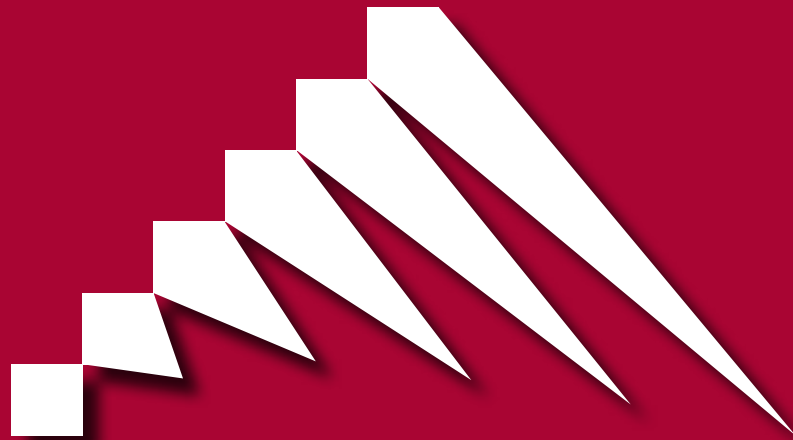




**Colorado Technical University**  
**Academic Catalog 2008-2009**

Dear Student,

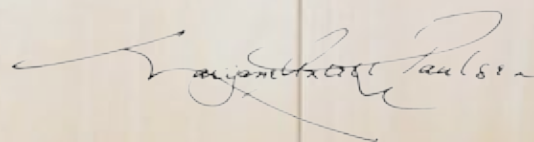
We've asked our graduates, "What made Colorado Technical University a significant educational experience for you?" Their answer? "CTU connects... with students; with the community; with employers; with real and 'virtual' campuses."

At Colorado Technical University, you'll experience this connection. CONNECT with choices—not only in curriculum, but in how it's delivered. Connect to our remarkable online platform or our campuses—or connect to both as your schedule allows.

Connect with our great faculty and staff who will assist you with your academic progress through guidance and support as you pursue your career. Connect with the employers in the communities who look to CTU to hire our graduates.

Connect with CTU's 43-year history, and you'll be connected to an institution committed to academic quality, innovative delivery, and excellence in student support and service.

We're glad you've chosen to connect to CTU. Welcome!



Marijane Axtell Paulsen, Ph.D.  
CEO, Colorado Technical University

*"CTU CONNECTS...  
with students; with the community; with  
employers; with real and 'virtual' campuses."*



## Mission:

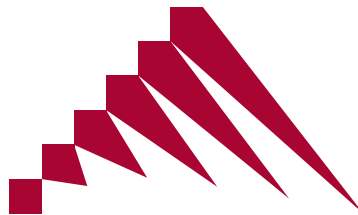
The mission of Colorado Technical University, an institution of higher learning, is to provide career-oriented education by teaching applied, real-world, industry-current programs in selected areas, serving the needs of students for employment and career advancement and the needs of industry for highly qualified professionals at the associate's, bachelor's, master's and doctorate levels.

## History:

Colorado Technical University is a private, for-profit, accredited institution of higher learning, granting professional certificates, associate's, bachelor's, master's and doctorate degrees. The University was initially founded in Colorado Springs in 1965 where the main campus continues to reside today.

Over the past 40 years, the University has evolved from a technical training school to a university with graduate-level programs. The introduction in 1995 of doctorate programs, the establishment of branch campuses in Denver, Colorado; Sioux Falls, South Dakota; and North Kansas City, Missouri and the introduction of the online campus have established Colorado Technical University as a mature institution of higher learning.

In 2003, Career Education Corporation (CEC) assumed ownership of the University. CEC is one of North America's largest providers of private, postsecondary education. CEC colleges and universities offer a variety of doctorate, master's, bachelor's and associate's degrees and non-degree programs in career-oriented disciplines including information technology, visual communication and design technologies, business studies and culinary arts. All CEC programs emphasize hands-on learning and expose students to industry-current programs and expert faculty.





## **The Higher Learning Commission of the North Central Association of Colleges and Schools**

<http://www.ncahigherlearningcommission.org>

Colorado Technical University is accredited by the Higher Learning Commission and is a member of the North Central Association of Colleges and Schools: 30 North LaSalle Street, Suite 2400, Chicago, IL 60602-2504. (312) 263-0456

## **Department of Higher Education, Colorado Commission on Higher Education (CCHE)**

[http://www.state.co.us/ccche\\_dir/heccche.html](http://www.state.co.us/ccche_dir/heccche.html)

Colorado Technical University's authorization to award degrees has been granted by the State of Colorado, Department of Higher Education, Colorado Commission on Higher Education. 1380 Lawrence Street, Suite 1200, Denver, CO 80204. (303) 866-2723

## **Missouri Department of Higher Education (MDHE)**

<http://www.dhe.mo.gov>

Colorado Technical University's authorization to award degrees has been granted by the State of Missouri, Department of Higher Education, 3515 Amazonas Drive, Jefferson City, MO 65190. (816)-751-2361

## **The Commission on Accreditation of Allied Health Education Programs (CAAHEP)**

<http://www.caahep.org>

The Associate of Science in Medical Assisting at the Sioux Falls campus and the Associate of Applied Science in Surgical Technology at the Kansas City campus are accredited by the Commission on Accreditation of Allied Health Education Programs, 35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208. (312) 553-9355

## **Accreditation Board for Engineering and Technology (ABET)**

<http://www.abet.org>

The Bachelor of Science degree programs in Computer Engineering and Electrical Engineering at the Colorado Springs Campus are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. 111 Market Place, Suite 1050, Baltimore, MD 21202. (410) 347-7700

## **Accrediting Bureau of Health Education Schools (ABHES)**

<http://www.abhes.org>

The Associate of Applied Science in Medical Assisting at the Kansas City Campus is accredited by the Accrediting Bureau of Health Education Schools. 7777 Leesburg Pike, Suite 314, N. Falls Church, VA 22043 (703) 917-9503

## **The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF)**

<http://www.sole.org>

The International Society of Logistics Engineers and the Logistics Education Foundation endorse the Master of Business Administration in Management with a concentration in Logistics/Supply Chain Management, the Bachelor of Science in Business Administration with a concentration in Logistics/Supply Chain Management and associated certificate programs. 8100 Professional Place, Suite 111, Hyattsville, MD 20785. (301) 459-8446

## **Project Management Institute (PMI®), Registered Education Provider**

<http://www.pmi.org>

CTU is a recognized provider with the Project Management Institute Educational Provider Program (PMI R.E.P.). CTU's Master of Business Administration with a concentration in Project Management, Master of Science in Management with a concentration in IT/Project Management, Bachelor of Science in Project Management and the academic certificates in project management prepare students to take PMI's Project Management Professional® certification. 4 Campus Boulevard, Newtown Square, PA 19073-3299. (601) 356-4600

## **Project Management Institute Education Foundation (PMIEF)**

CTU supports the goals of the PMIEF by providing scholarships in project management at selected campuses/divisions.

## **Colorado Institute of Technology**

<http://www.coloradoit.org>

Colorado Technical University is a member of the Colorado Institute of Technology. P.O. Box 1146, Broomfield, CO 80038-1146. (303) 583-3101. E-mail: [info@coloradoit.org](mailto:info@coloradoit.org)

## **Society for Human Resource Management (SHRM)**

<http://www.shrm.org>

Colorado Technical University has met the requirements for affiliation with the Society of Human Resource Management (SHRM). 1800 Duke Street, Alexandria, VA 22314. (800) 283-7476

## **National Information Assurance Education and Training Program**

<http://www.nsa.gov/ia/academia/iace.cfm>

The Information Assurance Courseware Evaluation (IACE) Review Committee has validated that the Colorado Technical University courseware meets all of the elements of the Committee on National Security Systems (CNSS) National Training Standards for:

Information Systems Security (INFOSEC) Professionals, NSTISSI-4011

Information Systems Security Officers, CNSSI-4014 Entry Level.

9800 Savage Road, Fort Meade, MD 20755-6716. (410) 854-6206



### **National Center for Competency Testing (NCCT)**

All CTU surgical Technology programs have been approved as NCCT proctor sites and can administer the certificate exam.

### **Joint Review Committee on Education in Radiologic Technology**

<http://www.jrcert.org>

20 N. Wacker Drive, Suite 2850 Chicago, IL 60606-3182. (312) 704-5300

### **Supporting Agencies**

Colorado State Rehabilitation Division

Colorado Board of Nursing

ConAP, Concurrent Admissions Program

Missouri Board of Nursing

Service Members Opportunity Colleges

South Dakota Board of Nursing

U.S. Armed Forces Tuition Assistance Program

U.S. Department of Education

U.S. Department of Veterans Affairs

U.S. Department of Veterans Affairs, Vocational Rehabilitation and Employment Division

### **CTU's faculty and staff are affiliated with the organizations listed below.**

Academy of Business Education (ABE)

Academy of Criminal Justice Sciences

Academy of Management

Academy of Political Science

American Accounting Association (AAA)

American Association for Higher Education (AAHE)

American Association of Collegiate Registrars and Admissions Officers (AACRO)

American Association of Medical Assistants (AAMA)

American Association of University Women (AAUW)

American College of Healthcare Executives (ACHE)

American Library Association (ALA)

American Mathematics Society

American Production and Inventory Control Society (APICS)

American Society for Engineering Education (ASEE)

American Society for Quality Control (ASQC)

American Society for Training and Development (ASTD)

Association for Computing Machinery (ACM)

Association for Supervision and Curriculum Development (ASCD)

Association of Career Professionals International (ACPI)

Association of Teachers of Technical Writing (ATTW)

Association of Veterans Education

Better Business Bureau

Chamber of Commerce

Cisco

Colorado Association of Financial Aid Officers (CAFA)

CompTIA

Council for Adult and Experiential Learning (CAEL)

Information Systems Security Association (ISSA)

Institute of Electrical and Electronics Engineers, Inc. (IEEE)

International Business Education Association (IBEA)

International Council on Systems Engineering (INCOSSE)

International Society of Logistics Engineering (SOLE)

Logistics Management Association

Maricopa Advanced Technology Education Center (MATEC)

Mathematical Association of America (MAA)

Microsoft IT Academy

Missouri Association of Private Colleges and Career Schools (MAPCCS)

Missouri Association of Student Financial Aid Personnel

National Association for Health Professionals (NAHP)

National Association of Colleges and Employers (NACE)

National Association of Communication System Engineers (NACSE)

National Association of Financial Aid Officers (NASFAO)

National Business Education Association (NBEA)

National Contract Management Association (NCMA)

National Council of Teachers of English (NCTE)

National Criminal Justice Honor Society

NSA

Online Computer Library Center (OCLC)

Organizational Behavior Teaching Society (OBTS)

Project Management Institute (PMI)

Rocky Mountain Association for Financial Aid Officers

Society for Applied and Industrial Mathematics (SAIM)

Society for Human Resource Management (SHRM)

Society for Technical Communication

Society for Values in Higher Education

Society of Women Engineers (SWE)

South Dakota Association of Student Financial Aid Administrators

South Dakota Society of Medical Assistants

## Statement of Ownership

Colorado Technical University is owned by Career Education Corporation (CEC), which is wholly owned by Career Education Corporation (CEC). CEC is a Delaware corporation with principal offices located at 2895 Greenspoint Parkway, Suite 600, Hoffman Estates, Illinois 60169.

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President and Chief Executive Officer  
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State University of New York – M.Sc.  
National Taiwan University, B.Sc.



# COLORADO SPRINGS



## Colorado Technical University

### Colorado Springs

4435 North Chestnut Street

Colorado Springs, CO 80907

(719) 598-0200

FAX (719) 598-3740

[www.coloradotech.edu](http://www.coloradotech.edu)



**Greg Mitchell**

President

George Washington University, M.S.

United States Naval Academy, B.S.A.

## ABOUT CTU COLORADO SPRINGS

The main campus of Colorado Technical University, the Colorado Springs campus was founded in 1965, and became one of the first institutions of higher learning to design degree programs utilizing online learning. The University earned a 10 year accreditation (2001-2011) from the Higher Learning Commission of the North Central Association of Colleges and Schools, and is a Project Management Institute (PMI®) Registered Education Provider.

Our Colorado Springs campus offers Associate's, Bachelor's, and Master's degrees within its colleges of Business and Management, Engineering and Computer Science, Criminal Justice and Public Administration, and Information Science and Technology. CTU's Professional Learning Model was founded on the idea that students learn best by working on real-world, professional projects related to their chosen career fields. By working with hands-on, industry-related projects and experiences, students develop the expertise to apply conceptual knowledge to get effective results.

Also known for its outstanding military educational programs and scholarship opportunities, CTU's Colorado Springs campus has the largest military vocational rehabilitation program in Colorado. With five major military commands and a large contingency of defense contractors in the area, we listen to them when it comes to computer security, cyberspace, and logistics systems management. The campus was honored recently with the 2007 Military Affairs Award of Excellence by The Greater Colorado Springs Chamber of Commerce. The award recognizes outstanding support shown to the men and women of our armed forces by an organization in the Pikes Peak region.

From Engineering to Project Management, CTU Colorado Springs' innovative programs, industry-current technology, dedicated faculty, and real-world focus provide an education today that can lead to greater achievement tomorrow.

# COLORADO SPRINGS



# PUEBLO

## ABOUT CTU PUEBLO

Its heritage preserved through historic attractions and old world charm, Pueblo is home to Colorado Technical University's campus offering students degree programs in Business and Management, Criminal Justice and Public Administration, Information Science and Technology, and Health Sciences.

CTU in Pueblo offers Master's degree programs in Business Administration with concentrations in Project Management and Technology Management, as well as Bachelor's degree programs in Accounting, Project Management and Business Administration with a concentration in Management. Associate's and Bachelor's degrees are available within our colleges of Information Science and Technology, Criminal Justice and Public Administration, and Health Sciences. Students can earn their RN to BSN (Bachelor of Science in Nursing) or Associate Degree in Nursing (ADN) degrees.

At Colorado Technical University, we dedicate ourselves to preparing students with a real-world education they can use to take their careers to new heights.

Whether you are an undergraduate student, an experienced professional seeking to retain your competitive edge or a career climber ready to elevate your qualifications to the next level, CTU Pueblo is ready when you are with real-world Master's, Bachelor's and Associate's degree programs.

## Colorado Technical University Pueblo

Midtown Center  
1025 West 6th Street  
Pueblo, CO 81003  
(719) 595-0200  
FAX (719) 595-0206  
[www.coloradotech.edu](http://www.coloradotech.edu)



**Greg Mitchell**

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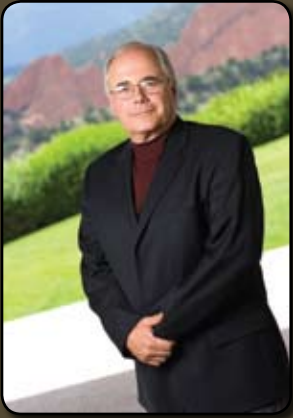


## Colorado Technical University Denver North

Westminster  
1865 West 121st Avenue  
Westminster, CO 80234  
(303) 362-2900  
FAX (303) 362-2945  
[www.coloradotech.edu](http://www.coloradotech.edu)

## Denver South DTC

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Greenwood Village, CO 80111  
(303) 362-2901  
FAX (303) 694-6673  
[www.coloradotech.edu](http://www.coloradotech.edu)



Mark A. Pieffer, D.M.  
President  
Professor of Management  
Colorado Technical University, D.M.  
University of Richmond, M.A.  
Central State University of Ohio, B.S.

## ABOUT CTU DENVER

The “Mile High City” of Denver is home to two CTU campus locations. CTU maintains two separate and unique locations in Denver—Denver North with traditional academic classrooms, and the South Denver Tech Center campus with the feel of a corporate office. Both campuses offer undergraduate and graduate degrees within the colleges of Business and Management, Engineering and Computer Science, Criminal Justice and Public Administration, Information Systems and Technology, and Health Sciences.

Many CTU Denver students work full-time while attending school. Some are pursuing a degree to broaden their professional horizons within their chosen career field. Others are seeking an entirely new career direction. All are working towards Associate’s, Bachelor’s or Master’s degrees grounded in industry-current technology.

At CTU Denver, instructors include working professionals who bring a real-world perspective to academic studies. This advantage, combined with a career-focused curriculum, innovative educational techniques and a full-service career development program, gives CTU Denver students a solid foundation for whatever career they choose to pursue.

DENVER



# NORTH KANSAS CITY

## ABOUT CTU NORTH KANSAS CITY

The North Kansas City Campus of Colorado Technical University opened its doors in 2005 and now offers a wide range of Health Sciences degree programs and diplomas, including Surgical Technology (AAS), Radiologic Technology (AAS, BS), Practical Nursing (PN), Medical Assisting (AAS) and Healthcare Management (BS). Our campus in North Kansas City offers Associate's and Bachelor's degrees in many of today's in-demand professional fields. Students can earn industry-current degrees in Business and Management, Criminal Justice and Public Administration, Health Sciences, Computer Science, and Information Science and Technology.

The school's population of students is quite diverse, with many students working in full or part-time positions in the Kansas City area while attending class, as well as a growing contingent of international attendees.

CTU North Kansas City degree programs are clearly focused on applied learning to help ensure practical application in the real world of business and technology. The medical program areas, for example, include externships that are coordinated by the program staff as part of the academic experience.

In addition, small classes allow each student to enjoy focused attention and assistance from the faculty and administration. And the Student Senate takes an active role in providing tutoring, planning events and enabling fellow classmates to share ideas and experiences with one another.

CTU North Kansas City's career support service programs assist students with résumés, interviews and weekly career opportunities. An online placement assistance site and on-campus recruiters can help students find non-career as well as career positions. Because of these efforts, graduates of the school have a good opportunity to find satisfying employment in their chosen professions.

## Colorado Technical University

### North Kansas City

520 East 19th Avenue.

North Kansas City, MO 64116

(816) 472-7400

FAX (816) 472-0688

[www.coloradotech.edu](http://www.coloradotech.edu)



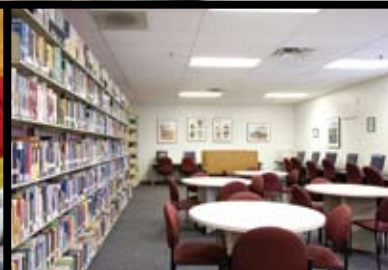
Scott van Tonningen, Ph.D.

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University of Colorado, Ph.D.

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United States Air Force Academy, B.S.





# SIoux FALLS



**Colorado Technical University  
Sioux Falls**

3901 West 59th Street  
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(605) 361-0200  
FAX (605)361-5954  
[www.coloradotech.edu](http://www.coloradotech.edu)



David Heflin, Ed.D.  
President  
University of St. Thomas, Ed.D.  
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**ABOUT CTU SIOUX FALLS**

Situated amidst South Dakota's breathtaking natural wonders, Sioux Falls is known as the "Gateway to the Plains," having been praised for its "liveability" and healthy economy. The city's varied cultural and educational venues do, indeed, make it an interesting and entertaining place to study, live and work.

Colorado Technical University in Sioux Falls takes great pride in helping to prepare students for career opportunities in their chosen fields. These efforts go beyond excellence in academics to include a dedicated Career Services team whose primary focus is to provide the resources and connections to help students achieve the professional goals they set for themselves whether they are seeking career opportunities in Business and Management, Engineering and Computer Science, Information Science and Technology, Criminal Justice and Public Administration, Health Sciences or other related fields.

Whether you are a newly enrolled student embarking on an exciting educational journey or an established professional enhancing your career qualifications to remain industry-current and up-to-date in a competitive job market, Colorado Technical University stands behind you to help make your career dreams a reality.

**SIOUX FALLS**



## ABOUT CTU ONLINE

Colorado Tech Online offers Bachelor's and Master's degree programs in an array of professional fields, including Business Administration, Information Technology, Criminal Justice, Accounting and Management.

Colorado Tech Online's network of dedicated professionals is strongly committed to helping you achieve your academic goals—with a team of Admissions Advisors who can help you choose and apply for the degree program that's right for you, devoted instructors who are accessible by phone, e-mail or online chats, as well as Financial Aid Advisors, a dedicated Career Services team, 24/7 Technical Support team staffed by trained technicians and an always-available online library.

Instructors at Colorado Tech Online are career-experienced professionals in the fields they teach—people who can share relevant, applicable knowledge and experiences about your chosen field of interest.

Courses are fully web-based offering multiple opportunities to interact with instructors and classmates throughout your learning experience. At Colorado Tech Online, thousands of articles from newspapers, magazines and scholarly journals are at your fingertips, whenever and wherever you need them. That means you can research and review source materials for your assignments 24/7, completely online.

Nearly all Colorado Tech Online degree programs incorporate professional certificates you can earn on your way to graduation, without added courses or additional cost. These résumé-enhancing credentials can help you build your marketable skills concurrently with your studies.

## CTU Online

4435 North Chestnut Street  
Colorado Springs, CO 80907  
(719) 598-0200  
FAX (719) 598-3740  
[www.ctuonline.edu](http://www.ctuonline.edu)



Wallace Pond, Ph.D.  
President and Chief Executive Officer  
Chancellor, CTU Online  
Walden University, Ph.D.  
Boston University, M.Ed.  
University of Utah, B.A.



CTU ONLINE



COLORADO TECHNICAL UNIVERSITY



INSTITUTE  
FOR ADVANCED  
STUDIES

Innovative. Adaptable. Smart.

INSTITUTE for  
ADVANCED STUDIES



## Institute for Advanced Studies

4435 North Chestnut Street  
Colorado Springs, CO 80907  
(719) 598-0200

FAX (719) 598-3740

[www.instituteforadvancedstudies.com](http://www.instituteforadvancedstudies.com)



David Leasure, Ph.D.  
Chief Academic Officer  
Chancellor, Institute for Advanced Studies  
University of Kansas, Ph.D.  
Kansas State University, M.S.  
Kansas State University, B.A.

## ABOUT THE INSTITUTE for ADVANCED STUDIES

Nine 3 ½ Day Trips...Over 3 Years...To the Rocky Mountains...  
To Earn a Doctorate Degree. That's (much) Higher Education.

Colorado Technical University has been an innovator in the field of higher education for more than 30 years and has offered Colorado Doctoral degrees for 12 years. In 2004, in order to better serve both students and the organizations that employ them, we redesigned the Doctoral programs and now offer executive-format Doctoral degrees in the fields of Computer Science, Management and Enterprise Information Systems. The programs are no less rigorous than the traditional dissertation based programs, but we believe that the six projects and executive format will help our students achieve success and produce publishable papers in a shorter period of time. And we believe that our students will more quickly be able to move their ideas from theory to application. CTU Doctorates are applied degrees that focus on preparing graduates to make a distinctive contribution to their professional fields.

- No interruption of your career (online learning with periodic residencies)
- No dissertation (four practical projects over three years)
- Distinguished faculty, speakers and project mentors drawn from industry and prominent universities

Colorado Technical University's Institute for Advanced Studies has been established to foster and recognize practical and applied scholarly contributions. The focus of CTU is applied, real-world, industry-current education. At the doctoral and executive master's levels, this involves creating usable knowledge and implementing practical applications of existing knowledge.

INSTITUTE for  
ADVANCED STUDIES



# GO ON



*"It is never easy to decide to start a degree while working full-time. Of all the schools available, I chose Colorado Technical University because I wanted to attend a college that understood my personal priorities as well as my desire to obtain a degree. Colorado Technical University offers classes that work around my schedule whether I take them until 11 PM at night or from my own home online. Colorado Technical University allows students to continue maintaining their existing lifestyle while obtaining a degree."*

*Tanigue Wright  
B.S. in Information Systems Management*

# NEXT

"As a non-traditional student, I was a little apprehensive about going back to school. A friend of mine recommended CTU and told me there were a number of other non-traditional students attending this University. After attending my first class, I found that the staff and faculty made me feel comfortable. I truly enjoyed my classes and would recommend CTU to anyone looking for a great education in this fast paced world."

Carl Bootsma  
BSBA in Marketing Management  
MBA



*"The tailored program design and convenience of combining class-time and online learning are the primary reasons for my choosing CTU. As a working professional, the flexibility allows me to successfully accomplish my full-time life and work goals, while developing a greater understanding and awareness of how the world really operates. This educational setting drives home the ultimate win – efficient and effective use of time and money."*

**Charlene Correa**  
MBA



CONNECT



"My instructors at the Masters level have been extremely knowledgeable in their fields—not just with 'book knowledge,' but with applicable, real-world, real-time knowledge. Through in-class instruction, online links, or group and individually focused assignments, they transfer not only critical knowledge, but also the skills needed to utilize that knowledge in today's work environment. Teaching styles may vary in presentation, but all instructors have been very accessible. First name basis is the norm: students are afforded very open-door assistance with classes or careers. CTU's instructors are very accommodating to a mixed range of skills."

**Greg McMahan**  
MBA



|                                                              |                |
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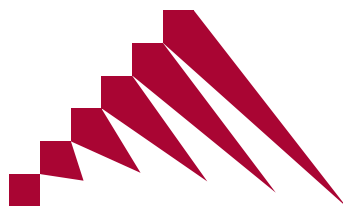
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# PROGRAM INDEX - UNDERGRADUATE

| Degree/Certificate Name                       | Colorado Springs | Denver | Sioux Falls | Kansas City | Pueblo | 100% Online Delivery | Page Number |
|-----------------------------------------------|------------------|--------|-------------|-------------|--------|----------------------|-------------|
| Accounting (AASBA-ACC)                        |                  |        |             | X           |        |                      | 162         |
| Accounting (ASACC)                            | X                | X      | X           |             | X      | X                    | 148         |
| Accounting (BSACC)                            | X                | X      | X           | X           | X      | X                    | 108         |
| Accounting (BSBA-ACC)                         | X                | X      |             |             |        |                      | 118         |
| Advertising and Digital Media Design (BSADMD) | X                | X      |             |             |        |                      | 274         |
| Business Administration (ASBA)                |                  |        | X           |             |        | X                    | 152         |
| Computer Engineering (BSCE)                   | X                |        |             |             |        |                      | 216         |
| Computer Systems Security (ASCSS)             | X                | X      |             |             |        |                      | 226         |
| Computer Systems Security (BSCSS)             | X                | X      |             |             |        |                      | 220         |
| Computer Science (BSCS)                       | X                | X      | X           |             |        |                      | 218         |
| Criminal Justice (AASCI)                      |                  |        |             | X           |        |                      | 198         |
| Criminal Justice (ASCJ)                       | X                | X      | X           |             | X      | X                    | 188         |
| Criminal Justice (BSCJ)                       | X                | X      | X           | X           | X      | X                    | 174         |
| Cybercrime Investigation (ASCI)               |                  |        |             |             |        | X                    | 192         |
| Cybercrime Investigation (BSCI)               |                  |        |             | X           |        |                      | 182         |
| Digital Media Design (ASDMD)                  | X                | X      |             |             |        |                      | 286         |
| Digital Media Design (BSDMD)                  | X                | X      |             |             |        |                      | 276         |
| Enterprise Information Management (BSEIM)     |                  | X      | X           |             |        |                      | 278         |
| Electronics Technology (ASET)                 | X                |        |             |             |        |                      | 228         |
| Electrical Engineering (BSEE)                 | X                |        |             |             |        |                      | 222         |
| Finance (BSBA-FIN)                            |                  |        |             |             |        | X                    | 122         |
| Finance (BSFIN)                               |                  |        | X           |             |        |                      | 112         |
| Forensic Investigation (BSCJ-FI)              |                  |        | X           |             |        |                      | 178         |
| General Studies (AASGS)                       |                  |        |             | X           |        |                      | 164         |
| General Studies (ASGS)                        | X                | X      | X           |             | X      | X                    | 156         |
| Healthcare Management (BSHCM)                 |                  |        |             | X           |        |                      | 234         |
| Healthcare Management (BSBA-HCM)              |                  |        |             |             |        | X                    | 124         |
| Health Services Administration (BSHSA)        |                  | X      | X           | X           |        |                      | 236         |
| Human Resource Management (BSBA-HRM)          | X                |        | X           |             |        | X                    | 126         |
| Human Services (BSCJ-HS)                      |                  |        | X           |             |        |                      | 180         |

| Degree/Certificate Name                        | Colorado Springs | Denver | Sioux Falls | Kansas City | Pueblo | 100% Online Delivery | Page Number |
|------------------------------------------------|------------------|--------|-------------|-------------|--------|----------------------|-------------|
| Information Systems Management (BSISM)         | X                | X      |             | X           |        |                      | 280         |
| Information Technology (ASIT)                  | X                | X      | X           |             | X      | X                    | 288         |
| Information Technology (BSIT)                  | X                | X      | X           |             | X      | X                    | 282         |
| Information Technology (BSBA-IT)               |                  |        |             |             |        | X                    | 134         |
| International Business (BSBA-IB)               |                  |        |             |             |        | X                    | 130         |
| Logistics/Supply Chain Management (BSBA-L/SCM) | X                |        |             |             |        |                      | 136         |
| Management (AASBA-MGM)                         |                  |        |             | X           |        |                      | 166         |
| Management (BSBA-MGM)                          | X                | X      | X           | X           | X      | X                    | 138         |
| Marketing and Sales (AASBA-MKT)                |                  |        |             | X           |        |                      | 168         |
| Marketing (ASBA-MKT)                           | X                | X      |             |             |        |                      | 160         |
| Marketing Management (BSBA-MKTG)               | X                | X      | X           | X           |        |                      | 142         |
| Marketing Management (BSBA-MKT)                |                  |        |             |             |        | X                    | 144         |
| Medical Assisting (MA Diploma)                 |                  | X      |             | X           |        |                      | 262         |
| Medical Assisting (AASMA)                      |                  |        |             | X           |        |                      | 254         |
| Medical Assisting (ASMA)                       |                  | X      | X           |             |        |                      | 246         |
| Medical Billing and Coding (ASMBC)             |                  | X      |             |             | X      | X                    | 248         |
| Nursing (ADN)                                  |                  |        |             |             | X      |                      | 244         |
| Nursing (RN-BSN)                               |                  | X      |             |             | X      | X                    | 240         |
| Paralegal Studies (ASPS)                       |                  |        | X           |             |        | X                    | 194         |
| Paralegal Studies (BSPS)                       |                  |        | X           |             |        |                      | 184         |
| Practical Nursing (PN-Diploma)                 |                  |        |             | X           |        |                      | 260         |
| Project Management (BSPM)                      | X                | X      | X           |             | X      |                      | 114         |
| Project Management (BSBA-PM)                   |                  |        |             |             |        | X                    | 146         |
| Public Administration (BSPBAD)                 |                  |        | X           |             |        |                      | 186         |
| Radiologic Technology (AASRT)                  |                  |        |             | X           |        |                      | 256         |
| Radiologic Technology (BSRT)                   |                  |        |             | X           |        |                      | 242         |
| Software Engineering (BSSE)                    | X                |        |             |             |        |                      | 224         |
| Surgical Technology (AASST)                    |                  |        |             | X           |        |                      | 258         |
| Surgical Technology (ASST)                     |                  | X      |             |             | X      |                      | 252         |
| Technology Management (BSTM)                   |                  |        | X           | X           |        |                      | 116         |



# PROGRAM INDEX - GRADUATE

| Degree/Certificate Name                             | Colorado Springs | Denver | Sioux Falls | Kansas City | Pueblo | 100% Online Delivery | Page Number |
|-----------------------------------------------------|------------------|--------|-------------|-------------|--------|----------------------|-------------|
| <b>Master Programs</b>                              |                  |        |             |             |        |                      |             |
| Accounting (MBA-ACC)                                | X                | X      |             |             |        | X                    | 42          |
| Accounting (MS-ACC)                                 | X                | X      | X           |             |        |                      | 88          |
| Business Administration (MBA)                       | X                | X      | X           |             | X      | X                    | 46          |
| Business Administration (EMBA)                      | X                | X      |             |             |        |                      | 40          |
| Business Management (MSM-BM)                        |                  |        |             |             |        | X                    | 90          |
| Computer Engineering (MSCE)                         | X                | X      |             |             |        |                      | 206         |
| Computer Systems Security (MSCS-CSS)                | X                | X      | X           |             |        |                      | 210         |
| Criminal Justice (MSM-CJ)                           | X                | X      | X           |             |        | X                    | 94          |
| Electrical Engineering (MSEE)                       | X                | X      |             |             |        |                      | 212         |
| Database (MSCS-DB)                                  | X                | X      |             |             |        |                      | 210         |
| e-Learning and Instructional Technology (MeIT)      |                  | X      |             |             |        |                      | 266         |
| Finance (MBA-FIN)                                   | X                | X      |             |             |        | X                    | 50          |
| Healthcare Management (MBA-HCM)                     |                  |        | X           |             |        | X                    | 54          |
| Human Resource Management (MBA-HRM)                 | X                | X      | X           |             |        | X                    | 58          |
| Information Systems Security (MSM-ISS)              | X                | X      |             |             |        | X                    | 98, 268     |
| Information Technology Management (MSM-ITM)         |                  |        |             |             |        | X                    | 270         |
| Information Technology / Project Mgmt (MSM-IT / PM) | X                | X      | X           |             |        |                      | 272         |
| Insurance and Risk Management (MBA-IRM)             | X                | X      | X           |             |        | X                    | 62          |
| Logistics/Supply Chain Management (MBA-L / SCM)     | X                |        |             |             |        | X                    | 66          |
| Marketing (MBA-MKTG)                                | X                | X      |             |             |        |                      | 70          |
| Marketing (MBA-MKT)                                 |                  |        |             |             |        | X                    | 72          |
| Mediation and Dispute Resolution (MBA-MDR)          | X                | X      |             |             |        | X                    | 74          |
| Operations Management (MBA-OM)                      | X                | X      |             |             |        | X                    | 78          |
| Project Management (MBA-PM)                         | X                | X      | X           |             | X      |                      | 82          |
| Project Management (MSM-PM)                         |                  |        |             |             |        | X                    | 104         |
| Software Engineering (MSCS-SE)                      | X                | X      | X           |             |        |                      | 208         |
| Systems Engineering (MSSE)                          | X                | X      |             |             |        |                      | 214         |
| Technology Management (MBA-TM)                      | X                | X      | X           |             | X      | X                    | 84          |

| Degree/Certificate Name                                    | Colorado Springs | Denver | Sioux Falls | Kansas City | Pueblo | 100% Online Delivery | Page Number |
|------------------------------------------------------------|------------------|--------|-------------|-------------|--------|----------------------|-------------|
| Doctorate Programs                                         |                  |        |             |             |        |                      |             |
| Computer Science (DCS)                                     | X                |        |             |             |        |                      | 202         |
| Computer Science/ Enterprise Information Systems (DCS-EIS) | X                |        |             |             |        |                      | 204         |
| Management (DM)                                            | X                |        |             |             |        |                      | 38          |

## NOTES:

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## UNIVERSITY SERVICES

Colorado Technical University (CTU) has a full range of services to assist students and graduates with their success. CTU places a high premium on customer service. If at any time you feel you are not receiving good service from a campus office, and the issue cannot be resolved with the department supervisor, please contact campus Student Services. All student services are handicap accessible.

## LIBRARY

The primary mission of the CTU library is to support the learning and research outcomes of Colorado Technical University. Its purpose is to provide access to information, and instruction for the university's diverse populations. To achieve its mission, librarians are available to:

- create an environment conducive to inquiry and study
- provide students, faculty, and staff with a collection of materials and information needed for success in their academic careers and professional development
- advise the CTU community in the use of library information sources through classroom presentations, publications and web-based materials
- promote library materials and services available through on ground or online library resources
- provide information and instruction to encourage the development of information literacy skills and academic integrity

## BOOKSTORE

Colorado Technical University's bookstores serve students and faculty by providing access to course materials. At the University's discretion, texts may be delivered in electronic (e-Book) or standard printed form. A standard printed text may be available at additional cost in those courses in which e-Books have been adopted. The bookstores also have other supplies available, as well as University branded items.

## CAREER SERVICES

The Career Services department is devoted to assisting current CTU students and CTU graduates in researching careers. While Colorado Technical University cannot guarantee employment to any graduate, this office can assist students and graduates with resume writing, interviewing techniques, and employment searches. The Career Services department may also have listings of employment opportunities for current students.

## STUDENT ADVISING

Students receive guidance from admissions through graduation. Student Advisors play a proactive role in student success. This role includes:

- serving as sources of general information, such as program requirements and university policies;
- connecting students with university resources;
- helping students work through problems that may become barriers to student success;
- challenging students to achieve academic success;
- assisting students in managing time efficiently;
- acting as liaisons between students and instructors.

## LEARNING SUPPORT SERVICES

Students needing assistance beyond normal course instruction should begin by contacting their Instructors or Student Advisor. Additional assistance such as tutoring or learning labs may be available. See your Student Handbook for further details. Students with documented Special Needs should refer to the Reasonable Accommodations Policy elsewhere in the catalog.

## FACILITIES

Each campus will vary as to the types of facilities and what it has to offer. Prospective students will be given a tour by an Admission's Advisor who will point out the features of the campus. If you have any questions about campus facilities or their use please ask your Admission's Advisor.

## TECHNICAL SUPPORT

Colorado Technical University is committed to providing consistent and effective technical support to students and faculty. Contact Student Services for more information on the technical support services available.

## STUDENT PORTAL

The student portal is a secure website that allows a student access to his or her information including schedule, grades, account balance and activity, school events, and school contact information. For students enrolled in CTU online programs, the Virtual Campus provides students with many of the same services experienced at our "brick-and-mortar" campuses. Upon acceptance to CTU, students will be issued a student login used to gain access to the student portal.



## CALENDAR

Please consult the Schedule of Classes for each individual campus and/or division for detailed registration information and dates, and for ending dates of specific Quarters and sessions.

### Winter Quarter 2008

Week of January 6  
Beginning of classes

### Spring Quarter 2008

Week of April 6  
Beginning of classes

### Summer Quarter 2008

Week of July 6  
Beginning of classes

### Fall Quarter 2008

Week of October 5  
Beginning of classes

**Commencement ceremonies** are held individually by each regional campus and division. Please check with the Registrar to obtain information on dates and times.

## GUIDE TO THE CATALOG

*Note: While the university makes an effort to keep as current as possible with course titles and descriptions, there may be some courses not included in this section or some changes that occurred after the catalog was published. Please check with the Registrar's office for additional information and/or updates.*

## COURSE DESIGNATORS

ACC or ACCT – Accounting  
AS – AFROTC Aerospace Studies  
BADM – Business Administration  
BIO – Biology  
BSRT – Radiologic Technology  
CE – Computer Engineering  
CHE – Chemistry  
CJUS – Criminal Justice  
CS – Computer Science  
CSS – Computer Systems Security  
EBUS – e-Business  
ECO or ECON – Economics  
EE – Electrical Engineering  
EMBA – Executive MBA  
ENG or ENGL – English  
FIN or FINC – Finance

FINP – Financial Planning  
HCM – Healthcare Administration Management  
HIS or HIST – History  
HIT – Health Information Technology  
HRM or HRMT – Human Resource Management  
HSA – Health Services Administration  
HSS – Health Science Studies  
HUM or HUMN – Humanities  
ID or INTD – Interdisciplinary  
IRM – Insurance Risk Management  
IT – Information Technology  
ITM – Information Technology Management  
LTR or LITR – Literature  
MAM -- Mammography  
MAT or MATH – Mathematics  
MDR – Mediation and Dispute Resolution  
MEDA – Medical Assisting  
MGM or MGMT – Management  
MIS – Management of Information Systems  
MKT or MKTG – Marketing  
MPM – Project Management  
MSL – Army ROTC Military Science and Leadership  
NRSG – Nursing  
PBAD – Public Administration  
PFP – Personal Finance  
PHL or PHIL – Ethics  
PHY – Physics  
PM – Project Management  
PN – Practical Nursing  
PSY or PSYC – Psychology  
RADG – Radiologic Technology  
SCI – Science  
SCM – Supply Chain/Management/Logistics  
SE – Systems Engineering  
SOC or SOCL – Sociology  
SUR – Surgical Technology  
SWE – Software Engineering  
TLC – Technology for Learning and Communications  
TMGT—Technology Management  
VC – Visual Communications

## ABBREVIATIONS

AAS, Associate of Applied Science

AS, Associate of Science

BS, Bachelor of Science

BSBA, Bachelor of Science in Business Administration

D, Doctorate

MBA, Master of Business Administration

MS, Master of Science

MSM, Master of Science in Management

## DEFINITIONS

**Academic certificate:** awarded to students who successfully complete a prescribed sequence of courses to indicate proficiency in subject area.

**Academic dismissal:** see SAP

**Accredited institution:** Department of Education definition

**Accuplacer:** an exam to provide information about academic skill levels in math, English and reading. The results of this assessment, in conjunction with academic background, goals and interests are used by advisors to determine course selection.

**Add/drop:** a period of time in which a student can add or drop a class.

**Challenge Exam:** an assessment that students may take to demonstrate proficiency in select courses and earn credit toward their program of study.

**Co requisite:** a course that must be taken or at the same time as a given course.

**Drop:** withdrawing from a course or program of study.

**Elective:** a course chosen from outside the core or general education requirements of a program of study. Credits up to the maximum specified in the program earned in electives count toward fulfilling degree requirements.

**Grade point:** points assigned to course credit in accordance with the letter grade earned in the course.

**Grade point average (GPA):** the grade point average is computed for each academic level using course grade points. The grade points earned for each course are computed by multiplying the course's credit hours by the grade point of the final grade received. The quarterly GPA is computed by dividing the sum of the grade points earned in all courses taken during the quarter by the total number of credit hours completed during the quarter.

**Honors:** awarded to students for achieving certain grade point averages and/or at graduation for a certain cumulative GPA.

**Hybrid:** a course or program with some instruction being delivered in an alternate format (i.e., via the internet, a residency, independently, internships/externships, etc.).

**Incomplete:** when a student is temporarily unable to complete a course a grade of (I) is given.

**Non-degree seeking student:** a student who is not enrolled in a degree program.

**Online:** internet delivery method used for portions of, or entire courses.

**Prerequisite:** required or necessary as a prior condition to taking an advanced course.

**Professional Learning Model (PLM):** the learning model used by CTU. See the explanation in the Academic section below for more information.

**Proficiency:** the state or quality of being proficient; competence.

**Quarter hour:** the university's unit of academic credit.

**Readmission:** for students who have dropped out of the university, but want to return.

**Reinstatement:** for students who were withdrawn from the university, but want to be allowed back.

**Satisfactory Academic Progress (SAP):** see complete details in the Academic Policies section of catalog.

**Transcript:** official or unofficial record of courses attempted at the university. Transcripts may include grades, credit hours, course titles, and degree(s) conferred. The transcript is a student's academic record.

**Withdrawal:** to be removed from a course, program of study or the university.

## UNIVERSITY NOTICES AND GOVERNMENT REGULATIONS

### University Policy and Program Changes

This catalog contains a summary of the policies, rules and procedures of Colorado Technical University at the time of publication. By enrolling in Colorado Technical University, students agree to accept and abide by the terms stated in this catalog and all school policies. From time to time, it may be necessary or desirable for the University to make changes to this catalog due to the requirements and standards of the University's accrediting body, state licensing agency, U.S. Department of Education, or due to market conditions, employer needs or other reasons. The University reserves the right to make changes to any provision of this catalog, including the amount of tuition, academic programs and courses, school policies and procedures, faculty and administrative staff, the academic calendar and other dates, and other provisions at any time.

The University also reserves the right to make changes to instructional materials, to modify curricula and, when size and curriculum permit, to combine classes.

Students are expected to be familiar with the information presented in this school catalog, in any supplements and addenda to the catalog, and with all school policies. Notice of these changes will be communicated in a revised catalog, an addendum or supplement to the catalog, or other written format. By enrolling with the University, students agree to accept and abide by the terms stated in this catalog and all school policies.

If there is any conflict between any statement in this catalog and the enrollment agreement signed by the student, the provision in the enrollment agreement controls and is binding.

While not all photographs in this publication were taken at Colorado Technical University, they do accurately present the general type and quality of equipment and facilities found at CTU.

### **Student Conduct**

All students are expected to respect the rights of others and are held responsible for conforming to the laws of the national, state and local governments, and for conducting themselves in a manner consistent with the best interests of the institution and of the student body. Colorado Technical University reserves the right to dismiss a student for any of the following reasons: failure to maintain satisfactory academic progress, failure to pay school fees and/or tuition by applicable deadlines, disruptive behavior, posing a danger to the health or welfare of students or other members of the CTU community, or failure to comply with the policies and procedures of CTU. Any unpaid balance for tuition, fees and supplies becomes due and payable immediately upon a student's dismissal from the school. The institution will also determine if any Title IV funds need to be returned (see Financial Information section of this catalog for information on Title IV funding).

Please also see Academic Policies and Regulations section of this catalog for detailed information on student conduct.

### **Academic Honesty**

All Colorado Technical University students are expected to hold the highest standards of academic integrity while engaged in coursework at the University. Violations of the CTU policy on academic dishonesty (cheating, plagiarism, etc.) may result in sanctions up to and including dismissal from the University. Additional information on Academic Honesty can be found in the Academic Policies and Regulations section of this catalog.

### **Reasonable Accommodations for Individuals with Disabilities**

Colorado Technical University does not discriminate against individuals on the basis of physical or mental disability. CTU is fully committed to provide reasonable accommodations to qualified individuals with documented disabilities, unless providing the requested accommodations would result in an undue burden or fundamentally alter the nature of the relevant program, benefit, or service provided by Colorado Technical University. To request an auxiliary aid or service please contact the 504/ADA coordinator on your campus or request information from the Chief Academic Officer.

Individuals requesting an auxiliary aid or service will need to request the aid in writing. To enable CTU to provide the auxiliary aid or service in a timely manner, CTU requests that individuals submit the request six weeks before the first day of classes, or as soon as practical. Disagreements regarding an appropriate auxiliary aid and alleged violations of this policy may be raised pursuant to CTU's grievance procedures.

### **Campus Security**

Colorado Technical University strives to maintain a safe and secure atmosphere for the campus community. The University fosters an environment where diversity is celebrated. The safety, security and rights of students and employees are of critical importance.

In compliance with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Campus Security/Clery Act), Colorado Technical University publishes an annual security report that contains information concerning policies and programs relating to campus security, crimes and emergencies, the prevention of crimes and sexual offenses, drug and alcohol use, campus law enforcement and access to campus facilities. The annual security report also includes statistics concerning the occurrence of specified types of crimes on campus, at certain off-campus locations, and



on the public property surrounding campus. The annual security report is published each year by October 1 and contains statistics for the three most recent calendar years. The annual security report is provided to all current students and employees. A copy of the most recent annual security report may be obtained during regular business hours at the student services office.

In addition to the annual security report, the University's main campus maintains a log of all crimes committed and reported on its campus. The crime log is available for public inspection during regular business hours at the student services office main campus. Colorado Technical University will provide timely warning to the campus community concerning the occurrence of any crime includable in the annual security report that is reported to campus security or local police and that is considered to be a threat to students or employees.

Colorado Technical University reminds all students that they are ultimately responsible for their own actions regarding their safety and welfare.

### **Drug-Free Environment**

In compliance with the Drug-Free Workplace Act of 1988 (P.L.101-690) and the Drug-Free Schools and Communities Act of 1989 (P.L.101-226) Colorado Technical University has taken steps to provide a drug-free environment. As a matter of policy, Colorado Technical University prohibits the unlawful manufacture, possession, use, sale, dispensation, or distribution of controlled substances by students and employees on its property and at any school activity and supports the enforcement of federal and state drug laws and prohibits the possession, use and sale of alcoholic beverages by students and employees on its property and at any school activity and supports the enforcement of state underage drinking laws. Information on Colorado Technical University's drug-free awareness program and drug and alcohol abuse prevention program may be found in the Student Handbook. Any violation of these policies will result in appropriate disciplinary actions up to and including expulsion in the case of students and termination in the case of employees, even for a first offense. Violations of the law will also be referred to the appropriate law enforcement authorities. Students or employees may also be referred to substance abuse help centers. If such a referral is made, continued enrollment or employment will be subject to successful completion of any prescribed counseling or treatment program.

### **Student's Notice of Family Educational Rights and Privacy Act (FERPA)**

Under the authority of the Family Educational Rights and Privacy Act of 1974 (FERPA), Colorado Technical University has established a policy for the release of and access to records containing information about a student.

1. Each student enrolled at Colorado Technical University shall have the right to inspect and review the contents of his/her education records, including grades, records of attendance and other educational information. Students are not entitled to inspect and review financial records of their parents. Parental access to a student's records will be allowed without prior consent if the student is a dependent as defined in Section 152 of the Internal Revenue Code of 1986.
2. A student's education records are defined as files, materials, or documents, including those in electronic format, that contain information directly related to the student and are maintained by the institution, except as provided by law. Access to a student's education records is afforded to University officials who have a legitimate educational interest in the records, such as for purposes of recording grades, attendance, advising, and determining financial aid eligibility.
3. Students may review their education records by submitting a written request to the Registrar's Office. The review will be allowed during regular university hours under appropriate supervision within 45 days of the day the University receives notice. Students may also obtain copies of their education records for a nominal charge.
4. Students may request that the institution amend any of their education records if they believe the record contains information that is inaccurate, misleading, or in violation of their privacy rights. The request for change must be made in writing and submitted to the Registrar's Office, with the reason for the requested change stated fully. Grades and course evaluations can be challenged only on the grounds that they are improperly recorded. The instructor or staff member involved will review the request, if necessary meet with the student, and then determine whether to retain, change, or delete the disputed data. If a student requests a further review, the President/Chancellor will conduct a hearing, giving the student an opportunity to present evidence relevant to the disputed issues. The student will

be notified of the President/Chancellor's decision, which will be the final decision of the University. Copies of student challenges and any written explanations regarding the contents of the student's record will be retained as part of the student's permanent record.

5. Directory information is information on a student that the University may release to third parties without the consent of the student. The University has defined directory information as the student's name, address(es), telephone number(s), e-mail address, birth date and place, program undertaken, dates of attendance, and credential awarded. If a student does not want some or all of his or her directory information to be released to third parties without the student's consent, the student must present such a request in writing to the Registrar's Office within 10 days after the date of the student's initial enrollment or by such later date as the institution may specify.
6. The written consent of the student is required before personally identifiable information from education records of that student may be released to a third party, except for those disclosures referenced above, disclosures to accrediting commissions and government agencies, and other disclosures permitted by law.

A student who believes that the University has violated his or her rights concerning the release of or access to his or her records may file a complaint with the U.S. Department of Education.

### **Non-Discrimination**

The University admits students without regard to race, gender, sexual orientation, religion, creed, color, national origin, ancestry, marital status, age, disability, or any other factor prohibited by law.

### **Harassment**

Colorado Technical University is committed to the policy that all members of the University's community, including its faculty, students, and staff, have the right to be free from harassment by any other member of the school's community. Should a student feel that he/she has been harassed the student should immediately inform a University official.

Sexual harassment refers to, among other things, sexual conduct that is unwelcome and/or offensive to the recipient.

All students and employees must be allowed to work and study in an environment free from unsolicited and unwelcome advances. Harassment will not be tolerated.

### **Student Grievances**

If a student has a grievance with any part of the University, the student should first attempt to settle the problem with the person in charge of the area of concern. (The student's advisor can often be of great assistance in such a situation). If the problem cannot be settled at that level, the student should submit a written complaint to the Academic Support/Student Services Office. The Academic Support/Student Service Offices will then deliver the complaint to the appropriate Department Manager for resolution. The resolution of the complaint will not normally take longer than fifteen (15) business days from the date of submission of the complaint. If a student's grievance or complaint is not resolved to his/her satisfaction through this process, a student may choose to seek resolution in accordance with the provision of the Dispute Resolution clause included as part of the student's Enrollment Agreement.

At any time, a student may also contact: The Higher Learning Commission of the North Central Association of Colleges and Schools at 30 North LaSalle Street, Suite 2400, Chicago, IL 60602-2504. (312) 263-0456



College of

Business

and Management.







# DOCTORATE OF MANAGEMENT (DM)

All doctoral degrees are offered through the University's Institute for Advanced Studies (IAS).

The Doctor of Management program at Colorado Technical University is designed to encourage the professional development of managers through mentoring, action research, and practical projects; enabling them to make key leadership contributions in their area of expertise.

Each year of the DM program is designed to provide candidates with the theoretical, research and application capabilities necessary to pursue a successful career in their chosen field. The organization of each year is described below.

## Year 1: The Foundation

The beginning of the program focuses on research. Each student will spend the first year learning about classic and current management literature and forming the ability to think critically and creatively. There is also a research apprenticeship during the first year (working with a third-year student) that will enable the student to prepare a literature review article.

## Year 2: Acquisition of Knowledge

Once the foundation is in place, year two is the time the student chooses an area of specialization and begins to form a personal understanding of the management research and methods used in that area. This deeper level of understanding will result in two articles for submission to practitioner journals.

## Year 3: Leadership and Professional Advancement

In the final year, leadership skills and the ability to manage change are developed. Students will use qualitative methods and strategic

processes to be able to predict future trends, furthering a mastery of a specialization. The final year will result in two projects: a proposal for programmatic research to be submitted to an organization and a research article to be submitted to an academic journal.

The DM program includes twelve 5-credit classes, one per term for three years. These courses are taught using the Professional Learning Model™ in an executive format. Each course combines an active online component with an intensive residential session, lasting four days at our Colorado Springs campus. These are graded classes, and students must maintain an average of 3.5 out of a possible 4.0 in these classes.

There are also 12 Research and Writing courses that result in either four publishable papers or a dissertation. One research and writing course is taken each quarter in conjunction with one formal course. There are two options: publishable paper and dissertation. Both require a literature review and a research proposal. The research proposal for both options must be approved by the mentor. The publishable paper option requires the approval by the mentor and two readers for four papers: a publishable literature review, two publishable empirical papers (at least one of which must be publishable as an academic article), and a proposal for programmatic research covering a planned stream of research. This could also serve as a proposal for funding through a company or granting agency. The dissertation option requires a more extensive document that incorporates the literature review, a major empirical study, and the proposal for programmatic research. It must be approved by the mentor and two readers.

# DM PROGRAM REQUIREMENTS

## Required Courses

All students in the DM program must complete all of the following courses:

| Course No.                          | Course Name                                | Hrs. |
|-------------------------------------|--------------------------------------------|------|
| MGM800                              | Critical and Creative Thinking             | 5    |
| MGM801                              | Research and Writing I                     | 3    |
| MGM805                              | Classic and Contemporary Management Theory | 5    |
| MGM806                              | Research and Writing II                    | 3    |
| MGM810                              | Action Research                            | 5    |
| MGM811                              | Research and Writing III                   | 3    |
| MGM815                              | Qualitative and Ethnographic Methods       | 5    |
| MGM816                              | Research and Writing IV                    | 3    |
| MGM820                              | Quantitative Methods                       | 5    |
| MGM821                              | Research and Writing V                     | 3    |
| MGM825                              | Research Methods and Design                | 5    |
| MGM826                              | Research and Writing VI                    | 3    |
| MGM830                              | Philosophy of Science, Values, and Ethics  | 5    |
| MGM831                              | Research and Writing VII                   | 3    |
| MGM835                              | Process Consulting and Intervention        | 5    |
| MGM836                              | Research and Writing VIII                  | 3    |
| MGM840                              | Leadership                                 | 5    |
| MGM841                              | Research and Writing IX                    | 3    |
| MGM845                              | Strategic Thinking                         | 5    |
| MGM846                              | Research and Writing X                     | 3    |
| MGM850                              | Strategic Organization Design              | 5    |
| MGM851                              | Research and Writing XI                    | 3    |
| MGM855                              | Futuring and Innovation                    | 5    |
| MGM856                              | Research and Writing XII                   | 3    |
| TOTAL PROGRAM QUARTER CREDIT HOURS: |                                            | 96   |

## PROGRAM OUTCOMES

- Attain familiarity with the body of knowledge in current management theory
- Become a subject-matter expert in a specialized area of management
- Develop a leadership style based on ethical and philosophical consideration
- Effectively manage change through strategic design and research
- Predict future trends through effective research and qualitative methods
- Contribute to management literature via literature reviews, practitioner articles and research articles





# MASTER OF BUSINESS ADMINISTRATION (EMBA)

All Executive Program Degrees are offered through the University's Institute for Advance Studies (IAS)

The Executive MBA Program is a revolutionary re-interpretation of the traditional MBA program. Designed to give students those tools, theories and skills necessary for long term success, this curriculum has been built from the ground up to foster what companies and students need most:

- Leadership skills grounded in sound ethical judgment with the purpose of building environments where innovation, creativity and efficiency flourish
- Methods and practices of 'Intrapreneurism', which applies the skills and mindset of the entrepreneur within an organization
- An understanding of emerging markets and how to best position an organization to take advantage of these opportunities
- The ability to profitably manage businesses from both a socially responsible and ethically sound foundation through an understanding of the philosophy and practice of double bottom-line accounting
- Application of appropriate technologies and management styles that take into consideration the cultural and socio-economic realities of the environment
- Four basic ideas on which the curriculum is built: ethical management and leadership; the use of good judgment and the making smart choices; an understanding of the global business environment; and the ability to create environments where innovative ideas can be taken from concept through application efficiently and consistently

The hallmark of this curriculum is the 'Electives First' design, in which the traditional sequence of MBA programs has been reversed. This encourages and enables students, from the very first class, to explore topics of personal and professional interest at the very beginning of their program to assist in developing their capstone project topics. An increasing number of graduate-level, elective courses will be available to meet the specific needs of EMBA students during the first quarter. Descriptions for these courses will be available through the CTU Institute for Advanced Studies (IAS).

The EMBA Program is arranged in five (5), 11-week quarters with five (5) in-residence sessions conducted over a long weekend. The first residency takes place at the beginning of the program. Subsequent residencies take place at the midpoint of the each quarter with the exception of the final Capstone Project residency, which occurs at the end of the last quarter. Classes are taught in a dual-class format; two classes per quarter. Work on the Capstone Project begins the second quarter and continues throughout the program.

## PROGRAM OUTCOMES

- Employ leadership skills, including effective judgment and decision-making
- Differentiate between 'entrepreneur' and 'intrapreneur' and use skills of both to work within an organization to produce innovative change and growth
- Plan and manage projects, organizational change, and organizational growth
- Identify and analyze emerging global markets
- Manage an organization ethically and in a socially responsible manner
- Evaluate organizational effectiveness using the dual and triple bottom-line approaches
- Formulate value-creation strategies
- Demonstrate effective negotiation skills
- Engage in professional business practices that cross cultural, economic and political boundaries
- Synthesize course material and present innovative solutions to contemporary, real-world problems and initiatives

## EMBA PROGRAM REQUIREMENTS

### Required Courses

All students in the EMBA program must complete all of the following courses:

| Course No. | Course Name                                      | Hrs. |
|------------|--------------------------------------------------|------|
| EMBA600*   | Managing Programs, Projects and Initiatives      | 4    |
| EMBA610*   | Global Management Perspectives                   | 4    |
| EMBA620    | Transactional/Transformational Leadership        | 4    |
| EMBA630    | Decision in Management: Navigating Uncertainty   | 4    |
| EMBA640    | Entrepreneurship/Intrapreneurship and Innovation | 4    |
| EMBA650    | Emerging Markets                                 | 4    |
| EMBA660    | Financial Structures and Valuation               | 4    |
| EMBA670    | Domestic and Global Economic Environments        | 4    |
| EMBA680    | Organizational Behavior and Corporate Ethics     | 4    |
| EMBA690    | Strategic Management in Dynamic Environments     | 4    |
| EMBA695    | Capstone                                         | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 44**

\* Note: transfer or elective credit may be available for EMBA600 and EMBA610. Subsequent courses (from EMBA620 to program completion) are taken in pairs (with the exception of the integrated Capstone) and transfer credit is not allowed for these courses.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN ACCOUNTING (MBA-ACC)

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of personal financial advisors. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory roles. In addition to openings resulting from growth, the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The Master of Business Administration in Accounting is a program for students with a bachelor's degree in accounting or closely related fields. This program provides students with strong theoretical foundations and professional skills in the main functional areas of accounting, including financial reporting, management control and auditing, and taxation. In addition, this program is designed to prepare graduates for careers in industry, government and not-for-profit organizations.

## PROGRAM OUTCOMES

- Perform an audit review and prepare the appropriate documentation
- Describe how accounting information is used in implementing management policy
- Utilize accounting information to evaluate how to organize the business for managerial control
- Discuss the ethical implications of taxation and business decisions
- Develop a practical understanding and application of specific actions, processes, and techniques needed to move into the "next generation" of organizations
- Develop financial reports to meet business expansion needs
- Apply product costing techniques in the development of a master budget from a strategic perspective



# MBA-ACC PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-ACC program must complete all of the following courses:

| Course No.                                 | Course Name                            | Hrs.      |
|--------------------------------------------|----------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                        |           |
| ECON616                                    | Applied Managerial Economics           | 4         |
| FINC615                                    | Applied Managerial Finance             | 4         |
| IT600                                      | Information Technology Management      | 4         |
| MGMT600                                    | Applied Managerial Decision-making     | 4         |
| INTD670                                    | Leadership and Ethical Decision-making | 4         |
| ACCT614                                    | Applied Managerial Accounting          | 4         |
| <b>MBA-ACC REQUIREMENTS</b>                |                                        |           |
| ACCT618                                    | Taxation and Business Decisions        | 4         |
| ACCT624                                    | Advanced Cost Accounting               | 4         |
| ACCT628                                    | Financial Reporting                    | 4         |
| ACCT634                                    | Accounting Information Systems         | 4         |
| ACCT644                                    | Management Control and Auditing        | 4         |
| ACCT660                                    | Accounting Capstone                    | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                        | <b>48</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Financial Reporting (ACCT618, ACCT628, ACCT634, ACCT644)  
Management Accounting and Control (ACCT624, ACCT634, ACCT644)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA). The student who meets the unique requirements of the State Board of Accounting in their state's Application for CPA Licensure is qualified to sit for the CPA exam.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN ACCOUNTING (MBA-ACC) ONLINE

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of personal financial advisors. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory roles. In addition to openings resulting from growth, the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The Master of Business Administration in Accounting is a program for students with a bachelor's degree in accounting or related fields. This program provides students with strong theoretical foundations and professional skills in the main functional areas of accounting, including financial reporting and assurance, management control and auditing, and taxation.

## PROGRAM OUTCOMES

- Perform an audit review and prepare the appropriate documentation
- Describe how accounting information is used in implementing management policy
- Utilize accounting information to evaluate how to organize the business for managerial control
- Discuss the ethical implications of taxation and business decisions
- Develop a practical understanding and application of specific actions, processes, and techniques needed to move into the "next generation" of organizations
- Develop financial reports to meet business expansion needs
- Apply product costing techniques in the development of a master budget from a strategic perspective

100% ONLINE

# MBA-ACC PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-ACC program must complete all of the following courses:

| Course No.                                 | Course Name                              | Hrs.      |
|--------------------------------------------|------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                          |           |
| ACC614                                     | Applied Managerial Accounting            | 4         |
| INTD670                                    | Leadership and Ethical Decision-making   | 4         |
| MGM600                                     | Applied Managerial Decision-making       | 4         |
| MGM625                                     | Applied Finance for Decision-making      | 5         |
| MGM626                                     | Economics for Decision-making            | 5         |
| <b>MBA-ACC REQUIREMENTS</b>                |                                          |           |
| ACC618                                     | Taxation and Business Decisions          | 5         |
| ACC624                                     | Advanced Cost Accounting                 | 5         |
| ACC628                                     | Financial Reporting                      | 5         |
| ACC634                                     | Accounting Information Systems           | 5         |
| ACC642                                     | Advanced Auditing and Management Control | 6         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                          | <b>48</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Financial Reporting (ACC618, ACC628, ACC634, ACC644)

Management Accounting and Control (ACC624, ACC634, ACC644)

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# MASTER OF

## BUSINESS ADMINISTRATION (MBA)

The MBA is a professional degree intended for those who aspire to increasing levels of responsibility in business and industry. An MBA is an investment in the graduate's future. This degree program is designed to provide each student with a breadth of skills ranging from accounting to project management. The program revolves around managerial skills required in planning, organizing and controlling work in organizations, and focuses on directing, coaching and motivating people for effective performance. In addition, this program is designed to help the student understand various management theories, essential management functions and their interrelationships, and the global environment of today's business.

### PROGRAM OUTCOMES

- Demonstrate an understanding of effective, ethical leadership strategies and skills
- Conduct professional applied research
- Demonstrate competence in the chosen field
- Communicate information effectively
- Work effectively as problem-solving team members
- Understand the implications of the internet on today's business
- Demonstrate an understanding of the major functional areas of business administration including the critical skills necessary to analyze and solve business problems
- Show a mastery of mathematics, statistics, accounting, finance, and economics to a sufficient degree to apply quantitative reasoning and analysis to business and management problems

# MBA PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA program must complete all of the following courses:

### Course No. Course Name

#### MBA CORE PROGRAM REQUIREMENTS

|         |                                        |
|---------|----------------------------------------|
| ECON616 | Applied Managerial Economics           |
| FINC615 | Applied Managerial Finance             |
| IT600   | Information Technology Management      |
| MGMT600 | Applied Managerial Decision-making     |
| INTD670 | Leadership and Ethical Decision-making |
| ACCT614 | Applied Managerial Accounting          |

#### MBA – ADDITIONAL PROGRAM REQUIREMENTS

|         |                                                              |
|---------|--------------------------------------------------------------|
| PM600   | Project Management Processes in Organizations                |
| SCM610  | Logistics/Supply Chain Management Inventory and Distribution |
| HRMT640 | Strategic Human Resources Management                         |
| MGMT660 | Management Capstone                                          |

#### Campus Option (1 Course)

|         |                              |
|---------|------------------------------|
| MKTG630 | Applied Managerial Marketing |
| or      |                              |
| MGMT604 | Organizational Behavior      |

#### TOTAL PROGRAM QUARTER CREDIT HOURS:

### Hrs.

4  
4  
4  
4  
4  
4

4  
4  
4  
4

4  
4

44

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Business Management (IT600, MGMT604, MKTG630, PM600)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF

## BUSINESS ADMINISTRATION (MBA) ONLINE

The MBA is a professional degree intended for those who aspire to increasing levels of responsibility in business and industry. An MBA is an investment in the graduate's future. This degree program is designed to provide each student with a breadth of skills ranging from accounting to project management. The program revolves around managerial skills required in planning, organizing and controlling work in organizations, and focuses on directing, coaching and motivating people for effective performance. In addition, this program is designed to help the student understand various management theories, essential management functions and their interrelationships, and the global environment of today's business.

### PROGRAM OUTCOMES

- Demonstrate an understanding of effective, ethical leadership strategies and skills
- Conduct professional applied research
- Demonstrate competence in the chosen field
- Communicate information effectively
- Work effectively as problem-solving team members
- Understand the implications of the internet on today's business
- Demonstrate an understanding of the major functional areas of business administration including the critical skills necessary to analyze and solve business problems
- Show a mastery of mathematics, statistics, accounting, finance, and economics to a sufficient degree to apply quantitative reasoning and analysis to business and management problems



# MBA PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA program must complete all of the following courses:

### Course No. Course Name

#### MBA CORE PROGRAM REQUIREMENTS

|         |                                               |   |
|---------|-----------------------------------------------|---|
| INTD670 | Leadership and Ethical Decision-making        | 4 |
| IT601   | Information Technology in Business Management | 4 |
| MGM600  | Applied Managerial Decision-making            | 4 |
| MGM624  | Applied Accounting for Decision-making        | 5 |
| MGM625  | Applied Finance for Decision-making           | 5 |
| MGM626  | Economics for Decision-making                 | 5 |

#### MBA – PROGRAM REQUIREMENTS

|        |                                               |   |
|--------|-----------------------------------------------|---|
| MGM630 | Applied Managerial Marketing                  | 4 |
| MPM650 | Project Management Processes in Organizations | 5 |
| HRM620 | Managing Organization Development and Change  | 4 |
| MGM661 | MBA Capstone 1                                | 2 |
| MGM662 | MBA Capstone 2                                | 2 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 44

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM600, MGM624, MGM625, MGM626)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN FINANCE (MBA-FIN)

The Master of Business Administration in Finance combines graduate business administration skills with an emphasis on finance. This concentration helps students understand how to analyze financial information to make decisions to enhance business success. Ethical issues in finance and financial management for multinational enterprises are also covered.

## PROGRAM OUTCOMES

- Make financial decisions that build the value of the organization
- Employ sound financial reasoning in business planning, operation, and assessment
- Effectively research, analyze, and interpret financial information to influence managerial decision making
- Develop change-agent skills that reflect critical and creative thinking

# MBA-FIN PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-FIN program must complete all of the following courses:

| Course No.                                 | Course Name                                        | Hrs.      |
|--------------------------------------------|----------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                    |           |
| ECON616                                    | Applied Managerial Economics                       | 4         |
| FINC615                                    | Applied Managerial Finance                         | 4         |
| IT600                                      | Information Technology Management                  | 4         |
| MGMT600                                    | Applied Managerial Decision-making                 | 4         |
| INTD670                                    | Leadership and Ethical Decision-making             | 4         |
| ACCT614                                    | Applied Managerial Accounting                      | 4         |
| <b>MBA-FIN REQUIREMENTS</b>                |                                                    |           |
| FINC600                                    | Financial Statement Analysis                       | 4         |
| FINC605                                    | Corporate Portfolio Management                     | 4         |
| FINC610                                    | Financial Management for Multinational Enterprises | 4         |
| FINC660                                    | Finance Capstone                                   | 4         |
| <b>Campus Selection Option (1 Course)</b>  |                                                    |           |
| MKTG630                                    | Applied Managerial Marketing                       | 4         |
| or                                         |                                                    |           |
| MGMT604                                    | Organizational Behavior                            | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                    | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN FINANCE (MBA-FIN) ONLINE

The Master of Business Administration in Finance combines graduate business administration skills with an emphasis on finance. This concentration helps students understand how to analyze financial information to make decisions to enhance business success. Ethical issues in finance and financial management for multinational enterprises are also covered.

## PROGRAM OUTCOMES

- Make financial decisions that build the value of the organization
- Employ sound financial reasoning in business planning, operation, and assessment
- Effectively research, analyze, and interpret financial information to influence managerial decision making
- Develop change-agent skills that reflect critical and creative thinking
- Demonstrate an understanding of effective, ethical leadership strategies and skills
- Conduct professional applied research

# MBA-FIN PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-FIN program must complete all of the following courses:

| Course No.                                 | Course Name                                        | Hrs.      |
|--------------------------------------------|----------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                    |           |
| IT601                                      | Information Technology in Business Management      | 4         |
| MGM600                                     | Applied Managerial Decision-making                 | 4         |
| MGM624                                     | Applied Accounting for Decision-making             | 5         |
| MGM625                                     | Applied Finance for Decision-making                | 5         |
| MGM626                                     | Economics for Decision-making                      | 5         |
| INTD670                                    | Leadership and Ethical Decision-making             | 4         |
| <b>MBA-FIN REQUIREMENTS</b>                |                                                    |           |
| FIN600                                     | Financial Statement Analysis                       | 4         |
| FIN605                                     | Corporate Portfolio Management                     | 4         |
| FIN610                                     | Financial Management for Multinational Enterprises | 5         |
| FIN661                                     | Finance Capstone 1                                 | 2         |
| FIN662                                     | Finance Capstone 2                                 | 2         |
| MGM630                                     | Applied Managerial Marketing                       | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                    | <b>48</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM600, MGM624, MGM625, MGM626)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN HEALTHCARE MANAGEMENT (MBA-HCM)

The MBA-HCM degree program combines graduate business administration skills with an emphasis on healthcare management. This concentration covers a range of skills relevant to the healthcare environment, including management concepts and processes, resource allocation, risk assessment, and financing. These concepts are applied within the ethical, legal, and policy framework of the healthcare environment advantage.

### PROGRAM OUTCOMES

- Apply sound business principles and practices to the unique field of healthcare
- Coordinate resources effectively within legal, regulatory, and ethical constraints
- Demonstrate visionary leadership skills by creating innovative solutions to management problems
- Apply critical thinking to the diverse disciplines found in healthcare organizations
- Demonstrate change agent skills that reflect critical and creative thinking regarding human resource management issues
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies

# MBA-HCM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-HCM program must complete all of the following courses:

| Course No.                                 | Course Name                                      | Hrs.      |
|--------------------------------------------|--------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                  |           |
| ECON616                                    | Applied Managerial Economics                     | 4         |
| FINC615                                    | Applied Managerial Finance                       | 4         |
| IT600                                      | Information Technology Management                | 4         |
| MGMT600                                    | Applied Managerial Decision-making               | 4         |
| INTD670                                    | Leadership and Ethical Decision-making           | 4         |
| ACCT614                                    | Applied Managerial Accounting                    | 4         |
| <b>MBA-HCM REQUIREMENTS</b>                |                                                  |           |
| HCM612                                     | Managing the Healthcare Organization             | 4         |
| HCM621                                     | Ethics, Policy, and Law in Healthcare Management | 4         |
| HCM631                                     | Systems in Healthcare                            | 4         |
| HCM660                                     | Healthcare Capstone                              | 4         |
| <b>Campus Selection Option (1 Course)</b>  |                                                  |           |
| MKTG630                                    | Applied Managerial Marketing                     | 4         |
| or                                         |                                                  |           |
| MGMT604                                    | Organizational Behavior                          | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                  | <b>45</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN HEALTHCARE MANAGEMENT (MBA-HCM) ONLINE

The MBA-HCM degree program combines graduate business administration skills with an emphasis on healthcare management. This concentration covers a range of skills relevant to the healthcare environment, including management concepts and processes, resource allocation, risk assessment, and financing. These concepts are applied within the ethical, legal, and policy framework of the healthcare environment advantage.

### PROGRAM OUTCOMES

- Apply sound business principles and practices to the unique field of healthcare
- Coordinate resources effectively within legal, regulatory, and ethical constraints
- Demonstrate visionary leadership skills by creating innovative solutions to management problems
- Apply critical thinking to the diverse disciplines found in healthcare organizations
- Demonstrate change agent skills that reflect critical and creative thinking regarding human resource management issues
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies

# MBA-HCM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-HCM program must complete all of the following courses:

| Course No.                                 | Course Name                                      | Hrs.      |
|--------------------------------------------|--------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                  |           |
| IT601                                      | Information Technology in Business Management    | 4         |
| MGM600                                     | Applied Managerial Decision-making               | 4         |
| MGM624                                     | Applied Accounting for Decision-making           | 5         |
| MGM625                                     | Applied Finance for Decision-making              | 5         |
| MGM626                                     | Economics for Decision-making                    | 5         |
| MGM630                                     | Applied Managerial Marketing                     | 4         |
| <b>MBA-HCM REQUIREMENTS</b>                |                                                  |           |
| HCM611                                     | Managing the Healthcare Organization             | 5         |
| HCM621                                     | Ethics, Policy, and Law in Healthcare Management | 4         |
| HCM631                                     | Systems in Healthcare                            | 4         |
| HCM661                                     | Healthcare Management Capstone 1                 | 2         |
| HCM662                                     | Healthcare Management Capstone 2                 | 2         |
| MGM604                                     | Organizational Behavior                          | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                  | <b>48</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM600, MGM624, MGM625, MGM626)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN HUMAN RESOURCE MANAGEMENT (MBA-HRM)

The MBA-HRM degree program is designed to prepare the graduate to integrate human resource functions into an organization's strategic plan. Every manager needs to be aware of the federal regulations that govern human resources and labor relations. In many companies, HR functions are being turned over to line managers and supervisors as a cost savings, while the actual HR functions are being outsourced to 1-800 numbers and Intranet sites. Thus, the department manager is being relied on more and more to be knowledgeable about HR issues. For this reason, the Human Resource Management concentration can be an excellent choice for those who wish to work in the management field.

### PROGRAM OUTCOMES

- Develop change-agent skills, especially related to critical and creative thinking, regarding human resource management issues
- Discuss the importance of strategic human resource planning and be able to participate in futuristic forecasting, and strategic planning processes
- Apply knowledge of the legal and ethical principles to human resource management decision making and policy development
- Resolve operational problems using knowledge and understanding principles and various functions of human resource management including models of compensation and benefits, selection, recruitment, succession planning, equal employment opportunity, employment rights, training, employee and organizational development
- Explain the impact of current trends in legal decisions on organizational policies and human resources impacts
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies

# MBA-HRM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-HRM program must complete all of the following courses:

| Course No.                                 | Course Name                                       | Hrs.      |
|--------------------------------------------|---------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                   |           |
| ECON616                                    | Applied Managerial Economics                      | 4         |
| FINC615                                    | Applied Managerial Finance                        | 4         |
| IT600                                      | Information Technology Management                 | 4         |
| MGMT600                                    | Applied Managerial Decision-making                | 4         |
| INTD670                                    | Leadership and Ethical Decision-making            | 4         |
| ACCT614                                    | Applied Managerial Accounting                     | 4         |
| <b>MBA-HRM REQUIREMENTS</b>                |                                                   |           |
| HRMT640                                    | Strategic Human Resource Management               | 4         |
| HRMT645                                    | Operational Human Resource Management             | 4         |
| HRMT650                                    | Current Legal Issues in Human Resource Management | 4         |
| HRMT655                                    | Managing Organizational Development and Change    | 4         |
| HRMT660                                    | Human Resource Management Capstone                | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                   | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Human Resource Management (HRMT640, HRMT645, HRMT650, HRMT655)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

### AFFILIATED WITH:



The Society for Human Resource Management  
CTU has met the requirements for affiliation with the Society of Human Resource Management. [www.shrm.org](http://www.shrm.org)



Colorado Technical University™



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN HUMAN RESOURCE MANAGEMENT (MBA-HRM) ONLINE

The MBA-HRM degree program is designed to prepare you to integrate human resource functions into an organization's strategic plan. Every manager needs to be aware of the federal regulations that govern human resources and labor relations. In many companies, HR functions are being turned over to line managers and supervisors as a cost savings, while the actual HR functions are being outsourced to 1-800 numbers and Intranet sites. Thus, the department manager is being relied on more and more to be knowledgeable about HR issues. For this reason, the Human Resource Management concentration can be an excellent choice for those who wish to work in the management field.

### PROGRAM OUTCOMES

- Develop change agent skills, especially related to critical and creative thinking, regarding human resource management issues
- Discuss the importance of strategic human resource planning and be able to participate in futuristic forecasting, and strategic planning processes
- Apply knowledge of the legal and ethical principles to human resource management decision making and policy development
- Resolve operational problems using knowledge and understanding principles and various functions of human resource management including models of compensation and benefits, selection, recruitment, succession planning, equal employment opportunity, employment rights, training, employee and organizational development
- Explain the impact of current trends in legal decisions on organizational policies and human resources impacts
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies

100% ONLINE

# MBA-HRM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-HRM program must complete all of the following courses:

| Course No.                                 | Course Name                                       | Hrs.      |
|--------------------------------------------|---------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                   |           |
| IT601                                      | Information Technology in Business Management     | 4         |
| MGM600                                     | Applied Managerial Decision-making                | 4         |
| MGM624                                     | Applied Accounting for Decision-making            | 5         |
| MGM625                                     | Applied Finance for Decision-making               | 5         |
| MGM626                                     | Economics for Decision-making                     | 5         |
| INTD670                                    | Leadership and Ethical Decision-making            | 4         |
| <b>MBA-HRM REQUIREMENTS</b>                |                                                   |           |
| HRM610                                     | Strategic Human Resource Management               | 5         |
| HRM620                                     | Managing Organizational Development and Change    | 4         |
| HRM635                                     | Current Legal Issues in Human Resource Management | 4         |
| HRM661                                     | Human Resource Management Capstone 1              | 2         |
| HRM662                                     | Human Resource Management Capstone 2              | 2         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                   | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM600, MGM624, MGM625, MGM626)  
Human Resource Management (HRM610, HRM620, HRM635)

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### AFFILIATED WITH:



The Society for Human Resource Management

CTU has met the requirements for affiliation with the Society of Human Resource Management. [www.shrm.org](http://www.shrm.org)



Colorado Technical University™

# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN INSURANCE AND RISK MANAGEMENT (MBA-IRM)

The Master of Business Administration in Insurance and Risk Management is designed for insurance professionals that have earned the Chartered Property Casualty Underwriter (CPCU) designation of the American Institute for CPCU (AICPCU) and Insurance Institute of American (IIA). Upon receipt of proof that an applicant to the University has successfully been awarded the CPCU designation, CTU will credit the applicant 16 quarter hours toward the MBA-IRM degree program. After a student has completed the MBA core, and the award of the CPCU has been validated, he/she will be enrolled in a two-course (8 quarter credit) capstone project under the supervision of a qualified faculty member. Once the capstone has been completed successfully, the student will be awarded the MBA-IRM degree.

### PROGRAM OUTCOMES

- Demonstrate proficiency in industry validated insurance and risk management skills by the successful completion of the CPCU designation, including:
  - CPCU foundation courses
  - CPCU commercial or personal concentration courses
  - CPCU ethics requirement
  - CPCU experience requirement
- Integrate insurance and risk management skills with sound business principles and practices
- Apply research skills to solve insurance and risk management problems
- Demonstrate change-agent skills using critical and creative thinking

# MBA-IRM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-IRM program must complete all of the following courses:

| Course No.                                 | Course Name                                  | Hrs.      |
|--------------------------------------------|----------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                              |           |
| ECON616                                    | Applied Managerial Economics                 | 4         |
| FINC615                                    | Applied Managerial Finance                   | 4         |
| IT600                                      | Information Technology Management            | 4         |
| MGMT600                                    | Applied Managerial Decision-making           | 4         |
| INTD670                                    | Leadership and Ethical Decision-making       | 4         |
| ACCT614                                    | Applied Managerial Accounting                | 4         |
| <b>MBA-IRM REQUIREMENTS</b>                |                                              |           |
| IRM681                                     | Insurance and Risk Management Capstone I     | 4         |
| IRM682                                     | Insurance and Risk Management Capstone II    | 4         |
| CPCU                                       | Transfer Credit (campus validation required) | 16        |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                              | <b>48</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN INSURANCE AND RISK MANAGEMENT (MBA-IRM) ONLINE

The Master of Business Administration in Insurance and Risk Management is designed for insurance professionals that have earned the Chartered Property Casualty Underwriter (CPCU) designation of the American Institute for CPCU (AICPCU) and Insurance Institute of American (IIA). Upon receipt of proof that an applicant to the University has successfully been awarded the CPCU designation, CTU will credit the applicant 16 quarter hours toward the MBA-IRM degree program. After a student has completed the MBA core, and the award of the CPCU has been validated, he/she will be enrolled in a two-course capstone project under the supervision of a qualified faculty member. Once the capstone has been completed successfully, the student will be awarded the MBA-IRM degree.

### PROGRAM OUTCOMES

- Demonstrate proficiency in industry validated insurance and risk management skills by the successful completion of the CPCU designation, including:
  - CPCU foundation courses
  - CPCU commercial or personal concentration courses
  - CPCU ethics requirement
  - CPCU experience requirement
  - Integrate insurance and risk management skills with sound business principles and practices
- Apply research skills to solve insurance and risk management problems
- Demonstrate change-agent skills using critical and creative thinking

# MBA-IRM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-IRM program must complete all of the following courses:

Course No. Course Name

### MBA CORE PROGRAM REQUIREMENTS

| Course No. | Course Name                                   | Hrs. |
|------------|-----------------------------------------------|------|
| IT601      | Information Technology in Business Management | 4    |
| MGM600     | Applied Managerial Decision-making            | 4    |
| MGM624     | Applied Accounting for Decision-making        | 5    |
| MGM625     | Applied Finance for Decision-making           | 5    |
| MGM626     | Economics for Decision-making                 | 5    |

### MBA-IRM REQUIREMENTS

|        |                                              |    |
|--------|----------------------------------------------|----|
| IRM681 | Insurance and Risk Management Capstone I     | 4  |
| IRM682 | Insurance and Risk Management Capstone II    | 4  |
| CPCU   | Transfer Credit (campus validation required) | 16 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 47

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM600, MGM626, MGM625, MGM624)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN LOGISTICS / SUPPLY CHAIN MANAGEMENT (MBA-L/SCM)

The MBA-L/SCM is a comprehensive program that is designed to build a generalist foundation that emphasizes the application of critical thinking and management skills in today's business environment. Students will understand how to apply the detailed functional aspects of logistics and supply chain management from a global, international, and domestic perspective.

### PROGRAM OUTCOMES

- Demonstrate an understanding of the relevance and applicability of logistics and supply chain methodologies to businesses operating in a global environment
- Conduct scholarly research in the fields of logistics and supply chain management
- Apply managerial logistics and supply chain philosophy and concepts, as well as quantitative and qualitative methodologies to product design, warehousing, distribution, procurements, and contracting decisions
- Design an integrated supply chain system from the raw material to delivery to the end customer; including reverse logistics considerations

# MBA-L/SCM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-L/SCM program must complete all of the following courses:

| Course No.                                 | Course Name                                                  | Hrs.      |
|--------------------------------------------|--------------------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                              |           |
| ECON616                                    | Applied Managerial Economics                                 | 4         |
| FINC615                                    | Applied Managerial Finance                                   | 4         |
| IT601                                      | Information Technology in Business Management                | 4         |
| MGMT600                                    | Applied Managerial Decision-making                           | 4         |
| INTD670                                    | Leadership and Ethical Decision-making                       | 4         |
| ACCT614                                    | Applied Managerial Accounting                                | 4         |
| <b>MBA-L/SCM REQUIREMENTS</b>              |                                                              |           |
| SCM610                                     | Logistics/Supply Chain Management Inventory and Distribution | 4         |
| SCM620                                     | Design and Production Considerations                         | 4         |
| SCM630                                     | Supply Chain/Logistics Cost Analysis                         | 4         |
| SCM660                                     | Global Supply Chain Management Capstone                      | 4         |
| <b>Campus Selection Option (1 Course)</b>  |                                                              |           |
| MKTG630                                    | Applied Managerial Marketing                                 | 4         |
| or                                         |                                                              |           |
| MGMT604                                    | Organizational Behavior                                      | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                              | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Logistics/Supply Chain Management (SCM610, SCM620, SCM630)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

### AFFILIATED WITH:



The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF)  
The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF) endorse the Master of Science in Management with a concentration in Logistics/Supply Chain Management and associated certificate programs.  
[www.sole.org](http://www.sole.org)



Colorado Technical University™



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN LOGISTICS / SUPPLY CHAIN MANAGEMENT (MBA-L/SCM) ONLINE

The MBA-L/SCM is a comprehensive program that is designed to build a generalist foundation that emphasizes the application of critical thinking and management skills in today's business environment. Students will understand how to apply the detailed functional aspects of logistics and supply chain management from a global, international, and domestic perspective.

### PROGRAM OUTCOMES

- Demonstrate an understanding of the relevance and applicability of logistics and supply chain methodologies to businesses operating in a global environment
- Conduct scholarly research in the fields of logistics and supply chain management
- Apply managerial logistics and supply chain philosophy and concepts, as well as quantitative and qualitative methodologies to product design, warehousing, distribution, procurements, and contracting decisions
- Design an integrated supply chain system from the raw material to delivery to the end customer; including reverse logistics considerations

# MBA-L/SCM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-L/SCM program must complete all of the following courses:

| Course No.                                 | Course Name                                                  | Hrs.      |
|--------------------------------------------|--------------------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                              |           |
| MGM624                                     | Applied Accounting for Decision Making                       | 5         |
| MGM626                                     | Economics for Decision-making                                | 5         |
| MGM625                                     | Applied Finance for Decision-making                          | 5         |
| INTD670                                    | Leadership and Ethical Decision-making                       | 4         |
| IT601                                      | Information Technology in Business Management                | 4         |
| MGM600                                     | Applied Managerial Decision-making                           | 4         |
| <b>MBA-L/SCM REQUIREMENTS</b>              |                                                              |           |
| MGM630                                     | Applied Managerial Marketing                                 | 4         |
| SCM610                                     | Logistics/Supply Chain Management Inventory and Distribution | 4         |
| SCM620                                     | Design and Production Considerations                         | 4         |
| SCM630                                     | Supply Chain/Logistics Cost Analysis                         | 4         |
| SCM661                                     | Supply Chain Capstones 1                                     | 2         |
| SCM662                                     | Supply Chain Capstones 2                                     | 2         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                              | <b>47</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM624, MGM626, MGM625, MGM600)  
Logistics/Supply Chain Management (SCM610, SCM620, SCM630)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

### AFFILIATED WITH:



The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF)  
The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF) endorse the Master of Science in Management with a concentration in Logistics/Supply Chain Management and associated certificate programs.  
[www.sole.org](http://www.sole.org)



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN MARKETING (MBA-MKTG)

The MBA-Marketing degree is focused on the skills needed to make critical marketing decisions for businesses and organizations. Marketing research is crucial to analyzing and understanding data and trends. As increasing numbers of companies look to expand into global markets, individuals with a grasp of cultural, ethical, and legal implications of international marketing will be in high demand. The field of marketing has been, and is being, transformed by technology; successful leaders need to be ready to adapt and leverage this technology to gain competitive advantage.

## PROGRAM OUTCOMES

- Demonstrate mastery of marketing research, international marketing, e-marketing, and customer relationship management skills
- Adapt marketing strategies globally using critical thinking, ethics, and cross-cultural understanding
- Manage the expected growth in global competition creatively
- Develop effective marketing plans including pricing, product placement, and promotion of goods and services
- Demonstrate change-agent skills using critical and creative thinking

MASTER  
70

OF BUSINESS ADMINISTRATION

# MBA-MKTG PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-MKTG program must complete all of the following courses:

| Course No.                                 | Course Name                            | Hrs.      |
|--------------------------------------------|----------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                        |           |
| ECON616                                    | Applied Managerial Economics           | 4         |
| FINC615                                    | Applied Managerial Finance             | 4         |
| IT600                                      | Information Technology Management      | 4         |
| MGMT600                                    | Applied Managerial Decision-making     | 4         |
| INTD670                                    | Leadership and Ethical Decision-making | 4         |
| ACCT614                                    | Applied Managerial Accounting          | 4         |
| <b>MBA-MKTG REQUIREMENTS</b>               |                                        |           |
| MKTG618                                    | Marketing Research Methods             | 4         |
| MKTG628                                    | Marketing in the Digital Age           | 4         |
| MKTG638                                    | International Marketing                | 4         |
| MKTG660                                    | Marketing Capstone                     | 4         |
| <b>Campus Selection Option (1 Course)</b>  |                                        |           |
| MKTG630                                    | Applied Managerial Marketing           | 4         |
| or                                         |                                        |           |
| MGMT604                                    | Organizational Behavior                | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                        | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)  
Marketing Management (MKTG618, MKTG628, MKTG638)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN MARKETING (MBA-MKT) ONLINE

The MBA-Marketing degree is focused on the skills needed to make critical marketing decisions for businesses and organizations. Marketing research is crucial to analyzing and understanding data and trends. As increasing numbers of companies look to expand into global markets, individuals with a grasp of cultural, ethical, and legal implications of international marketing will be in high demand. The field of marketing has been, and is being, transformed by technology; successful leaders need to be ready to adapt and leverage this technology to gain competitive advantage.

### PROGRAM OUTCOMES

- Demonstrate mastery of marketing research, international marketing, e-marketing, and customer relationship management skills
- Adapt marketing strategies globally using critical thinking, ethics, and cross-cultural understanding
- Manage the expected growth in global competition creatively
- Develop effective marketing plans including pricing, product placement, and promotion of goods and services
- Demonstrate change-agent skills using critical and creative thinking

# MBA-MKT PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-MKT program must complete all of the following courses:

| Course No.                                 | Course Name                                   | Hrs.      |
|--------------------------------------------|-----------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                               |           |
| INTD670                                    | Leadership and Ethical Decision-making        | 4         |
| IT601                                      | Information Technology in Business Management | 4         |
| MGM600                                     | Applied Managerial Decision-making            | 4         |
| MGM624                                     | Applied Accounting for Decision-making        | 5         |
| MGM625                                     | Applied Finance for Decision-making           | 5         |
| MGM626                                     | Economics for Decision-making                 | 5         |
| <b>MBA-MKT REQUIREMENTS</b>                |                                               |           |
| MKT618                                     | Marketing Research Methods                    | 5         |
| MKT628                                     | Marketing in the Digital Age                  | 4         |
| MKT638                                     | International Marketing                       | 4         |
| MKT661                                     | Marketing Capstone 1                          | 2         |
| MKT662                                     | Marketing Capstone 2                          | 2         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                               | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM600, MGM624, MGM625, MGM626)  
Marketing Management (MKT618, MKT628, MKT638)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN MEDIATION AND DISPUTE RESOLUTION (MBA-MDR)

The MBA-MDR degree program is designed for mediation professionals that have earned the Advanced Practitioner of Mediation (APM) designation of the Institute of Advanced Dispute Resolution (IADR). Upon receipt of proof that an applicant to the University has successfully been awarded the APM designation, CTU will credit the applicant 12 quarter hours toward the MBA-MDR degree program. After a student has completed the MBA-MDR core, and the award of the APM has been validated, he/she will be enrolled in a two-course capstone project.

### PROGRAM OUTCOMES

- Demonstrate proficiency in industry validated mediation and dispute resolution skills by the successful completion of the APM designation, including:
  - APM core course
  - APM specialization courses
- Demonstrate an understanding of the major functional areas of business administration including the critical skills necessary to analyze and solve business problems
- Show a mastery of mathematics, statistics, accounting, finance, and economics to a sufficient degree to apply quantitative reasoning and analysis to business and management problems
- Demonstrate effective, ethical leadership strategies and skills
- Conduct professional applied research
- Communicate information effectively
- Work effectively as problem-solving team members

# MBA-MDR PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-MDR program must complete all of the following courses:

### Course No. Course Name

#### MBA CORE PROGRAM REQUIREMENTS

|         |                                        |   |
|---------|----------------------------------------|---|
| ECON616 | Applied Managerial Economics           | 4 |
| FINC615 | Applied Managerial Finance             | 4 |
| IT600   | Information Technology Management      | 4 |
| MGMT600 | Applied Managerial Decision-making     | 4 |
| INTD670 | Leadership and Ethical Decision-making | 4 |
| ACCT614 | Applied Managerial Accounting          | 4 |

#### MBA-MDR REQUIREMENTS

|        |                                              |    |
|--------|----------------------------------------------|----|
| MDR680 | Mediation and Dispute Resolution Capstone I  | 4  |
| MDR681 | Mediation and Dispute Resolution Capstone II | 4  |
| APM    | Transfer credit (campus validation required) | 12 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 44**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN MEDIATION AND DISPUTE RESOLUTION (MBA-MDR) ONLINE

The MBA-MDR degree program is designed for mediation professionals that have earned the Advanced Practitioner of Mediation (APM) designation of the Institute of Advanced Dispute Resolution (IADR). Upon receipt of proof that an applicant to the University has successfully been awarded the APM designation, CTU will credit the applicant 12 quarter hours toward the MBA-MDR degree program. After a student has completed the MBA-MDR core, and the award of the APM has been validated, he/she will be enrolled in a two-course capstone project.

### PROGRAM OUTCOMES

- Demonstrate proficiency in industry validated mediation and dispute resolution skills by the successful completion of the APM designation, including:
  - APM core course
  - APM specialization courses
- Demonstrate an understanding of the major functional areas of business administration including the critical skills necessary to analyze and solve business problems
- Show a mastery of mathematics, statistics, organizational behaviors, accounting, and finance, to a sufficient degree to apply quantitative reasoning and analysis to business and management problems
- Conduct professional applied research
- Communicate information effectively
- Work effectively as problem-solving team members

# MBA-MDR PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-MDR program must complete all of the following courses:

| Course No.                                 | Course Name                                   | Hrs.      |
|--------------------------------------------|-----------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                               |           |
| IT601                                      | Information Technology in Business Management | 4         |
| MGM600                                     | Applied Managerial Decision-making            | 4         |
| MGM604                                     | Organizational Behavior                       | 4         |
| MGM624                                     | Applied Accounting for Decision-making        | 5         |
| MGM625                                     | Applied Finance for Decision-making           | 5         |
| MGM630                                     | Applied Managerial Marketing                  | 4         |
| <b>MBA-MDR REQUIREMENTS</b>                |                                               |           |
| MDR680                                     | Mediation and Dispute Resolution Capstone I   | 4         |
| MDR681                                     | Mediation and Dispute Resolution Capstone II  | 4         |
| APM                                        | Transfer credit (campus validation required)  | 12        |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                               | <b>46</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM600, MGM624, MGM625, MGM626) [Note: MGM630 is substituted for MGM626]

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN OPERATIONS MANAGEMENT (MBA-OM)

The Master of Business Administration with a concentration in Operations Management (MBA-OM) degree program is designed to prepare students to lead organizations in the planning, development, operation, and management of business systems. The program combines the technical aspects of operating systems with the practical aspects of contemporary business environment. The curriculum blends skills, such as project management, system operations and business related with organizational skills in the major areas of business management.

### PROGRAM OUTCOMES

- Demonstrate an understanding of the relevance and applicability of operational considerations and logistics and supply chain methodologies to businesses operating in a global environment
- Conduct scholarly research in the field of operations related management
- Apply managerial operational philosophy and concepts, as well as quantitative and qualitative methodologies to product design, warehousing, distribution, procurements, and contracting decisions
- Design an integrated operating system from the raw material to delivery to the end customer; including reverse logistics considerations

# MBA-OM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-OM program must complete all of the following courses:

| Course No. | Course Name | Hrs. |
|------------|-------------|------|
|------------|-------------|------|

### MBA CORE PROGRAM REQUIREMENTS

|         |                                        |   |
|---------|----------------------------------------|---|
| ECON616 | Applied Managerial Economics           | 4 |
| FINC615 | Applied Managerial Finance             | 4 |
| IT600   | Information Technology Management      | 4 |
| MGMT600 | Applied Managerial Decision-making     | 4 |
| INTD670 | Leadership and Ethical Decision-making | 4 |
| ACCT614 | Applied Managerial Accounting          | 4 |

### MBA-OM REQUIREMENTS

|         |                                          |   |
|---------|------------------------------------------|---|
| MGMT646 | Managing Service Operations              | 4 |
| MGMT647 | Operations Strategy                      | 4 |
| MGMT645 | Operations Management Capstone           | 4 |
| MGMT640 | Operations Management                    | 4 |
| PM610   | Project Planning, Execution, and Closure | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**Hrs.**

4  
4  
4  
4  
4  
4

4  
4  
4  
4  
4

**44**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Operations Management (MGMT640, MGMT646, MGMT647, PM610)

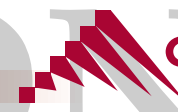
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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

### AFFILIATED WITH:



The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF)  
The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF) endorse the Master of Science in Management with a concentration in Logistics/Supply Chain Management and associated certificate programs.  
[www.sole.org](http://www.sole.org)



**Colorado Technical University™**



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN OPERATIONS MANAGEMENT (MBA-OM) ONLINE

The Master of Business Administration with a concentration in Operations Management (MBA-OM) degree program is designed to prepare students to lead organizations in the planning, development, operation, and management of business systems. The program combines the technical aspects of operating systems with the practical aspects of contemporary business environment. The curriculum blends skills, such as project management, analysis of operations strategy and effective service operations with organizational skills in the major areas of business management.

### PROGRAM OUTCOMES

- Demonstrate an understanding of the relevance and applicability of operational considerations to businesses operating in a global environment
- Design and evaluate operating systems
- Apply the principles of operations management to both products and services
- Develop an effective operations strategy

100% ONLINE

# MBA-OM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-OM program must complete all of the following courses:

| Course No.                                 | Course Name                                   | Hrs.      |
|--------------------------------------------|-----------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                               |           |
| IT601                                      | Information Technology in Business Management | 4         |
| MGM600                                     | Applied Managerial Decision-making            | 4         |
| ACC614                                     | Applied Managerial Accounting                 | 4         |
| MGM625                                     | Applied Finance for Decision-making           | 5         |
| MGM626                                     | Economics for Decision-making                 | 5         |
| INTD670                                    | Leadership and Ethical Decision-making        | 4         |
| <b>MBA-OM REQUIREMENTS</b>                 |                                               |           |
| MGM640                                     | Operations Management                         | 4         |
| MGM641                                     | Operations Management Capstone 1              | 2         |
| MPM655                                     | Project Planning, Execution, and Closure      | 5         |
| MGM642                                     | Operations Management Capstone 2              | 2         |
| MGM646                                     | Managing Service Operations                   | 4         |
| MGM647                                     | Operations Strategy                           | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                               | <b>47</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGM600, ACC614, MGM625, MGM626)  
Operations Management (MGM640, MPM655, MGM647, MGM646)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN PROJECT MANAGEMENT (MBA-PM)

The MBA-PM degree program is designed to provide the tools, techniques and skills needed to effectively manage projects. The curriculum covers in detail the nine knowledge areas specified by the Project Management Institute (PMI) in the Project Management Body of Knowledge (PMBOK), the industry standard for project management. In addition, the program integrates business foundation courses with the theory and the practice of project management in order to prepare well-equipped and skilled project managers.

### PROGRAM OUTCOMES

- Apply the project management process and knowledge areas to a project
- Establish a project office with appropriate structure, personnel and processes
- Analyze project scope and identify project key tasks and stakeholders
- Develop a detailed list of project tasks and arrange them in a project work breakdown structure
- Construct and implement an approach for using contracting and procurement activities to fulfill project goals
- Assemble project tasks into a project schedule, determine task time, order of precedence and resources required
- Create and implement a proactive risk management and quality plan. Assess potential and actual risks. Develop contingency plans. Mitigate the effects of risks
- Prepare a project plan and establish a project cost/schedule baseline
- Assess project status against the project baseline using earned value and other analysis tools. Initiate corrective action

# MBA-PM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-PM program must complete all of the following courses:

| Course No.                                 | Course Name                                       | Hrs.      |
|--------------------------------------------|---------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENTS</b>       |                                                   |           |
| ECON616                                    | Applied Managerial Economics                      | 4         |
| FINC615                                    | Applied Managerial Finance                        | 4         |
| IT600                                      | Information Technology Management                 | 4         |
| MGMT600                                    | Applied Managerial Decision-making                | 4         |
| INTD670                                    | Leadership and Ethical Decision-making            | 4         |
| ACCT614                                    | Applied Managerial Accounting                     | 4         |
| <b>MBA-PM REQUIREMENTS</b>                 |                                                   |           |
| PM600                                      | Project Management Processes in Organizations     | 4         |
| PM610                                      | Project Planning, Execution and Closure           | 4         |
| PM620                                      | Schedule and Cost Control Techniques              | 4         |
| PM630                                      | Contracting and Procurement in Project Management | 4         |
| PM660                                      | Project Management Capstone                       | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                   | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)  
Project Management (PM600, PM610, PM620, PM630)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

### REGISTERED BY:



Project Management Institute, Registered Education Provider  
CTU is a recognized provider with the Project Management Institute (PMI®) Educational Provider Program (PMI R.E.P.).

Colorado Technical University's Master of Business Administration with a concentration in Project Management, Master of Science in Management with a concentration in IT, Project Management, Bachelor of Science in Project Management and the professional certificates in project management prepare students to take PMI's Project Management Professional® certification.  
[www.pmi.org](http://www.pmi.org)



**Colorado Technical University™**



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN TECHNOLOGY MANAGEMENT (MBA-TM)

The MBA-TM degree program is designed to prepare the graduate to assist and lead organizations in the planning, development, operation and management of information technology systems. The program combines the technical aspects of information systems with the practical aspects of contemporary business. The curriculum blends information technology skills, such as database management, networking and telecommunications systems, with organizational skills in the major areas of business.

### PROGRAM OUTCOMES

- Explain the major functional areas of business administration including the critical skills necessary to analyze and solve business problems
- Apply quantitative reasoning and analysis to business and management problems
- Conduct professional applied research
- Manage the relational database application life cycle and the relational database management system environment
- Define the relational data model and determine if a given database satisfies the properties of a relational database
- Define the OSI network model and implementations as they are used in computer and voice networks
- Define network transmission methods and describe network device operations
- Describe the protocols used for network data transport

# MBA-TM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-TM program must complete all of the following courses:

Course No. Course Name

### MBA CORE PROGRAM REQUIREMENTS

|         |                                        |   |
|---------|----------------------------------------|---|
| ECON616 | Applied Managerial Economics           | 4 |
| FINC615 | Applied Managerial Finance             | 4 |
| IT600   | Information Technology Management      | 4 |
| MGMT600 | Applied Managerial Decision-making     | 4 |
| INTD670 | Leadership and Ethical Decision-making | 4 |
| ACCT614 | Applied Managerial Accounting          | 4 |

### MBA-TM REQUIREMENTS

|       |                                               |   |
|-------|-----------------------------------------------|---|
| IT610 | Relational Database Management Systems        | 4 |
| IT640 | Networking and Telecommunications             | 4 |
| PM600 | Project Management Processes in Organizations | 4 |
| PM610 | Project Planning, Execution and Closure       | 4 |
| IT651 | Technology Management Capstone                | 4 |

TOTAL PROGRAM QUARTER CREDIT HOURS: 44

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)  
Technology Management (IT600, IT610, IT640, PM600)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN TECHNOLOGY MANAGEMENT (MBA-TM) ONLINE

The MBA-TM degree program is designed to prepare the graduate to assist and lead organizations in the planning, development, operation and management of information technology systems. The program combines the technical aspects of information systems with the practical aspects of contemporary business. The curriculum blends information technology skills, such as database management, networking and telecommunications systems, with organizational skills in the major areas of business.

### PROGRAM OUTCOMES

- Explain the major functional areas of business administration including the critical skills necessary to analyze and solve business problems
- Apply quantitative reasoning and analysis to business and management problems
- Conduct professional applied research
- Manage the relational database application life cycle and the relational database management system environment
- Define the relational data model and determine if a given database satisfies the properties of a relational database
- Define the OSI network model and implementations as they are used in computer and voice networks
- Define network transmission methods and describe network device operations
- Describe the protocols used for network data transport

# MBA-TM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-TM program must complete all of the following courses:

| Course No. | Course Name | Hrs. |
|------------|-------------|------|
|------------|-------------|------|

### MBA CORE PROGRAM REQUIREMENTS

|         |                                        |   |
|---------|----------------------------------------|---|
| ACC614  | Applied Managerial Accounting          | 4 |
| MGM626  | Economics for Decision-making          | 5 |
| MGM625  | Applied Finance for Decision-making    | 5 |
| INTD670 | Leadership and Ethical Decision-making | 4 |
| IT600   | Information Technology Management      | 4 |
| MGM600  | Applied Managerial Decision-making     | 4 |

### MBA-TM REQUIREMENTS

|        |                                               |   |
|--------|-----------------------------------------------|---|
| IT610  | Relational Database Management Systems        | 4 |
| IT640  | Networking and Telecommunications             | 4 |
| IT655  | Technology Management Capstone I              | 2 |
| IT656  | Technology Management Capstone II             | 2 |
| MPM650 | Project Management Processes in Organizations | 5 |
| MPM655 | Project Planning, Execution and Closure       | 5 |

|                                            |           |
|--------------------------------------------|-----------|
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> | <b>48</b> |
|--------------------------------------------|-----------|

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Technology Management (IT600, IT610, IT640, MPM650)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF SCIENCE IN

## ACCOUNTING (MSACC)

The Master of Science in Accounting is a degree in Accounting for students with a bachelor's degree in accounting or closely related fields. This program provides strong theoretical foundations and professional skills in the main functional areas of accounting, including financial reporting and assurance, management control and auditing, taxation, and forensic accounting. In addition, this program is designed to prepare graduates for careers in public accounting, industry, government or not-for-profit organizations. Accountants are key players in the financial information arena of all organizations. They provide much of the information utilized by for-profit and not-for-profit organizations in the decision-making needed to help the organization attain its goals. Accountants and auditors help to ensure that organizations are run more efficiently, public records are kept more accurately, and taxes are paid properly and on time. They perform these vital functions by offering an increasingly wide array of business and accounting services to their clients. These services include public, management and government accounting, as well as internal auditing. However, accountants and auditors are broadening the services they offer to include budget analysis, financial and investment planning, information technology consulting and limited legal services. Beyond the fundamental tasks of the occupation—preparing, analyzing and verifying financial documents in order to provide information to clients — many accountants now are required to possess a wide range of knowledge and skills.

### PROGRAM OUTCOMES

- Address the changing financial laws and regulations, and increased scrutiny of company finances
- Assume the role of a personal financial advisor to the business
- Offer financial management and consulting services while taking on a greater advisory role
- Perform an audit review and prepare the appropriate documentation
- Describe how accounting information is used in implementing management policy
- Utilize accounting information to evaluate how to organize the business for managerial control
- Discuss the ethical implications of taxation and business decisions
- Develop a practical understanding and application of specific actions, processes, and techniques needed to move into the “next generation” of organizations
- Develop financial reports to meet business expansion needs
- Apply product costing techniques in the development of a master budget from a strategic perspective



# MSACC PROGRAM REQUIREMENTS

## Required Courses

All students in the MSACC program must complete all of the following courses:

| Course No.                                 | Course Name                            | Hrs.      |
|--------------------------------------------|----------------------------------------|-----------|
| <b>MSACC PROGRAM REQUIREMENTS</b>          |                                        |           |
| ECON616                                    | Applied Managerial Economics           | 4         |
| FINC615                                    | Applied Managerial Finance             | 4         |
| MGMT600                                    | Applied Managerial Decision-making     | 4         |
| INTD670                                    | Leadership and Ethical Decision-making | 4         |
| ACCT614                                    | Applied Managerial Accounting          | 4         |
| ACCT618                                    | Taxation and Business Decisions        | 4         |
| ACCT624                                    | Advanced Cost Accounting               | 4         |
| ACCT628                                    | Financial Reporting                    | 4         |
| ACCT634                                    | Accounting Information Systems         | 4         |
| ACCT638                                    | Advanced Auditing                      | 4         |
| ACCT644                                    | Management Control and Auditing        | 4         |
| ACCT648                                    | Forensic Accounting                    | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                        | <b>48</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Financial Reporting (ACCT618, ACCT628, ACCT634, ACCT644)

Management Accounting and Control (ACCT624, ACCT634, ACCT642)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

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Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA). The student who meets the unique requirements of the State Board of Accounting in their state's Application for CPA Licensure is qualified to sit for the CPA exam.

# MASTER OF SCIENCE IN MANAGEMENT

## WITH A CONCENTRATION IN BUSINESS MANAGEMENT (MSM-BM)

The MSM-BM degree program equips the graduate with an understanding of the fundamental issues related to technology's role today and in the future. The student will develop both technical expertise and business savvy from the enterprise perspective of an organization. The student will also understand how to create new technology-based business paradigms to achieve organizational goals. The program is structured to expose each graduate to key technological tools and concepts from a managerial perspective. The Project Management Institute (PMI®) endorsed project management component provides a solid base of knowledge to address today's most pressing management challenges using industry-recognized models and techniques.

### PROGRAM OUTCOMES

- Demonstrate an understanding of effective, ethical leadership strategies and skills
- Conduct professional applied research
- Utilize analytical and critical thinking skills in order to synthesize, evaluate and integrate concepts and knowledge for effective decision analysis and problem solving
- Communicate information professionally
- Work effectively as problem-solving team members
- Conduct, use, and evaluate professional applied research

# MSM-BM PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-BM program must complete all of the following courses:

| Course No.                                 | Course Name                                                  | Hrs.      |
|--------------------------------------------|--------------------------------------------------------------|-----------|
| <b>MSM-BM PROGRAM REQUIREMENTS</b>         |                                                              |           |
| ACCT614                                    | Applied Managerial Accounting                                | 4         |
| HRMT640                                    | Strategic Human Resource Management                          | 4         |
| HRMT645                                    | Operational Human Resource Management                        | 4         |
| INTD670                                    | Leadership and Ethical Decision-making                       | 4         |
| MGMT608                                    | Managing e-Business                                          | 4         |
| MGMT604                                    | Organizational Behavior                                      | 4         |
| MGMT638                                    | Transforming the Enterprise with IT                          | 4         |
| MKTG628                                    | Marketing in the Digital Age                                 | 4         |
| MKTG630                                    | Applied Managerial Marketing                                 | 4         |
| PM600                                      | Project Management Processes in Organizations                | 4         |
| SCM610                                     | Logistics/Supply Chain Management Inventory and Distribution | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                              | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

IT /Business Transformation (INTD607, MGMT608, MKTG628, MGMT638)

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### REGISTERED BY:



Project Management Institute, Registered Education Provider  
CTU is a recognized provider with the Project Management Institute (PMI®) Educational Provider Program (PMI R.E.P.).

Colorado Technical University's Master of Business Administration with a concentration in Project Management, Master of Science in Management with a concentration in ISS or IT/PM, Bachelor of Science in Project Management and the professional certificates in project management prepare students to take PMI's Project Management Professional® certification.  
[www.pmi.org](http://www.pmi.org)



**Colorado Technical University™**

# MASTER OF SCIENCE IN MANAGEMENT

WITH A CONCENTRATION IN **BUSINESS MANAGEMENT (MSM-BM) ONLINE**

The MSM-BM degree program equips the graduate with an understanding of the fundamental issues related to technology's role today and in the future. The student will develop both technical expertise and business savvy from the enterprise perspective of an organization. The student will also understand how to create new technology-based business paradigms to achieve organizational goals. The program is structured to expose each graduate to key technological tools and concepts from a managerial perspective. The Project Management Institute (PMI®) endorsed project management component provides a solid base of knowledge to address today's most pressing management challenges using industry-recognized models and techniques.

## PROGRAM OUTCOMES

- Demonstrate an understanding of effective, ethical leadership strategies and skills
- Conduct professional applied research
- Utilize analytical and critical thinking skills in order to synthesize, evaluate and integrate concepts and knowledge for effective decision analysis and problem solving
- Communicate information professionally
- Work effectively as problem-solving team members
- Conduct, use, and evaluate professional applied research

# MSM-BM PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-BM program must complete all of the following courses:

| Course No.                                 | Course Name                                       | Hrs.      |
|--------------------------------------------|---------------------------------------------------|-----------|
| <b>MSM-BM PROGRAM REQUIREMENTS</b>         |                                                   |           |
| INTD670                                    | Leadership and Ethical Decision-making            | 4         |
| MGM600                                     | Applied Managerial Decision-making                | 4         |
| MGM604                                     | Organizational Behavior                           | 4         |
| MGM608                                     | Managing e-Business                               | 4         |
| MGM628                                     | Marketing in the Digital Age                      | 4         |
| MGM638                                     | Transforming the Enterprise with IT               | 4         |
| MPM650                                     | Project Management Processes in Organizations     | 5         |
| MPM655                                     | Project Planning, Execution and Closure           | 5         |
| MPM660                                     | Schedule and Cost Control Techniques              | 5         |
| MPM665                                     | Contracting and Procurement in Project Management | 5         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                   | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

IT / Business Transformation (INTD670, MGM608, MGM628, MGM638)  
Project Management (MPM650, MPM655, MPM660, MPM665)

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**Colorado Technical University™**



# MASTER OF SCIENCE IN MANAGEMENT

## WITH A CONCENTRATION IN CRIMINAL JUSTICE (MSM-CJ)

The Master of Science in Management with a concentration in Criminal Justice is designed to meet the emerging administrative and leadership needs of the criminal justice system. The criminal justice field is rapidly expanding in the areas of corrections, law enforcement, law and the courts, and in many types of diversionary and ancillary programs that support the system. As a result, those with leadership and management skills, and those with expertise in program evaluation, budgeting and policy-making will help forge the future of the criminal justice system.

This program is designed specifically to develop the knowledge base and skills essential to those who will become the managers of people, money and programs, and leaders in planning and decision making in the criminal justice system. These skills are applicable to a wide spectrum of employment areas for both public and non-profit organizations within the criminal justice system and ancillary agencies. The Master of Science in Management with a concentration in Criminal Justice was developed with the direction of leaders in the criminal justice industry and reflects the balance needed for developing excellent administrative skills along with the information base necessary to enhance responsible policy-making.

## PROGRAM OUTCOMES

- Discuss trends in the development of public policies and apply management principles and policy analysis techniques to current issues facing criminal justice and juvenile justice agencies
- Use research results to enhance administrative problem solving and decision making
- Explore proactive strategies that reflect responsible organizational values
- Examine how court rulings, public opinion, research findings, and legislative actions have influenced justice-related policies
- Analyze the realities of translating public policy into operational practice in law enforcement, correctional and juvenile justice agencies
- Evaluate the impact and cost-effectiveness of justice policies and organizational practices
- Identify innovative approaches for developing rational, fiscally-responsible policy choices
- Apply management and leadership theories to the challenges faced by modern public safety agencies

# MSM-CJ PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-CJ program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| <b>MSM-CJ PROGRAM REQUIREMENTS</b>         |                                            |           |
| INTD607                                    | Creative Leadership                        | 4         |
| HRMT640                                    | Strategic Human Resource Management        | 4         |
| MGMT604                                    | Organizational Behavior                    | 4         |
| MGMT623                                    | Public Administration                      | 4         |
| MGMT635                                    | Grants and Contracts                       | 4         |
| CJUS610                                    | Crime Lab/Evidence Management              | 4         |
| CJUS620                                    | Court Services Management                  | 4         |
| CJUS630                                    | Law Enforcement Management                 | 4         |
| CJUS640                                    | Corrections Management                     | 4         |
| CJUS650                                    | Terrorism and Homeland Security Management | 4         |
| IT600                                      | Information Technology Management          | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Public Administration (INTD607, HRMT640, MGMT604, MGMT623)  
Grant Writing (MGMT635, MGMT623)  
Criminal Justice (CJUS610, CJUS620, CJUS630, CJUS640)  
Homeland Security Management (CJUS650, CJUS630)

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# MASTER OF SCIENCE IN MANAGEMENT

WITH A CONCENTRATION IN CRIMINAL JUSTICE (MSM-CJ) ONLINE

The Master of Science in Management with a concentration in Criminal Justice is designed to meet the emerging administrative and leadership needs of the criminal justice system. The criminal justice field is rapidly expanding in the areas of corrections, law enforcement, law and the courts, and in many types of diversionary and ancillary programs that support the system. As a result, those with leadership and management skills, and those with expertise in program evaluation, budgeting and policy-making will help forge the future of the criminal justice system.

This program is designed specifically to develop the knowledge base and skills essential to those who will become the managers of people, money and programs, and leaders in planning and decision-making in the criminal justice system. These skills are applicable to a wide spectrum of employment areas for both public and non-profit organizations within the criminal justice system and ancillary agencies. The Master of Science in Management with a concentration in Criminal Justice was developed with the direction of leaders in the criminal justice industry and reflects the balance needed for developing excellent administrative skills along with the information base necessary to enhance responsible policy-making.

## PROGRAM OUTCOMES

- Discuss trends in the development of public policies and apply management principles and policy analysis techniques to current issues facing criminal justice and juvenile justice agencies
- Use research results to enhance administrative problem-solving and decision-making
- Explore proactive strategies that reflect responsible organizational values
- Examine how court rulings, public opinion, research finding, and legislative actions have influenced justice-related policies
- Analyze the realities of translating public policy into operational practice in law enforcement, correctional and juvenile justice agencies
- Evaluate the impact and cost-effectiveness of justice policies and organizational practices
- Identify innovative approaches for developing rational, fiscally-responsible policy choices
- Apply management and leadership theories to the challenges faced by modern public safety agencies

100% ONLINE

# MSM-CJ PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-CJ program must complete all of the following courses:

| Course No.                                 | Course Name                                    | Hrs.      |
|--------------------------------------------|------------------------------------------------|-----------|
| <b>MSM-CJ PROGRAM REQUIREMENTS</b>         |                                                |           |
| ID612                                      | Leadership                                     | 4         |
| HRM620                                     | Managing Organizational Development and Change | 4         |
| MGM604                                     | Organizational Behavior                        | 4         |
| MGM623                                     | Public Administration                          | 4         |
| MGM634                                     | Advanced Grant Writing                         | 6         |
| CJUS610                                    | Crime Lab/Evidence Management                  | 4         |
| CJUS620                                    | Court Services Management                      | 4         |
| CJUS630                                    | Law Enforcement Management                     | 4         |
| CJUS640                                    | Corrections Management                         | 4         |
| CJUS651                                    | Terrorism and Homeland Security Management     | 6         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Public Administration (ID612, HRM620, MGM604, MGM623)  
Grant Writing (MGM635, MGM623)  
Criminal Justice (CJUS610, CJUS620, CJUS630, CJUS640)  
Homeland Security Management (CJUS651, CJUS630)

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# MASTER OF SCIENCE IN MANAGEMENT

WITH A CONCENTRATION IN INFORMATION SYSTEMS SECURITY (MSM-ISS) ONLINE

An almost continuous stream of security-related incidents is affecting millions of computer systems and networks throughout the world. Organizations are constantly experiencing these attacks and security incidents; they constitute a risk to their organizational mission. The loss or corruption of information systems can significantly impact the organization and result in a substantial loss of revenue. To address these threats, organizations, both private and government, are investing considerable funds to adopt security measures to make their organizations safe.

Course content includes a solid core of project management curriculum plus courses in information systems security. This program is designed to provide the student with the information system security skills necessary to manage and protect the vital technology assets of today's organizations. The MSM-ISS is designed to prepare technical leaders in security management to combat threats in today's environment through an understanding of security management, network security principles, and certification and accreditation requirements.

## PROGRAM OUTCOMES

- Plan projects effectively and successfully, taking into consideration the quadruple constraints of time, cost, resources, and specifications
- Develop from the basic project plan a work-breakdown structure to the lowest granularity permitted by cost
- Determine and calculate project risks according to classical risk analysis
- Plan and manage contractual purchasing issues, including, procurement and supply, outsourcing, and just-in-time
- Evaluate and present project objectives, requirements, scope, and budgeting effectively to upper management
- Define technical requirements for the implementation of an effective security infrastructure
- Identify and describe the impact of implementing security components at all OSI layers
- Develop effective enterprise level security policies, standards and procedures
- Identify and develop necessary enterprise/government systems certification and accreditation procedures and best commercial practices

100% ONLINE



# MSM-ISS PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-ISS program must complete all of the following courses:

| Course No.                                 | Course Name                                       | Hrs.      |
|--------------------------------------------|---------------------------------------------------|-----------|
| <b>MSM-ISS PROGRAM REQUIREMENTS</b>        |                                                   |           |
| CS651                                      | Computer Systems Security Foundations             | 4         |
| CS653                                      | Network Security                                  | 4         |
| CS654                                      | Security Management                               | 4         |
| CS661                                      | Software Information Assurance                    | 4         |
| CS662                                      | System Security Certification and Accreditation   | 4         |
| MPM650                                     | Project Management Processes in Organizations     | 5         |
| MPM655                                     | Project Planning, Execution and Closure           | 5         |
| MPM660                                     | Schedule and Cost Control Techniques              | 5         |
| MPM665                                     | Contracting and Procurement in Project Management | 5         |
| ID612                                      | Leadership                                        | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                   | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Information Systems Security (CS651)  
Information Systems Security Management (CS651, CS654)  
Project Management (MPM650, MPM655, MPM660, MPM665)

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### REGISTERED BY:



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[www.pmi.org](http://www.pmi.org)



**Colorado Technical University™**

# MASTER OF SCIENCE IN MANAGEMENT

WITH A CONCENTRATION IN INFORMATION TECHNOLOGY / PROJECT MANAGEMENT (MSM-IT/PM)

Explosive demand for professionals who can integrate and manage a company's information and technology tools has created an emerging new field in information technology. In the next decade, the demand is expected to double. To help meet the need for this competitive new breed of management professional, Colorado Technical University has introduced this exciting new information technology concentration within the Master of Science in Management degree program. Course content includes a solid core of project management curriculum plus courses in computing platforms and network architecture designs. Software systems, both application and development, will be covered with emphasis on relational database and client/server technology. Information technology graduates will be prepared to design, build, integrate and manage the information technology systems and programs associated with today's organizations.

## PROGRAM OUTCOMES

- Plan projects effectively and successfully, taking into consideration the quadruple constraints of time, cost, resources, and specifications
- Develop from the basic project plan a work-breakdown structure to the lowest granularity permitted by cost
- Determine and calculate project risks according to classical risk analysis
- Plan and manage contractual purchasing issues, including, procurement and supply, outsourcing, and just-in-time
- Evaluate and present project objectives, requirements, scope, and budgeting effectively to upper management
- Apply analytical and critical thinking skills necessary to design, build, integrate and manage the information technology systems and programs associated with today's organizations
- Design, develop and manage a database system
- Comprehend the concepts of telecommunications and networking systems design, development and management
- Work effectively as problem-solving team members
- Conduct, use, and evaluate professional applied research

## PREPARATORY REQUIREMENTS

IT501, Foundations in Information Technology, may be required to ensure an adequate foundation for undertaking the Master of Science in Management with a concentration in IT / PM. This course may be skipped with sufficient undergraduate preparation or life experience.

# MSM-IT/PM PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-IT/PM program must complete all of the following courses:

| Course No.                                 | Course Name                                       | Hrs.      |
|--------------------------------------------|---------------------------------------------------|-----------|
| <b>MSM-IT/PM PROGRAM REQUIREMENTS</b>      |                                                   |           |
| IT610                                      | Relational Database Management Systems            | 4         |
| IT612                                      | Database Analysis, Design and Implementation      | 4         |
| IT640                                      | Networking and Telecommunications                 | 4         |
| IT642                                      | Network Administration                            | 4         |
| IT660                                      | Information Technology Systems Development        | 4         |
| IT662                                      | Information Technology Systems Implementation     | 4         |
| PM600                                      | Project Management Processes in Organizations     | 4         |
| PM610                                      | Project Planning, Execution and Closure           | 4         |
| PM620                                      | Schedule and Cost Control Techniques              | 4         |
| PM630                                      | Contracting and Procurement in Project Management | 4         |
| PM660                                      | Project Management Capstone                       | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                   | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Systems Analysis and Integration (IT660, IT662)  
Networking and Telecommunications (IT640, IT642)  
Database Management (IT610, IT612)  
Project Management (PM600, PM610, PM620, PM630)

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### REGISTERED BY:



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[www.pmi.org](http://www.pmi.org)



**Colorado Technical University™**

# MASTER OF SCIENCE IN MANAGEMENT

WITH A CONCENTRATION IN INFORMATION TECHNOLOGY MANAGEMENT (MSM-ITM) ONLINE

Explosive demand for professionals who can integrate and manage a company's information and technology tools has created an emerging new field in information technology. In the next decade, the demand is expected to double. To help meet the need for this competitive new breed of management professional, Colorado Technical University has introduced this exciting new information technology concentration within the Master of Science in Management degree program. Course content includes a solid core of project management curriculum plus courses in computing platforms and network architecture designs. Software systems, both application and development, will be covered with emphasis on relational database and client/server technology. Information technology graduates will be prepared to design, build, integrate and manage the information technology systems and programs associated with today's organizations.

## PROGRAM OUTCOMES

- Plan projects effectively and successfully, taking into consideration the quadruple constraints of time, cost, resources, and specifications
- Develop from the basic project plan a work-breakdown structure to the lowest granularity permitted by cost
- Determine and calculate project risks according to classical risk analysis
- Plan and manage contractual purchasing issues, including, procurement and supply, outsourcing, and just-in-time
- Evaluate and present project objectives, requirements, scope, and budgeting effectively to upper management
- Apply analytical and critical thinking skills necessary to design, build, integrate and manage the information technology systems and programs associated with today's organizations
- Design, develop and manage a database system
- Comprehend the concepts of telecommunications and networking systems design, development and management
- Work effectively as problem-solving team members
- Conduct, use, and evaluate professional applied research

# MSM-ITM PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-ITM program must complete all of the following courses:

Course No. Course Name

### MSM-ITM PROGRAM REQUIREMENTS

|        |                                                   |
|--------|---------------------------------------------------|
| IT610  | Relational Database Management Systems            |
| IT612  | Database Analysis, Design and Implementation      |
| IT640  | Networking and Telecommunications                 |
| IT642  | Network Administration                            |
| IT660  | Information Technology Systems Development        |
| IT662  | Information Technology Systems Implementation     |
| MPM650 | Project Management Processes in Organizations     |
| MPM655 | Project Planning, Execution and Closure           |
| MPM660 | Schedule and Cost Control Techniques              |
| MPM665 | Contracting and Procurement in Project Management |

TOTAL PROGRAM QUARTER CREDIT HOURS:

Hrs.

4  
4  
4  
4  
4  
4  
5  
5  
5  
5

44

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Systems Analysis and Integration (IT660, IT662)  
Networking and Telecommunications (IT640, IT642)  
Database Management (IT610, IT612)  
Project Management (MPM650, MPM655, MPM660, MPM665)

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[www.pmi.org](http://www.pmi.org)



Colorado Technical University™



# MASTER OF SCIENCE IN MANAGEMENT

## WITH A CONCENTRATION IN PROJECT MANAGEMENT (MSM-PM)

The MSM-PM program prepares the student with the skills and knowledge needed to become an effective project manager, including time/conflict management; teams and HR management; risk analysis and management; scheduling techniques; organizations and processes; cost, budgeting and scheduling; procurement and contracting; and control systems implementation. Program content covers key areas contained in the Project Management Body of Knowledge (PMBOK®), considered to be the industry standard by the Project Management Institute (PMI®).

### PROGRAM OUTCOMES

- Plan projects effectively and successfully, taking into consideration the quadruple constraints of time, cost, resources, and specifications
- Demonstrate an understanding of effective, ethical leadership strategies and skills
- Utilize analytical and critical thinking skills in order to synthesize, evaluate and integrate concepts and knowledge for effective decision analysis and problem solving
- Communicate information professionally
- Work effectively as problem-solving team members
- Develop from the basic project plan a work-breakdown structure to the lowest granularity permitted by cost
- Determine and calculate project risks according to classical risk analysis
- Plan and manage contractual purchasing issues, including, procurement and supply, outsourcing, and just-in-time
- Evaluate and present project objectives, requirements, scope, and budgeting effectively to upper management
- Comprehend the concepts of telecommunications and networking systems design, development and management
- Conduct, use, and evaluate professional applied research

# MSM-PM PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-PM program must complete all of the following courses:

| Course No.                         | Course Name                                       | Hrs. |
|------------------------------------|---------------------------------------------------|------|
| <b>MSM-PM PROGRAM REQUIREMENTS</b> |                                                   |      |
| HRMT640                            | Strategic Human Resource Management               | 4    |
| HRMT645                            | Operational Human Resource Management             | 4    |
| INTD607                            | Creative Leadership                               | 4    |
| MGMT608                            | Managing e-Business                               | 4    |
| MGMT604                            | Organizational Behavior                           | 4    |
| MGMT638                            | Transforming the Enterprise with IT               | 4    |
| MKTG630                            | Applied Managerial Marketing                      | 4    |
| PM600                              | Project Management Processes in Organizations     | 4    |
| PM610                              | Project Planning, Execution and Closure           | 4    |
| PM620                              | Schedule and Cost Control Techniques              | 4    |
| PM630                              | Contracting and Procurement in Project Management | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 44

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Project Management (PM600, PM610, PM620, PM630)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

### REGISTERED BY:



Project Management Institute, Registered Education Provider  
CTU is a recognized provider with the Project Management Institute (PMI®) Educational Provider Program (PMI R.E.P.).

Colorado Technical University's Master of Business Administration with a concentration in Project Management, Master of Science in Management with a concentration in ISS or IT/PM, Bachelor of Science in Project Management and the professional certificates in project management prepare students to take PMI's Project Management Professional® certification.  
[www.pmi.org](http://www.pmi.org)



**Colorado Technical University™**

# MASTER OF SCIENCE IN MANAGEMENT

WITH A CONCENTRATION IN **PROJECT MANAGEMENT (MSM-PM) ONLINE**

The MSM-PM program prepares the student with the skills and knowledge needed to become an effective project manager, including time / conflict management; teams and HR management; risk analysis and management; scheduling techniques; organizations and processes; cost, budgeting and scheduling; procurement and contracting; and control systems implementation. Program content covers key areas contained in the Project Management Body of Knowledge (PMBOK®), considered to be the industry standard by the Project Management Institute (PMI®).

## PROGRAM OUTCOMES

- Plan projects effectively and successfully, taking into consideration the quadruple constraints of time, cost, resources, and specifications
- Demonstrate an understanding of effective, ethical leadership strategies and skills
- Utilize analytical and critical thinking skills in order to synthesize, evaluate and integrate concepts and knowledge for effective decision analysis and problem solving
- Communicate information professionally
- Work effectively as problem-solving team members
- Develop from the basic project plan a work-breakdown structure to the lowest granularity permitted by cost
- Determine and calculate project risks according to classical risk analysis
- Plan and manage contractual purchasing issues, including, procurement and supply, outsourcing, and just-in-time
- Evaluate and present project objectives, requirements, scope, and budgeting effectively to upper management
- Comprehend the concepts of telecommunications and networking systems design, development and management
- Conduct, use, and evaluate professional applied research

# MSM-PM PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-PM program must complete all of the following courses:

| Course No.                         | Course Name                                       | Hrs. |
|------------------------------------|---------------------------------------------------|------|
| <b>MSM-PM PROGRAM REQUIREMENTS</b> |                                                   |      |
| INTD670                            | Leadership and Ethical Decision-making            | 4    |
| IT600                              | Information Technology Management                 | 4    |
| MGM600                             | Applied Managerial Decision-making                | 4    |
| MGM604                             | Organizational Behavior                           | 4    |
| MGM630                             | Applied Managerial Marketing                      | 4    |
| MGM638                             | Transforming the Enterprise with IT               | 4    |
| MPM650                             | Project Management Processes in Organizations     | 5    |
| MPM655                             | Project Planning, Execution and Closure           | 5    |
| MPM660                             | Schedule and Cost Control Techniques              | 5    |
| MPM665                             | Contracting and Procurement in Project Management | 5    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 44

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Project Management (MPM650, MPM655, MPM660, MPM665)  
Business Management (IT600, MGM604, MGM630, MPM650)

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### REGISTERED BY:



Project Management Institute, Registered Education Provider  
CTU is a recognized provider with the Project Management Institute (PMI®) Educational Provider Program (PMI R.E.P.).

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[www.pmi.org](http://www.pmi.org)



**Colorado Technical University™**

# BACHELOR OF SCIENCE

## IN ACCOUNTING (BSACC)

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of a personal financial advisor. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory role. In addition to openings resulting from growth the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The BSACC degree program is designed to equip graduates with a variety of skills including corporate accounting, taxation, governmental and not-for-profit accounting, and auditing. This unique program also builds in skills to help prepare you with knowledge essential to becoming a Certified Public Accountant (CPA) or Certified Management Accountant (CMA). In addition, the curriculum provides students with an opportunity to develop intellectual, interpersonal and communication skills so that as graduates they can succeed in the business world.

### PROGRAM OUTCOMES

- Apply the knowledge and skills of accounting, management, business mathematics, and the liberal arts to identify, resolve, and communicate relevant accounting issues
- Prepare, comprehend and interpret the required financial statements according to Generally Accepted Accounting Principles (GAAP)
- Demonstrate a basic knowledge of the importance of the moral standards embodied in the professional code of ethics
- Distinguish between financial, managerial, cost accounting and tax accounting principles and practices
- Distinguish the appropriate information to be used in managerial decision making
- Distinguish between the accounting principles used for federal income taxation of both individuals and business, and evaluate the impact of those differences on the financial statements and managerial decision making
- Identify, formulate, and communicate the relevant accounting issues in the Sarbanes-Oxley era
- Manage a complete set of accounts for a small to moderate-sized organization

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# BSACC PROGRAM REQUIREMENTS

## Required Courses

All students in the BSACC program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (64 hrs)

|         |                                                 |   |
|---------|-------------------------------------------------|---|
| IT190   | Introduction to IT                              | 4 |
| IT254   | Spreadsheet Applications                        | 4 |
| ENGL111 | English Composition I                           | 4 |
| ENGL112 | English Composition II                          | 4 |
| ENGL200 | Professional Writing                            | 4 |
| ENGL210 | Professional Speaking                           | 4 |
| PHIL310 | Ethics                                          | 4 |
| INTD111 | Creating Academic and Professional Success      | 4 |
| SCI120  | The Impact of Science and Technology on Society | 4 |
| MATH143 | Business Algebra                                | 4 |
| MATH306 | Computer Assisted Statistics                    | 4 |
| BADM100 | Introduction to Business                        | 4 |
| ECON201 | Macroeconomics                                  | 4 |
| LITR220 | Values in World Literature                      | 4 |
| HIST150 | World History Since 1500                        | 4 |
| or      |                                                 |   |
| HIST210 | World History and Culture 1                     | 4 |
| PSYC100 | Introduction to Psychology                      | 4 |

#### HUMANITIES (4 hrs)

|         |                              |   |
|---------|------------------------------|---|
| HIST250 | World Culture and Values     | 4 |
| or      |                              |   |
| HIST310 | World History and Culture II | 4 |

#### MATHEMATICS (4 hrs)

|         |                              |   |
|---------|------------------------------|---|
| MATH476 | Quantitative Decision Making | 4 |
|---------|------------------------------|---|

#### SOCIAL SCIENCE (8 hrs)

|         |                           |   |
|---------|---------------------------|---|
| ECON202 | Microeconomics            | 4 |
| SOCL101 | Introduction to Sociology | 4 |

#### BUSINESS (100 hrs/101 hrs [Colorado only])

|         |                            |   |
|---------|----------------------------|---|
| ACCT201 | Accounting I               | 4 |
| ACCT202 | Accounting II              | 4 |
| ACCT203 | Accounting III             | 4 |
| ACCT210 | Computerized Accounting    | 4 |
| ACCT341 | Intermediate Accounting I  | 4 |
| ACCT342 | Intermediate Accounting II | 4 |
| ACCT351 | Cost Accounting            | 4 |
| ACCT361 | Tax Accounting I           | 4 |
| ACCT362 | Tax Accounting II          | 4 |
| ACCT421 | Advanced Accounting        | 4 |

### Hrs.

|                    |                                                |   |
|--------------------|------------------------------------------------|---|
| ACCT441            | Auditing                                       | 4 |
| ACCT443            | Auditing Lab (Colorado only)                   | 1 |
| ACCT460*           | Accounting Capstone                            | 4 |
| ACCT480            | Contemporary Accounting Issues                 | 4 |
| BADM150            | Contemporary Business Trends                   | 4 |
| BADM305            | Organizational Behavior                        | 4 |
| BADM350            | International Business                         | 4 |
| BADM360            | Operations Management                          | 4 |
| BADM410            | Business Law I                                 | 4 |
| BADM440            | Research Design Methods and Application        | 4 |
| BADM475            | Small Business Management and Entrepreneurship | 4 |
| or                 |                                                |   |
| BADM480            | Business Strategy and Policy                   | 4 |
| FINC220            | Financial Statement Analysis                   | 4 |
| FINC400            | Financial Management                           | 4 |
| HRMT210            | Introduction to Human Resource Management      | 4 |
| HRMT440            | Managing Organizational Change                 | 4 |
| 400 LEVEL ELECTIVE |                                                | 4 |

\*Capstone class may be offered incrementally based on campus decision.

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180/181**

#### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
Financial Accounting (ACCT341, ACCT342, ACCT421)  
Financial Statement Analysis (ACCT341, ACCT342, FINC220)  
Income Tax (ACCT361, ACCT362)  
Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
Professional Communication (ENGL200, ENGL210)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA). The student who meets the unique requirements of the State Board of Accounting in their state's Application for CPA Licensure is qualified to sit for the CPA exam.



**Colorado Technical University™**

# BACHELOR OF SCIENCE IN

## ACCOUNTING (BSACC) ONLINE

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of a personal financial advisor. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory role. In addition to openings resulting from growth (projected at 18 to 26 percent through 2014), the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The BSACC degree program is designed to equip you with a variety of skills including corporate accounting, taxation, governmental and not-for-profit accounting, and auditing. This unique program also builds in skills to help prepare you with knowledge essential to becoming a Certified Public Accountant (CPA) or Certified Management Accountant (CMA). In addition, the curriculum provides you with an opportunity to develop your intellectual, interpersonal and communication skills so that you can succeed in the business world.

### PROGRAM OUTCOMES

- Apply the knowledge and skills of accounting, management, business mathematics, and the liberal arts to identify, resolve, and communicate relevant accounting issues
- Prepare, comprehend and interpret the required financial statements according to Generally Accepted Accounting Principles (GAAP)
- Demonstrate a basic knowledge of the importance of the moral standards embodied in the professional code of ethics
- Distinguish between financial, managerial, cost accounting and tax accounting principles and practices
- Distinguish the appropriate information to be used in managerial decision making
- Distinguish between the accounting principles used for federal income taxation of both individuals and business, and evaluate the impact of those differences on the financial statements and managerial decision making
- Identify, formulate, and communicate the relevant accounting issues in the Sarbanes-Oxley era
- Manage a complete set of accounts for a small to moderate-sized organization

# BSACC PROGRAM REQUIREMENTS

## Required Courses

All students in the BSACC program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (48 hrs)</b>          |                                            |           |
| IT105                                      | Information and Technology Literacy        | 4         |
| ENG115                                     | English Composition                        | 4         |
| MGM105                                     | Professional Communication                 | 4         |
| PHL210                                     | Ethics                                     | 4         |
| HIS150                                     | World History since 1500                   | 4         |
| HUM140                                     | Art Appreciation                           | 4         |
| INTD111                                    | Creating Academic and Professional Success | 4         |
| SCI205                                     | Environmental Science                      | 4         |
| MAT105                                     | Business Math                              | 4         |
| MAT205                                     | College Math                               | 4         |
| PSY105                                     | Psychology                                 | 4         |
| SOC205                                     | Introduction to Sociology                  | 4         |
| <b>CORE REQUIREMENTS (42 hrs)</b>          |                                            |           |
| FINC220                                    | Financial Statement Analysis               | 4         |
| PFP110                                     | Personal Finance Concepts                  | 4         |
| ACC201                                     | Accounting I                               | 4         |
| ACC202                                     | Accounting II                              | 4         |
| ACC203                                     | Accounting III                             | 4         |
| ACC210                                     | Computerized Accounting                    | 4         |
| ACC211                                     | Computerized Accounting Lab                | 2         |
| MGM260                                     | Fundamentals of Management                 | 6         |
| ECO254                                     | Microeconomics                             | 6         |
| ECO201                                     | Macroeconomics                             | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>90</b> |
| <b>Upper Division Requirements</b>         |                                            |           |
| <b>GENERAL EDUCATION (20 hrs)</b>          |                                            |           |
| ENG116                                     | English Composition II                     | 6         |
| ENG202                                     | Professional Writing and Composition       | 6         |
| MGM110                                     | Principles of Business                     | 4         |
| IT254                                      | Spreadsheet Applications                   | 4         |
| <b>BUSINESS MANAGEMENT (70 hrs)</b>        |                                            |           |
| ACC341                                     | Financial Accounting                       | 4         |
| ACC345                                     | Intermediate Accounting I                  | 4         |

|        |                                               |   |
|--------|-----------------------------------------------|---|
| ACC346 | Intermediate Accounting II                    | 4 |
| ACC445 | Cost Accounting                               | 6 |
| ACC455 | Tax Accounting I                              | 6 |
| ACC456 | Tax Accounting II                             | 6 |
| ACC355 | Advanced Accounting                           | 4 |
| ACC365 | Auditing                                      | 4 |
| ACC460 | Accounting Capstone                           | 4 |
| ACC480 | Contemporary Accounting Issues                | 4 |
| FIN310 | Financial Management Principles               | 4 |
| MGM330 | Business Decision Making                      | 4 |
| MGM335 | Organizational Behavior Principles            | 4 |
| MGM365 | The Legal and Ethical Environment of Business | 4 |
| MGM355 | International Business Practices              | 4 |
| MGM340 | Operations Management Principles              | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 180

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACC201, ACC202, ACC203, FIN310)  
 Financial Accounting (ACC345, ACC346, ACC355)  
 Financial Statement Analysis (ACC345, ACC346, FINC220)  
 Income Tax (ACC345, ACCT346)

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Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA). Students must meet the requirements of the State Board of Accounting in their state's Application for CPA Licensure.



# BACHELOR OF SCIENCE

## IN FINANCE (BSFIN)

The BSFIN degree builds a strong base of contemporary business skills, tools, techniques and technologies for a career in financial management. You will become familiar with current approaches to financial planning and analysis, money and capital markets, investments and securities, and financial markets and institutions.

### PROGRAM OUTCOMES

- Demonstrate a working knowledge of the values, skills, and techniques utilized in the personal financial planning process
- Apply the theories and strategies of personal financial planning as they relate to retirement and estate planning
- Demonstrate an understanding of the ever-changing financial services environment
- Model as a financial services professional, an awareness of the ethical and professional considerations in personal financial planning

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSFIN PROGRAM REQUIREMENTS

## Required Courses

All students in the BSFIN program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (64 hrs)

|         |                                                 |
|---------|-------------------------------------------------|
| IT190   | Introduction to IT                              |
| IT254   | Spreadsheet Applications                        |
| ENGL111 | English Composition I                           |
| ENGL112 | English Composition II                          |
| ENGL200 | Professional Writing                            |
| ENGL210 | Professional Speaking                           |
| PHIL310 | Ethics                                          |
| HIST210 | World History and Culture I                     |
| HUMN200 | Art and Music Appreciation                      |
| LITR220 | Values in World Literature                      |
| INTD111 | Creating Academic and Professional Success      |
| SCI120  | The Impact of Science and Technology on Society |
| MATH143 | Business Algebra                                |
| MATH306 | Computer Assisted Statistics                    |
| ECON201 | Macroeconomics                                  |
| SOCL101 | Introduction to Sociology                       |

#### SOCIAL SCIENCE (4 hrs)

|         |                              |
|---------|------------------------------|
| HIST310 | World History and Culture II |
|---------|------------------------------|

#### INFORMATION TECHNOLOGY (4 hrs)

|       |                                   |
|-------|-----------------------------------|
| IT235 | Database Applications with Access |
|-------|-----------------------------------|

#### INTERDISCIPLINARY (4 hrs)

|         |                 |
|---------|-----------------|
| INTD340 | Career Planning |
|---------|-----------------|

#### ACCOUNTING AND FINANCE (52 hrs)

|         |                                             |
|---------|---------------------------------------------|
| ACCT201 | Accounting I                                |
| ACCT202 | Accounting II                               |
| ACCT203 | Accounting III                              |
| ACCT341 | Intermediate Accounting I                   |
| ACCT342 | Intermediate Accounting II                  |
| FINC400 | Financial Management                        |
| FINC310 | Money and Capital Markets                   |
| FINP310 | Taxation in Financial Planning              |
| FINP315 | Principles of Risk Management and Insurance |
| FINP320 | Investments                                 |
| FINP420 | Employee Benefits and Retirement Planning   |
| FINP430 | Estate Planning                             |
| FINP450 | Financial Planning Capstone                 |

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#### BUSINESS ADMINISTRATION (48 hrs)

|         |                                                |
|---------|------------------------------------------------|
| BADM100 | Introduction to Business                       |
| BADM305 | Organizational Behavior                        |
| BADM360 | Operations Management                          |
| BADM410 | Business Law I                                 |
| BADM420 | Business Law II                                |
| BADM475 | Small Business Management and Entrepreneurship |
| BADM480 | Business Strategy and Policy                   |
| EBUS308 | Introduction to e-Business                     |
| ECON202 | Microeconomics                                 |
| HRMT210 | Introduction to Human Resource Management      |
| MKTG301 | Introduction to Marketing                      |
| PM210   | Introduction to Project Management             |

#### ELECTIVES (4 hrs)

Electives—Choose a minimum of 4 credit hours

#### TOTAL PROGRAM QUARTER CREDIT HOURS:

180

#### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)

Business Fundamentals (BADM100, HRMT210, IT190, MKTG210)

e-Business Management (EBUS308, MKTG301, PM210)

Financial Statement Analysis (ACCT341, ACCT342, FINC400)

Personal Financial Planning (FINP310, FINP315, FINP320, FINP420, FINP430, FINP450)

Professional Communications (ENGL200, ENGL210)

Risk and Legal Environment (BADM410, BADM420, FINP315)

Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA). Students must meet the requirements of the State Board of Accounting in their state's Application for CPA Licensure.



**Colorado Technical University™**



# BACHELOR OF SCIENCE IN PROJECT MANAGEMENT (BSPM)

The BSPM degree is designed to provide you with the basic tools, techniques and skills needed to effectively organize and manage projects. The curriculum covers in details the process and knowledge areas defined by the Project Management Institute (PMI) in the Guide to the Project Management Book of Knowledge (PMBOK), the industry standard for project management. In addition, the program integrates business foundation courses with the theory and practice of project management in order to develop well-equipped and skilled project managers. The program utilizes a practical approach, helping to develop project team skills.

## PROGRAM OUTCOMES— Project Management

- Define a project, project management, and type of project structures, project life cycle phases, knowledge areas, and process
- Organize and staff a project office with appropriate structure, personnel and processes
- Explain cultural, legal, political, and financial issues associated with managing a project in domestic and international environments
- Align project goals with the corporate strategic planning process
- Manage and integrate organizational programs and project portfolio
- Analyze project scope and identify project key tasks and stakeholders; manage scope changes
- Align project tasks into a project schedule, determine task time, order of precedence and resources required
- Construct and implement an approach for using contracting and procurement activities to fulfill project goals
- Create and implement a proactive risk management and quality plan. Assess potential and actual risks. Develop contingency plans. Mitigate the effects of risks

## PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSPM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSPM program must complete all of the following courses:

| Course No.                          | Course Name                                     | Hrs. |
|-------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>   |                                                 |      |
| IT190                               | Introduction to IT                              | 4    |
| IT254                               | Spreadsheet Applications                        | 4    |
| ENGL111                             | English Composition I                           | 4    |
| ENGL112                             | English Composition II                          | 4    |
| ENGL200                             | Professional Writing                            | 4    |
| ENGL210                             | Professional Speaking                           | 4    |
| PHIL310                             | Ethics                                          | 4    |
| HIST150                             | World History Since 1500                        | 4    |
| or                                  |                                                 |      |
| HIST210                             | World History and Culture 1                     | 4    |
| LITR220                             | Values in World Literature                      | 4    |
| INTD111                             | Creating Academic and Professional Success      | 4    |
| SCI120                              | The Impact of Science and Technology on Society | 4    |
| MATH143                             | Business Algebra                                | 4    |
| MATH306                             | Computer Assisted Statistics                    | 4    |
| ECON201                             | Macroeconomics                                  | 4    |
| BADM100                             | Introduction to Business                        | 4    |
| PSYC100                             | Introduction to Psychology                      | 4    |
| <b>MATHEMATICS (4 hrs)</b>          |                                                 |      |
| MATH476                             | Quantitative Decision Making                    | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>       |                                                 |      |
| HIST250                             | World Cultures and Values                       | 4    |
| or                                  |                                                 |      |
| HIST310                             | World History and Culture II                    | 4    |
| SOCL101                             | Introduction to Sociology                       | 4    |
| <b>BUSINESS MANAGEMENT (68 hrs)</b> |                                                 |      |
| ACCT201                             | Accounting I                                    | 4    |
| ACCT202                             | Accounting II                                   | 4    |
| ACCT203                             | Accounting III                                  | 4    |
| BADM150                             | Contemporary Business Trends                    | 4    |
| BADM305                             | Organizational Behavior                         | 4    |
| BADM350                             | International Business                          | 4    |
| BADM360                             | Operations Management                           | 4    |
| BADM410                             | Business Law I                                  | 4    |
| BADM420                             | Business Law II                                 | 4    |
| BADM440                             | Research Design Methods and Applications        | 4    |
| BADM475                             | Small Business Management and Entrepreneurship  | 4    |

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| or      |                                                   |   |
| BADM480 | Business Strategy and Policy                      | 4 |
| ECON202 | Microeconomics                                    | 4 |
| FINC400 | Financial Management                              | 4 |
| HRMT210 | Introduction to Human Resource Management         | 4 |
| HRMT440 | Managing Organizational Change                    | 4 |
| MKTG210 | Introduction to Marketing                         | 4 |
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |

## GENERAL ELECTIVES (4 hrs)

Electives—Choose a minimum of 4 credit hours

## PROJECT MANAGEMENT CONCENTRATION (32 hrs)

|        |                                            |   |
|--------|--------------------------------------------|---|
| PM210  | Introduction to Project Management         | 4 |
| PM220  | Project Management Tools                   | 4 |
| PM310  | Project Planning                           | 4 |
| PM320  | Project Scheduling and Resource Allocation | 4 |
| PM330  | Project Cost Estimating and Control        | 4 |
| PM410  | Project Risk and Quality                   | 4 |
| PM420  | Program and Portfolio Management           | 4 |
| PM430* | Project Management Capstone                | 4 |

\* Capstone course may be offered incrementally based on campus decision.

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
 Business in the Global Environment (BADM100, BADM150, BADM350, HIST250)  
 Management Essentials (BADM100, BADM305, HRMT210)  
 Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
 Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
 Associate in Project Management (PM210, PM220, PM310)  
 Project Control (PM320, PM330, PM410, PM420)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# BACHELOR OF SCIENCE IN

## TECHNOLOGY MANAGEMENT (BSTM) (2 + 2 PROGRAM - AAS TO BS)

Technology professionals are increasingly called upon to perform key management functions, whether in a small business setting (as proprietor, partner, or supervisor) or within a large company that provides a variety of supervisory or management positions to its technical staff. This degree program recognizes the technical skill set acquired through the achievement of specific Associate of Applied Science degrees at selected institutions with which the University has articulation agreements. The program is designed to build upon this foundation by providing specific management skills, at the upper division level, to help the student face the challenges of today's technical leadership environment and to be prepared for management promotion or proprietorship opportunities.

### PROGRAM OUTCOMES

- Define and explain the basic functional areas of management and the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Explain the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Comprehend the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Integrate technical knowledge with management principles to solve real-world problems through a capstone experience

### PREPARATORY REQUIREMENTS

The student seeking a BSTM degree must have an Associate of Applied Science (AAS) degree in a technology related field from a two-year college with which Colorado Technical University has an articulation agreement covering this specific degree opportunity. AAS degrees that are acceptable from a technology standpoint will be listed in the articulation agreement. In addition to the coursework completed in the AAS degree at a participating two-year college, there are also both general education and program course requirements that may be met at either the two-year college or CTU, as noted below.

### BSTM PROGRAM REQUIREMENTS

Years 1 and 2 (earned at a two-year college)

- Technical Component: approximately 44 quarter hours
- General Education Component: approximately 28 quarter hours (see Note 1)
- Other Coursework (electives, additional technical or general education courses, leadership / management courses, etc.): approximately 16 quarter hours

Total quarter hours (first two years): 88

Year 3 (earned either at a two-year college or Colorado Technical University)

- General Education Component: approximately 36 quarter hours (see Note 1)
- Accounting Fundamentals: approximately 12 quarter hours (see Note 2)

Total quarter hours (third year): 48

Year 4 (earned at Colorado Technical University). The following courses represent the Technology Management component of the BSTM and *must* be taken *in residence* at CTU:

# BSTM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSTM program must complete all of the following courses:

| Course No.                                 | Course Name                               | Hrs.       |
|--------------------------------------------|-------------------------------------------|------------|
| BADM350                                    | International Business                    | 4          |
| BADM360                                    | Operations Management                     | 4          |
| BADM370                                    | Quality Management                        | 4          |
| BADM480                                    | Business Strategy and Policy              | 4          |
| EBUS308                                    | Introduction to e-Business                | 4          |
| FINC400                                    | Financial Management                      | 4          |
| HRMT210                                    | Introduction to Human Resource Management | 4          |
| HRMT410                                    | Training and Employee Development         | 4          |
| HRMT440                                    | Managing Organizational Change            | 4          |
| PM210                                      | Introduction to Project Management        | 4          |
| TMGT481                                    | Technology Management Capstone I          | 4          |
| TMGT482                                    | Technology Management Capstone II         | 4          |
| <b>Total quarter hours (fourth year):</b>  |                                           | <b>48</b>  |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                           | <b>184</b> |

Note 1: *General Education Requirements.* The following minimum general education requirements must be met in order to graduate with a Colorado Technical University BSTM degree. All of these requirements may be taken at the participating two year college (if available) or at CTU.

| Course Category                      | Minimum Qtr Hrs | CTU Equivalent Course No. |
|--------------------------------------|-----------------|---------------------------|
| English Composition I and II         | 8               | ENGL111 / 112             |
| Technical Writing                    | 4               | ENGL200                   |
| Speech                               | 4               | ENGL210                   |
| History                              | 4               | HIST150 / 210             |
| Business                             | 4               | BADM100                   |
| Psychology or Sociology              | 4               | PSYC100 or SOCL101        |
| College or Business Algebra          | 4               | MATH103 or MATH143        |
| Statistics                           | 4               | MATH306                   |
| Science                              | 4               | SCI120                    |
| Humanities                           | 4               | HUMN200                   |
| Ethics                               | 4               | PHIL310                   |
| Economics                            | 4               | ECO201                    |
| Literature                           | 4               | LITR220                   |
| Information Technology Principles    | 4               | IT190                     |
| Spreadsheet Applications             | 4               | IT254                     |
| <b>Total general education hours</b> |                 | <b>64</b>                 |

Note 2: *Accounting Requirements.* A lower division requirement for the BSTM is the successful completion of an accounting sequence through intermediate accounting. The equivalent CTU courses are ACCT201 Accounting I, ACCT202 Accounting II, and ACCT203 Accounting III. This accounting coursework may be taken at the participating two-year college (if available) or at CTU.





# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN ACCOUNTING (BSBA-ACC)

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of a personal financial advisor. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory role. In addition to openings resulting from growth, the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The BSBA-ACC degree program is designed to equip you with a variety of accounting and business skills necessary to succeed as an accountant in an industry environment. It offers flexibility to allow students to pursue their own unique business interests. In addition, the curriculum provides you with an opportunity to develop your intellectual, interpersonal and communication skills so that you can succeed in the business world. Students wishing to sit for the Certified Public Accountant (C.P.A.) exam should consider enrollment in the BSACC degree program after consultation with your Program Chair.

### PROGRAM OUTCOMES – Accounting Concentration

- Apply the knowledge and skills of accounting, management, business mathematics, and the liberal arts to identify, resolve, and communicate relevant accounting issues
- Prepare, comprehend and interpret the required financial statements according to Generally Accepted Accounting Principles (GAAP)
- Demonstrate a basic knowledge of the importance of the moral standards embodied in the professional code of ethics
- Distinguish between financial, managerial, cost accounting and tax accounting principles and practices
- Distinguish the appropriate information to be used in managerial decision making
- Identify, formulate, and communicate the relevant accounting issues in the Sarbanes-Oxley era
- Manage a complete set of accounts for a small to moderate-sized organization

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# BSBA-ACC PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-ACC program must complete all of the following courses:

| Course No.                          | Course Name                                     | Hrs. |
|-------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>   |                                                 |      |
| IT190                               | Introduction to IT                              | 4    |
| IT254                               | Spreadsheet Applications                        | 4    |
| ENGL111                             | English Composition I                           | 4    |
| ENGL112                             | English Composition II                          | 4    |
| ENGL200                             | Professional Writing                            | 4    |
| ENGL210                             | Professional Speaking                           | 4    |
| PHIL310                             | Ethics                                          | 4    |
| INTD111                             | Creating Academic and Professional Success      | 4    |
| SCI120                              | The Impact of Science and Technology on Society | 4    |
| MATH143                             | Business Algebra                                | 4    |
| MATH306                             | Computer Assisted Statistics                    | 4    |
| BADM100                             | Introduction to Business                        | 4    |
| ECON201                             | Macroeconomics                                  | 4    |
| LITR220                             | Values in World Literature                      | 4    |
| HIST150                             | World History Since 1500                        | 4    |
| or                                  |                                                 |      |
| HIST210                             | World History and Culture 1                     | 4    |
| PSYC100                             | Introduction to Psychology                      | 4    |
| <b>HUMANITIES (4 hrs)</b>           |                                                 |      |
| HIST250                             | World Culture and Values                        | 4    |
| or                                  |                                                 |      |
| HIST310                             | World History and Culture II                    | 4    |
| <b>MATHEMATICS (4 hrs)</b>          |                                                 |      |
| MATH476                             | Quantitative Decision Making                    | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>       |                                                 |      |
| ECON202                             | Microeconomics                                  | 4    |
| SOCL101                             | Introduction to Sociology                       | 4    |
| <b>BUSINESS MANAGEMENT (68 hrs)</b> |                                                 |      |
| ACCT201                             | Accounting I                                    | 4    |
| ACCT202                             | Accounting II                                   | 4    |
| ACCT203                             | Accounting III                                  | 4    |
| BADM150                             | Contemporary Business Trends                    | 4    |
| BADM305                             | Organizational Behavior                         | 4    |
| BADM350                             | International Business                          | 4    |
| BADM360                             | Operations Management                           | 4    |
| BADM410                             | Business Law I                                  | 4    |

|          |                                                |   |
|----------|------------------------------------------------|---|
| BADM420  | Business Law II                                | 4 |
| BADM440  | Research Design Methods and Applications       | 4 |
| BADM475  | Small Business Management and Entrepreneurship | 4 |
| or       |                                                |   |
| BADM480  | Business Strategy and Policy                   | 4 |
| ECON202  | Microeconomics                                 | 4 |
| FINC400  | Financial Management                           | 4 |
| HRMT210  | Introduction to Human Resource Management      | 4 |
| HRMT440  | Managing Organizational Change                 | 4 |
| Elective |                                                | 8 |

## ACCOUNTING CONCENTRATION (32 hrs)

|                   |                                |   |
|-------------------|--------------------------------|---|
| ACCT210           | Computerized Accounting        | 4 |
| ACCT341           | Intermediate Accounting I      | 4 |
| ACCT342           | Intermediate Accounting II     | 4 |
| ACCT351           | Cost Accounting                | 4 |
| ACCT460           | Accounting Capstone            | 4 |
| FINC220           | Financial Statement Analysis   | 4 |
| FINP310           | Taxation in Financial Planning | 4 |
| Business Elective |                                | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
 Financial Statement Analysis (ACCT341, ACCT342, FINC400)  
 Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
 Risk and Legal Environment (BADM410, BADM420, elective FINP315)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA).

# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN FINANCE (BSBA-FIN)

The BSBA-FIN degree concentration at Colorado Tech Online supplements your fundamental business knowledge with a focus in finance, including financial accounting, capital and money markets, investments, and risk assessment. You will explore both corporate and international financial management. The finance concentration builds upon the solid foundation of the BSBA degree that emphasizes practical competencies, creative leadership approaches, and the development of critical thinking skills. You can build a strong base of practical, real world applications, learning from professors with extensive business experience. In addition to important undergraduate foundation studies in areas including English, math, social science, and technology, you can learn about integrating technology for greater operational efficiency, professional communication skills, collaboration and team building skills, accounting and financial management, international business practices, business law, and project management.

### PROGRAM OUTCOMES—Finance

- Discuss the differences between using equity and debt to finance investment opportunities
- Examine the financial performance of a firm based on its financial statements
- Discuss the ethical ramifications of a firm's financial disclosure
- Describe the functions and roles played by financial markets and institutions particularly as they relate to the flow of funds from lenders to borrowers within the global financial system
- Evaluate the activities and impact of the U.S. treasury department, state and local governmental units' involvement in raising funds within the financial system
- Discuss and evaluate the ethical, economic, demographic, social and technological forces reshaping financial institutions, financial markets and the financial system
- Analyze the ways in which monetary policy can influence a nation's economic goals of achieving full employment, controlling inflation, sustaining adequate economic growth, and achieving a stable balance-of-payments position

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSBA-FIN PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-FIN program must complete all of the following courses:

| Course No.                          | Course Name                                     | Hrs. |
|-------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>   |                                                 |      |
| IT190                               | Introduction to IT                              | 4    |
| IT254                               | Spreadsheet Applications                        | 4    |
| ENGL111                             | English Composition I                           | 4    |
| ENGL112                             | English Composition II                          | 4    |
| ENGL200                             | Professional Writing                            | 4    |
| ENGL210                             | Professional Speaking                           | 4    |
| PHIL310                             | Ethics                                          | 4    |
| HIST150                             | World History Since 1500                        | 4    |
| or                                  |                                                 |      |
| HIST210                             | World History and Culture 1                     | 4    |
| LITR220                             | Values in World Literature                      | 4    |
| INTD111                             | Creating Academic and Professional Success      | 4    |
| SCI120                              | The Impact of Science and Technology on Society | 4    |
| MATH143                             | Business Algebra                                | 4    |
| MATH306                             | Computer Assisted Statistics                    | 4    |
| ECON201                             | Macroeconomics                                  | 4    |
| BADM100                             | Introduction to Business                        | 4    |
| PSYC100                             | Introduction to Psychology                      | 4    |
| <b>MATHEMATICS (4 hrs)</b>          |                                                 |      |
| MATH476                             | Quantitative Decision Making                    | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>       |                                                 |      |
| HIST250                             | World Cultures and Values                       | 4    |
| or                                  |                                                 |      |
| HIST310                             | World History and Culture II                    | 4    |
| SOCL101                             | Introduction to Sociology                       | 4    |
| <b>BUSINESS MANAGEMENT (68 hrs)</b> |                                                 |      |
| ACCT201                             | Accounting I                                    | 4    |
| ACCT202                             | Accounting II                                   | 4    |
| ACCT203                             | Accounting III                                  | 4    |
| BADM150                             | Contemporary Business Trends                    | 4    |
| BADM305                             | Organizational Behavior                         | 4    |
| BADM350                             | International Business                          | 4    |
| BADM360                             | Operations Management                           | 4    |
| BADM410                             | Business Law I                                  | 4    |
| BADM420                             | Business Law II                                 | 4    |

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| BADM440 | Research Design Methods and Applications          | 4 |
| BADM475 | Small Business Management and Entrepreneurship    | 4 |
| or      |                                                   |   |
| BADM480 | Business Strategy and Policy                      | 4 |
| ECON202 | Microeconomics                                    | 4 |
| FINC400 | Financial Management                              | 4 |
| HRMT210 | Introduction to Human Resource Management         | 4 |
| HRMT440 | Managing Organizational Change                    | 4 |
| MKTG210 | Introduction to Marketing                         | 4 |
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |

## ELECTIVES (4 hrs)

Electives—Choose a minimum of 4 credit hours

## FINANCIAL MANAGEMENT CONCENTRATION (32 hrs)

|         |                                 |   |
|---------|---------------------------------|---|
| FINC210 | Financial Management Principles | 4 |
| FINC220 | Financial Statement Analysis    | 4 |
| FINC310 | Money and Capital Markets       | 4 |
| FINC320 | Investments                     | 4 |
| FINC330 | Risk Management                 | 4 |
| FINC410 | Corporate Finance               | 4 |
| FINC420 | International Finance           | 4 |
| FINC460 | Finance Capstone                | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 180

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
 Management Essentials (BADM100, BADM305, HRMT210)  
 Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
 Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
 Financial Management (FINC210, FINC220, FINC410, FINC420)  
 Investments (FINC220, FINC310, FINC320, FINC330)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN FINANCE (BSBA-FIN) ONLINE

The BSBA-FIN degree concentration at Colorado Tech Online supplements your fundamental business knowledge with a focus in finance, including financial accounting, capital and money markets, investments, and risk assessment. You will explore both corporate and international financial management. The finance concentration builds upon the solid foundation of the BSBA degree that emphasizes practical competencies, creative leadership approaches, and the development of critical thinking skills. You can build a strong base of practical, real world applications, learning from professors with extensive business experience. In addition to important undergraduate foundation studies in areas including English, math, social science, and technology, you can learn about integrating technology for greater operational efficiency, professional communication skills, collaboration and team building skills, accounting and financial management, international business practices, business law, and project management.

### PROGRAM OUTCOMES—Finance

- Discuss the differences between using equity and debt to finance investment opportunities
- Examine the financial performance of a firm based on its financial statements
- Discuss the ethical ramifications of a firm's financial disclosure
- Describe the functions and roles played by financial markets and institutions particularly as they relate to the flow of funds from lenders to borrowers within the global financial system
- Evaluate the activities and impact of the U.S. treasury department, state and local governmental units' involvement in raising funds within the financial system
- Discuss and evaluate the ethical, economic, demographic, social and technological forces reshaping financial institutions, financial markets and the financial system
- Analyze the ways in which monetary policy can influence a nation's economic goals of achieving full employment, controlling inflation, sustaining adequate economic growth, and achieving a stable balance-of-payments position

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

100% ONLINE



# BSBA-FIN PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-FIN program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>Total credit hours for ASBA</b>                          |                                            | <b>90</b> |
| <b>UPPER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (20 CREDITS)</b>          |                                            |           |
| ENG116                                                      | English Composition II                     | 6         |
| ENG202                                                      | Professional Writing and Composition       | 6         |
| MGM110                                                      | Principles of Business                     | 4         |
| IT254                                                       | Spreadsheet Applications                   | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>20</b> |

## BUSINESS CORE REQUIREMENTS (42 CREDITS)

|        |                                       |   |
|--------|---------------------------------------|---|
| ACC350 | Managerial Accounting                 | 4 |
| MKT305 | Marketing and the Virtual Marketplace | 4 |
| MGM310 | e-Business                            | 4 |
| MGM330 | Business Decision Making              | 4 |
| MGM465 | Business Strategy                     | 6 |
| FIN310 | Financial Management Principles       | 4 |
| HRM450 | Organizational Change                 | 6 |
| MPM401 | Project Management Theory             | 6 |
| ECO305 | Global Managerial Economics           | 4 |

**Total credit hours**

**42**

## CONCENTRATION REQUIREMENTS (28 HRS)

|        |                           |   |
|--------|---------------------------|---|
| ACC341 | Financial Accounting      | 4 |
| FIN412 | Money and Capital Markets | 6 |
| FIN322 | Investments               | 4 |
| FIN354 | Risk Management           | 4 |
| FIN434 | Corporate Finance         | 6 |
| FIN356 | International Finance     | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

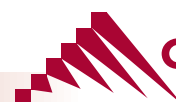
**180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basic Financial Management (FIN220, FIN310, FIN322, ACC341)  
Advanced Financial Management (FIN354, FIN356, FIN412, FIN434)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Colorado Technical University™**



# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN HEALTHCARE MANAGEMENT (BSBA-HCM) ONLINE

The concentration in Health Care Management provides an overview of the health care industry, with a focus on skills specific to managing the health care environment. Human resource and financial management skills needed for planning and coordinating health services are addressed, as well as legal, ethical, and regulatory issues governing the healthcare field. The HCM concentration builds upon the solid foundation of the BSBA degree that emphasizes practical competencies, creative leadership approaches, and the development of critical thinking skills. You can build a strong base of practical, real world applications, learning from professors with extensive business experience.

### PROGRAM OUTCOMES—Healthcare Management

- Develop the skills to address healthcare related issues
- Learn the functional aspects of the healthcare field
- Develop a generalist foundation that emphasizes the application of critical thinking skills to healthcare related issues
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies
- Focus on skills specific to managing the health care environment
- Human resource and financial management skills needed for planning and coordinating health services are addressed, as well as regulatory issues governing the field

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

# BSBA-HCM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-HCM program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>Total credit hours for ASBA</b>                          |                                            | <b>90</b> |
| <b>UPPER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (20 CREDITS)</b>          |                                            |           |
| ENG116                                                      | English Composition II                     | 6         |
| ENG202                                                      | Professional Writing and Composition       | 6         |
| MGM110                                                      | Principles of Business                     | 4         |
| IT254                                                       | Spreadsheet Applications                   | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>20</b> |

## BUSINESS CORE REQUIREMENTS (42 CREDITS)

|        |                                       |   |
|--------|---------------------------------------|---|
| ACC350 | Managerial Accounting                 | 4 |
| MKT305 | Marketing and the Virtual Marketplace | 4 |
| MGM310 | e-Business                            | 4 |
| MGM330 | Business Decision Making              | 4 |
| MGM465 | Business Strategy                     | 6 |
| FIN310 | Financial Management Principles       | 4 |
| HRM450 | Organizational Change                 | 6 |
| MPM401 | Project Management Theory             | 6 |
| ECO305 | Global Managerial Economics           | 4 |

**Total credit hours**

**42**

## CONCENTRATION REQUIREMENTS (28 HRS)

|        |                                                             |   |
|--------|-------------------------------------------------------------|---|
| HCM307 | The Healthcare Industry                                     | 4 |
| HCM427 | Human Resource Management in Healthcare                     | 6 |
| HCM337 | Current Legal, Ethical, and Regulatory Issues in Healthcare | 4 |
| HCM367 | The Healthcare Organization                                 | 6 |
| HCM477 | Finance in Healthcare                                       | 4 |
| HCM387 | Management Principles in Healthcare                         | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**180**



# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN HUMAN RESOURCE MANAGEMENT (BSBA-HRM)

Recent legislation and court rulings, rising healthcare costs, globalization, increased complexity of many jobs, the aging of the workforce, and increased usage of human resource information systems and technological advances that can leave employees with obsolete skills will continue to increase the demand for human resource professionals. Human resource management is the study of issues that affect people at work.

CTU's BSBA-HRM degree concentration is designed to prepare the aspiring human resource professional to participate as an integral member of an organization's management team. The complexities of today's legal environment, together with increased emphasis on customer service and competitiveness through effective personnel management, have dramatically affected the role and responsibilities of the human resource manager. Program curriculum is designed to develop insight into management structures and processes and to build professional skills in communication, human resources and systems management.

### PROGRAM OUTCOMES—

#### Human Resource Management Concentration

- Interpret implications of the rapidly changing and expanding role of the contemporary and future human resource manager
- Apply strategic thinking to human resource planning and policy consideration
- Evaluate successful processes for employee selection, placement, promotion, and termination
- Implement professional practices such as designing a compensation plan, conducting a job analysis, designing a training program, implementing a group diagnosis process, developing a performance appraisal approach, designing a strategic staffing plan, designing an employee manual, apply lessons learned from strikes and labor unrest to current HR policy
- Evaluate the role of technology in the various HR functions
- Apply principles of diversity management to HR policies and labor relations
- Analyze legal implications of employment and labor law in relation to HR policies and practices
- Recognize and resolve ethical issues using critical thinking
- Apply collaborative learning experiences to projects and problem solving
- Apply standards of scholarly research and documentation in developing solutions

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSBA-HRM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-HRM program must complete all of the following courses:

| Course No.                          | Course Name                                     | Hrs. |
|-------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>   |                                                 |      |
| IT190                               | Introduction to IT                              | 4    |
| IT254                               | Spreadsheet Applications                        | 4    |
| ENGL111                             | English Composition I                           | 4    |
| ENGL112                             | English Composition II                          | 4    |
| ENGL200                             | Professional Writing                            | 4    |
| ENGL210                             | Professional Speaking                           | 4    |
| PHIL310                             | Ethics                                          | 4    |
| HIST150                             | World History Since 1500                        | 4    |
| or                                  |                                                 |      |
| HIST210                             | World History and Culture 1                     | 4    |
| LITR220                             | Values in World Literature                      | 4    |
| INTD111                             | Creating Academic and Professional Success      | 4    |
| SCI120                              | The Impact of Science and Technology on Society | 4    |
| MATH143                             | Business Algebra                                | 4    |
| MATH306                             | Computer Assisted Statistics                    | 4    |
| ECON201                             | Macroeconomics                                  | 4    |
| BADM100                             | Introduction to Business                        | 4    |
| PSYC100                             | Introduction to Psychology                      | 4    |
| <b>MATHEMATICS (4 hrs)</b>          |                                                 |      |
| MATH476                             | Quantitative Decision Making                    | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>       |                                                 |      |
| HIST250                             | World Cultures and Values                       | 4    |
| or                                  |                                                 |      |
| HIST310                             | World History and Culture II                    | 4    |
| SOCL101                             | Introduction to Sociology                       | 4    |
| <b>BUSINESS MANAGEMENT (68 hrs)</b> |                                                 |      |
| ACCT201                             | Accounting I                                    | 4    |
| ACCT202                             | Accounting II                                   | 4    |
| ACCT203                             | Accounting III                                  | 4    |
| BADM150                             | Contemporary Business Trends                    | 4    |
| BADM305                             | Organizational Behavior                         | 4    |
| BADM350                             | International Business                          | 4    |
| BADM360                             | Operations Management                           | 4    |
| BADM410                             | Business Law I                                  | 4    |
| BADM420                             | Business Law II                                 | 4    |
| BADM440                             | Research Design Methods and Applications        | 4    |

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| BADM475 | Small Business Management and Entrepreneurship    | 4 |
| or      |                                                   |   |
| BADM480 | Business Strategy and Policy                      | 4 |
| ECON202 | Microeconomics                                    | 4 |
| FINC400 | Financial Management                              | 4 |
| HRMT440 | Managing Organizational Change                    | 4 |
| MKTG210 | Introduction to Marketing                         | 4 |
| PM210   | Introduction to Project Management                | 4 |
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |

## GENERAL ELECTIVES (4 hrs)

Electives—Choose a minimum of 4 credit hours

## HUMAN RESOURCE MANAGEMENT CONCENTRATION (32 hrs)

|          |                                           |   |
|----------|-------------------------------------------|---|
| HRMT210  | Introduction to Human Resource Management | 4 |
| HRMT220  | Staffing the Organization                 | 4 |
| HRMT300  | Managing Employee Performance             | 4 |
| HRMT325  | Compensation and Benefits                 | 4 |
| HRMT330  | HRM Legal Environment                     | 4 |
| HRMT410  | Training and Employee Development         | 4 |
| HRMT420  | Managing Labor-Management Relations       | 4 |
| HRMT485* | Human Resources Capstone                  | 4 |

\* Capstone class may be conducted incrementally based on campus decision.

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
 Management Essentials (BADM100, BADM305, HRMT210)  
 Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
 Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
 Human Resource Development (HRMT210, HRMT300, HRMT325, HRMT410)  
 Human Resource Management (HRMT210, HRMT220, HRMT330, HRMT420)

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**Colorado Technical University™**



# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN HUMAN RESOURCE MANAGEMENT (BSBA-HRM) ONLINE

Recent legislation and court rulings, rising healthcare costs, globalization, increased complexity of many jobs, the aging of the workforce, and increased usage of human resource information systems and technological advances that can leave employees with obsolete skills will continue to increase the demand for human resource professionals. Human resource management is the study of issues that affect people at work.

CTU's BSBA-HRM degree concentration is designed to prepare the aspiring human resource professional to participate as an integral member of an organization's management team. The complexities of today's legal environment, together with increased emphasis on customer service and competitiveness through effective personnel management, have dramatically affected the role and responsibilities of the human resource manager. Program curriculum is designed to develop insight into management structures and processes and to build professional skills in communication, human resources and systems management.

### PROGRAM OUTCOMES—Human Resource Management Concentration

- Interpret implications of the rapidly changing and expanding role of the contemporary and future human resource manager
- Apply strategic thinking to human resource planning and policy consideration
- Evaluate successful processes for employee selection, placement, promotion, and termination
- Implement professional practices such as designing a compensation plan, conducting a job analysis, designing a training program, implementing a group diagnosis process, developing a performance appraisal approach, designing a strategic staffing plan, designing an employee manual, apply lessons learned from strikes and labor unrest to current HR policy
- Evaluate the role of technology in the various HR functions

- Apply principles of diversity management to HR policies and labor relation
- Analyze legal implications of employment and labor law in relation to HR policies and practices
- Recognize and resolve ethical issues using critical thinking
- Apply collaborative learning experiences to projects and problem solving
- Apply standards of scholarly research and documentation in developing solutions

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

100% ONLINE



# BSBA-HRM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-HRM program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>Total credit hours for ASBA</b>                          |                                            | <b>90</b> |
| <b>UPPER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (20 CREDITS)</b>          |                                            |           |
| ENG116                                                      | English Composition II                     | 6         |
| ENG202                                                      | Professional Writing and Composition       | 6         |
| MGM110                                                      | Principles of Business                     | 4         |
| IT254                                                       | Spreadsheet Applications                   | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>20</b> |

## Business Core Requirements (42 credits)

|        |                                       |   |
|--------|---------------------------------------|---|
| ACC350 | Managerial Accounting                 | 4 |
| MKT305 | Marketing and the Virtual Marketplace | 4 |
| MGM310 | e-Business                            | 4 |
| MGM330 | Business Decision Making              | 4 |
| MGM465 | Business Strategy                     | 6 |
| FIN310 | Financial Management Principles       | 4 |
| HRM450 | Organizational Change                 | 6 |
| MPM401 | Project Management Theory             | 6 |
| ECO305 | Global Managerial Economics           | 4 |

**Total credit hours**

## Concentration Requirements (28 hrs)

|        |                                   |   |
|--------|-----------------------------------|---|
| HRM345 | Building Effective Teams          | 4 |
| HRM350 | Workforce Effectiveness           | 4 |
| HRM415 | Compensation and Benefits         | 6 |
| HRM335 | Legal Issues in HRM               | 4 |
| HRM460 | Employee Training and Development | 6 |
| HRM355 | Labor Relations                   | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Management Essentials (ACC201, HRM450, MGM335, MGM465)  
Organizational Systems Improvement (HRM450, MGM335, MGM340, MGM465)  
Human Resource Development (MGM260, HRM350, HRM345, HRM460,)  
Human Resource Management (HRM335, HRM355, HRM415, HRM450)

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**Colorado Technical University™**

# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN INTERNATIONAL BUSINESS (BSBA-IB)

In today's environment, almost all businesses are affected in some way by international and global factors. Managing a business in this environment has become increasingly challenging. The CTU International Business concentration looks at how unique political, social, legal, and cultural factors change the dynamics of business. Specific issues such as global economic factor, international marketing approach, and international finance considerations are examined in detail.

### PROGRAM OUTCOMES—

#### International Business Concentration

- Understand the issues in managing a business in today's domestic, international and global environments
- Develop and implement an international/global strategy
- Explain cultural, legal, political, and financial issues associated with managing in domestic international, and global environments
- Manage and integrate operations in a multinational environment
- Develop and integrate supply chain management techniques for inbound, outbound, and reverse control of goods
- Create and implement a proactive risk management approach to handle political, natural and legal risks present in the international environment. Develop contingency plans. Mitigate the effects of risks

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSBA-IB PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-IB program must complete all of the following courses:

| Course No.                          | Course Name                                     | Hrs. |
|-------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>   |                                                 |      |
| IT190                               | Introduction to IT                              | 4    |
| IT254                               | Spreadsheet Applications                        | 4    |
| ENGL111                             | English Composition I                           | 4    |
| ENGL112                             | English Composition II                          | 4    |
| ENGL200                             | Professional Writing                            | 4    |
| ENGL210                             | Professional Speaking                           | 4    |
| PHIL310                             | Ethics                                          | 4    |
| HIST150                             | World History Since 1500                        | 4    |
| or                                  |                                                 |      |
| HIST210                             | World History and Culture 1                     | 4    |
| LITR220                             | Values in World Literature                      | 4    |
| INTD111                             | Creating Academic and Professional Success      | 4    |
| SCI120                              | The Impact of Science and Technology on Society | 4    |
| MATH143                             | Business Algebra                                | 4    |
| MATH306                             | Computer Assisted Statistics                    | 4    |
| ECON201                             | Macroeconomics                                  | 4    |
| BADM100                             | Introduction to Business                        | 4    |
| PSYC100                             | Introduction to Psychology                      | 4    |
| <b>MATHEMATICS (4 hrs)</b>          |                                                 |      |
| MATH476                             | Quantitative Decision Making                    | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>       |                                                 |      |
| HIST250                             | World Cultures and Values                       | 4    |
| or                                  |                                                 |      |
| HIST310                             | World History and Culture II                    | 4    |
| SOCL101                             | Introduction to Sociology                       | 4    |
| <b>BUSINESS MANAGEMENT (68 hrs)</b> |                                                 |      |
| ACCT201                             | Accounting I                                    | 4    |
| ACCT202                             | Accounting II                                   | 4    |
| ACCT203                             | Accounting III                                  | 4    |
| BADM150                             | Contemporary Business Trends                    | 4    |
| BADM305                             | Organizational Behavior                         | 4    |
| BADM350                             | International Business                          | 4    |
| BADM360                             | Operations Management                           | 4    |
| BADM410                             | Business Law I                                  | 4    |
| BADM420                             | Business Law II                                 | 4    |
| BADM440                             | Research Design Methods and Applications        | 4    |

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| BADM475 | Small Business Management and Entrepreneurship    | 4 |
| or      |                                                   |   |
| BADM480 | Business Strategy and Policy                      | 4 |
| ECON202 | Microeconomics                                    | 4 |
| FINC400 | Financial Management                              | 4 |
| HRMT210 | Introduction to Human Resource Management         | 4 |
| HRMT440 | Managing Organizational Change                    | 4 |
| MKTG210 | Introduction to Marketing                         | 4 |
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |

## GENERAL ELECTIVES (4 hrs)

Electives—Choose a minimum of 4 credit hours

## INTERNATIONAL BUSINESS CONCENTRATION (32 hrs)

|          |                                            |   |
|----------|--------------------------------------------|---|
| BADM210  | Introduction to International Business     | 4 |
| BADM220  | International Business Communication       | 4 |
| BADM355  | Legal Operations in International Business | 4 |
| MKTG305  | Marketing in the Virtual Marketplace       | 4 |
| ECON310  | Global Managerial Economics                | 4 |
| MKTG410  | International Marketing                    | 4 |
| FINC420  | International Finance                      | 4 |
| BADM465* | International Business Capstone            | 4 |

\* Capstone class may be conducted incrementally based on campus decision.

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
 Management Essentials (BADM100, BADM305, HRMT210)  
 Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
 Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
 International Business (BADM210, BADM220, MKTG410, FINC420)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN INTERNATIONAL BUSINESS (BSBA-IB) ONLINE

In today's environment, almost all businesses are affected in some way by international and global factors. Managing a business in this environment has become increasingly challenging. The CTU International Business concentration looks at how unique political, social, legal, and cultural factors change the dynamics of business. Specific issues such as global economic factor, international marketing approach, and international finance considerations are examined in detail.

### PROGRAM OUTCOMES—

#### International Business Management

- Understand the issues in managing a business in today's domestic, international and global environments
- Develop and implement an international/global strategy
- Explain cultural, legal, political, financial issues associated with managing in domestic, international, and global environments
- Manage and integrate operations in a multinational environment
- Develop and integrate supply chain management techniques for inbound, outbound, and reverse control of goods
- Create and implement a proactive risk management approach to handle political, natural and legal risks present in the international environment. Develop contingency plans. Mitigate the effects of risks

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

# BSBA-IB PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-IB program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>Total credit hours for ASBA</b>                          |                                            | <b>90</b> |
| <b>UPPER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (20 CREDITS)</b>          |                                            |           |
| ENG116                                                      | English Composition II                     | 6         |
| ENG202                                                      | Professional Writing and Composition       | 6         |
| MGM110                                                      | Principles of Business                     | 4         |
| IT254                                                       | Spreadsheet Applications                   | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>20</b> |

## BUSINESS CORE REQUIREMENTS (42 CREDITS)

|        |                                       |   |
|--------|---------------------------------------|---|
| ACC350 | Managerial Accounting                 | 4 |
| MKT305 | Marketing and the Virtual Marketplace | 4 |
| MGM310 | e-Business                            | 4 |
| MGM330 | Business Decision Making              | 4 |
| MGM465 | Business Strategy                     | 6 |
| FIN310 | Financial Management Principles       | 4 |
| HRM450 | Organizational Change                 | 6 |
| MPM401 | Project Management Theory             | 6 |
| ECO305 | Global Managerial Economics           | 4 |

**Total credit hours**

**42**

## CONCENTRATION REQUIREMENTS (28 HRS)

|        |                                              |   |
|--------|----------------------------------------------|---|
| FIN356 | International Finance                        | 4 |
| MGM316 | International Business Communication         | 4 |
| MGM336 | Management in International Business         | 4 |
| MGM366 | Legal Operations in International Business   | 4 |
| MGM456 | Trade in International Business              | 6 |
| MKT446 | Marketing Concepts in International Business | 6 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

International Business (FIN356, MGM336, MGM456, MKT446)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Colorado Technical University™**



# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN INFORMATION TECHNOLOGY (BSBA-IT) ONLINE

The BSBA-IT degree concentration focuses on providing core information technology skills such as programming, networking, security, and database administration. The IT concentration builds upon the solid foundation of the BSBA degree that emphasizes practical competencies, creative leadership approaches, and the development of critical thinking skills. You can build a strong base of practical, real world applications, learning from professors with extensive business experience. In addition to important undergraduate foundation studies in areas including English, math, social science, and technology, you can learn about integrating technology for greater operational efficiency, professional communication skills, collaboration and team building skills, accounting and financial management, international business practices, business law, and project management.

### PROGRAM OUTCOMES— INFORMATION TECHNOLOGY

- Develop the skills to address information technology related issues
- Learn the functional aspects of the information technology field
- Develop a generalist foundation that emphasizes the application of critical thinking skills to technology related issues
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies
- Focus on skills specific to managing the environment
- Human resource and financial management skills needed for planning and coordinating services are addressed, as well as regulatory issues governing the field

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

100% ONLINE

# BSBA-IT PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-IT program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>Total credit hours for ASBA</b>                          |                                            | <b>90</b> |
| <b>UPPER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (20 CREDITS)</b>          |                                            |           |
| ENG116                                                      | Composition II                             | 6         |
| ENG202                                                      | Professional Writing                       | 6         |
| MGM110                                                      | Principles of Business                     | 4         |
| IT254                                                       | Spreadsheet Applications                   | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>20</b> |

## BUSINESS CORE REQUIREMENTS (42 CREDITS)

|        |                                       |   |
|--------|---------------------------------------|---|
| ACC350 | Managerial Accounting                 | 4 |
| MKT305 | Marketing and the Virtual Marketplace | 4 |
| MGM310 | e-Business                            | 4 |
| MGM330 | Business Decision Making              | 4 |
| MGM465 | Business Strategy                     | 6 |
| FIN310 | Financial Management Principles       | 4 |
| HRM450 | Organizational Change                 | 6 |
| MPM401 | Project Management Theory             | 6 |
| ECO305 | Global Managerial Economics           | 4 |

**Total credit hours**

**42**

## CONCENTRATION REQUIREMENTS (28 HRS)

|        |                                     |   |
|--------|-------------------------------------|---|
| MIS300 | Introduction to Information Systems | 4 |
| MIS330 | Programming Concepts                | 4 |
| MIS350 | Information Systems Security        | 4 |
| MIS370 | Management for Information Systems  | 4 |
| MIS405 | Database Systems                    | 6 |
| MIS420 | Network Systems                     | 6 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting (ACC350 and FIN310)

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**Colorado Technical University™**

# BACHELOR OF SCIENCE

# BUSINESS

## IN BUSINESS ADMINISTRATION IN LOGISTICS / SUPPLY CHAIN MANAGEMENT (BSBA-L/SCM)

The BSBA-L/SCM degree program can prepare you with skills and knowledge you need to manage a cost effective, efficient global supply chain. The program covers qualitative and quantitative techniques of distribution management, inventory control, procurement, and supplier management from a global perspective.

### PROGRAM OUTCOMES—

#### Logistics Supply Chain Management Concentration

- Relate and apply logistics methodologies to business strategy and operations
- Apply technical and management skills necessary to design, develop, and implement a supply chain from a global perspective
- Discuss issues associated with integrating supply chain factors throughout the value chain from product design, through manufacturing, delivery, support, and disposal
- Apply quantitative and qualitative managerial methods applicable to global supply chain management to include, inventory control, distribution, procurement, and contracting issues

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
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- Demonstrate the application of management information systems including spreadsheets and database applications

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSBA-L/SCM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-L/SCM program must complete all of the following courses:

| Course No.                          | Course Name                                     | Hrs. |
|-------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>   |                                                 |      |
| IT190                               | Introduction to IT                              | 4    |
| IT254                               | Spreadsheet Applications                        | 4    |
| ENGL111                             | English Composition I                           | 4    |
| ENGL112                             | English Composition II                          | 4    |
| ENGL200                             | Professional Writing                            | 4    |
| ENGL210                             | Professional Speaking                           | 4    |
| PHIL310                             | Ethics                                          | 4    |
| HIST150                             | World History Since 1500                        | 4    |
| or                                  |                                                 |      |
| HIST210                             | World History and Culture 1                     | 4    |
| LITR220                             | Values in World Literature                      | 4    |
| INTD111                             | Creating Academic and Professional Success      | 4    |
| SCI120                              | The Impact of Science and Technology on Society | 4    |
| MATH143                             | Business Algebra                                | 4    |
| MATH306                             | Computer Assisted Statistics                    | 4    |
| ECON201                             | Macroeconomics                                  | 4    |
| BADM100                             | Introduction to Business                        | 4    |
| PSYC100                             | Introduction to Psychology                      | 4    |
| <b>MATHEMATICS (4 hrs)</b>          |                                                 |      |
| MATH476                             | Quantitative Decision Making                    | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>       |                                                 |      |
| HIST250                             | World Cultures and Values                       | 4    |
| or                                  |                                                 |      |
| HIST310                             | World History and Culture II                    | 4    |
| SOCL101                             | Introduction to Sociology                       | 4    |
| <b>BUSINESS MANAGEMENT (68 hrs)</b> |                                                 |      |
| ACCT201                             | Accounting I                                    | 4    |
| ACCT202                             | Accounting II                                   | 4    |
| ACCT203                             | Accounting III                                  | 4    |
| BADM150                             | Contemporary Business Trends                    | 4    |
| BADM305                             | Organizational Behavior                         | 4    |
| BADM350                             | International Business                          | 4    |
| BADM360                             | Operations Management                           | 4    |
| BADM410                             | Business Law I                                  | 4    |
| BADM420                             | Business Law II                                 | 4    |
| BADM440                             | Research Design Methods and Applications        | 4    |
| BADM475                             | Small Business Management and Entrepreneurship  | 4    |

|         |                                           |   |
|---------|-------------------------------------------|---|
| or      |                                           |   |
| BADM480 | Business Strategy and Policy              | 4 |
| ECON202 | Microeconomics                            | 4 |
| FINC400 | Financial Management                      | 4 |
| HRMT210 | Introduction to Human Resource Management | 4 |
| HRMT440 | Managing Organizational Change            | 4 |
| MKTG210 | Introduction to Marketing                 | 4 |
| PM210   | Introduction to Project Management        | 4 |

## GENERAL ELECTIVES (4 hrs)

Electives—Choose a minimum of 4 credit hours

## SUPPLY CHAIN MANAGEMENT CONCENTRATION (32 hrs)

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |
| SCM220  | Transportation and Distribution Management        | 4 |
| SCM310  | Material and Inventory Management                 | 4 |
| SCM320  | Contracts and Procurement                         | 4 |
| SCM330  | Contract Pricing and Negotiation                  | 4 |
| SCM410  | Contract Management                               | 4 |
| BADM415 | Quality and Six Sigma                             | 4 |
| SCM430* | Logistics/Supply Chain Management Capstone        | 4 |

\* Capstone class may be conducted incrementally based on campus decision.

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
 Management Essentials (BADM100, BADM305, HRMT210)  
 Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
 Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
 Contract Management (SCM320, SCM330, SCM410, BADM415)  
 Logistics/Supply Chain Management (SCM210, SCM220, SCM310)

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# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN MANAGEMENT (BSBA-MGM)

Professional education in business administration serves to develop your capabilities so that you may assume positions of leadership and responsibility at all levels of management in our society. Business managers formulate the policies and direct the operations of corporations, nonprofit institutions and government agencies. General managers and top executives hold over two million jobs in the U.S.\* They are found in every industry, but wholesale and retail trade, and service industries employ over six out of ten business managers.

Source: [www.acinet.org](http://www.acinet.org)

### PROGRAM OUTCOMES—MGM Concentration

- Analyze business organizations from a managerial perspective
- Apply theories and concepts related to human behavior in organizations
- Recognize human behaviors and attitudes that could jeopardize an effective and efficient management of an organization
- Utilize supervisory skills to effectively manage individuals and teams
- Demonstrate competencies and professional skills in management and business

### PROGRAM OUTCOMES—BSBA Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# BSBA-MGM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-MGM program must complete all of the following courses:

| Course No.                          | Course Name                                     | Hrs. |
|-------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>   |                                                 |      |
| IT190                               | Introduction to IT                              | 4    |
| IT254                               | Spreadsheet Applications                        | 4    |
| ENGL111                             | English Composition I                           | 4    |
| ENGL112                             | English Composition II                          | 4    |
| ENGL200                             | Professional Writing                            | 4    |
| ENGL210                             | Professional Speaking                           | 4    |
| PHIL310                             | Ethics                                          | 4    |
| HIST150                             | World History Since 1500                        | 4    |
| or                                  |                                                 |      |
| HIST210                             | World History and Culture 1                     | 4    |
| LITR220                             | Values in World Literature                      | 4    |
| INTD111                             | Creating Academic and Professional Success      | 4    |
| SCI120                              | The Impact of Science and Technology on Society | 4    |
| MATH143                             | Business Algebra                                | 4    |
| MATH306                             | Computer Assisted Statistics                    | 4    |
| ECON201                             | Macroeconomics                                  | 4    |
| BADM100                             | Introduction to Business                        | 4    |
| PSYC100                             | Introduction to Psychology                      | 4    |
| <b>MATHEMATICS (4 hrs)</b>          |                                                 |      |
| MATH476                             | Quantitative Decision Making                    | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>       |                                                 |      |
| HIST250                             | World Cultures and Values                       | 4    |
| or                                  |                                                 |      |
| HIST310                             | World History and Culture II                    | 4    |
| SOCL101                             | Introduction to Sociology                       | 4    |
| <b>BUSINESS MANAGEMENT (68 hrs)</b> |                                                 |      |
| ACCT201                             | Accounting I                                    | 4    |
| ACCT202                             | Accounting II                                   | 4    |
| ACCT203                             | Accounting III                                  | 4    |
| BADM150                             | Contemporary Business Trends                    | 4    |
| BADM305                             | Organizational Behavior                         | 4    |
| BADM350                             | International Business                          | 4    |
| BADM360                             | Operations Management                           | 4    |
| BADM410                             | Business Law I                                  | 4    |
| BADM420                             | Business Law II                                 | 4    |

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| BADM440 | Research Design Methods and Applications          | 4 |
| BADM475 | Small Business Management and Entrepreneurship    | 4 |
| or      |                                                   |   |
| BADM480 | Business Strategy and Policy                      | 4 |
| ECON202 | Microeconomics                                    | 4 |
| FINC400 | Financial Management                              | 4 |
| HRMT210 | Introduction to Human Resource Management         | 4 |
| HRMT440 | Managing Organizational Change                    | 4 |
| MKTG301 | Introduction to Marketing                         | 4 |
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |

## GENERAL ELECTIVES (4 hrs)

Electives—Choose a minimum of 4 credit hours

## MANAGEMENT CONCENTRATION (32 hrs)

|         |                                 |   |
|---------|---------------------------------|---|
| FINC210 | Financial Management Principles | 4 |
| ACCT351 | Cost Accounting                 | 4 |
| BADM415 | Quality and Six Sigma           | 4 |
| BADM460 | Business Capstone               | 4 |
| MKTG320 | Consumer Behavior               | 4 |
| MKTG310 | Sales Management                | 4 |
|         | Business Elective               | 8 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
 Management Essentials (BADM100, BADM305, HRMT210)  
 Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
 Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)

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## IN BUSINESS ADMINISTRATION IN MANAGEMENT (BSBA-MGM) ONLINE

Professional education in business administration serves to develop your capabilities so that you may assume positions of leadership and responsibility at all levels of management in our society. Business managers formulate the policies and direct the operations of corporations, nonprofit institutions and government agencies. General managers and top executives hold over two million jobs in the U.S.\* They are found in every industry, but wholesale and retail trade, and service industries employ over six out of ten business managers.

Source: [www.acinet.org](http://www.acinet.org)

### PROGRAM OUTCOMES—MGM Concentration

- Analyze business organizations from a managerial perspective
- Apply theories and concepts related to human behavior in organizations
- Recognize human behaviors and attitudes that could jeopardize an effective and efficient management of an organization
- Utilize supervisory skills to effectively manage individuals and teams
- Demonstrate competencies and professional skills in management and business

### PROGRAM OUTCOMES—BSBA Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
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- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

# BSBA-MGM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-MGM program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>Total credit hours for ASBA</b>                          |                                            | <b>90</b> |
| <b>UPPER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (20 CREDITS)</b>          |                                            |           |
| ENG116                                                      | English Composition II                     | 6         |
| ENG202                                                      | Professional Writing and Composition       | 6         |
| MGM110                                                      | Principles of Business                     | 4         |
| IT254                                                       | Spreadsheet Applications                   | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>20</b> |

## BUSINESS CORE REQUIREMENTS (42 CREDITS)

|        |                                       |   |
|--------|---------------------------------------|---|
| ACC350 | Managerial Accounting                 | 4 |
| MKT305 | Marketing and the Virtual Marketplace | 4 |
| MGM310 | e-Business                            | 4 |
| MGM330 | Business Decision Making              | 4 |
| MGM465 | Business Strategy                     | 6 |
| FIN310 | Financial Management Principles       | 4 |
| HRM450 | Organizational Change                 | 6 |
| MPM401 | Project Management Theory             | 6 |
| ECO305 | Global Managerial Economics           | 4 |

**Total credit hours**

**42**

## CONCENTRATION REQUIREMENTS (28 HRS)

|        |                                  |   |
|--------|----------------------------------|---|
| MGM355 | International Business Practices | 4 |
| ACC445 | Cost Accounting                  | 6 |
| MPM401 | Project Management Theory        | 6 |
| HRM315 | Managing Human Resources         | 4 |
| HRM345 | Building Effective Teams         | 4 |
| MGM340 | Operations Management Principles | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Management Essentials (ACC201, HRM450, MGM335, MGM465)  
Organizational Systems Improvement (HRM450, MGM335, MGM340, MGM465)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Colorado Technical University™**

# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN MARKETING MANAGEMENT (BSBA-MKTG)

Opportunities for marketing professionals are expected to increase by as much as 20 percent through 2010.\* Marketing is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy organizational objectives. The BSBA-MKTG is designed to prepare you to understand and apply marketing, sales and management principles in order to contribute to organizational success.

\*U.S. Bureau of Labor statistics, "National Industry-Occupations Employment Matrix"

### PROGRAM OUTCOMES—Marketing Management Concentration

- Explain the core areas of marketing within an organization
- Apply the fundamental concepts of marketing
- Describe the role of marketing in an organization
- Explain the roll marketing variables play in the success of any organization
- Perform marketing research, including problem definition, research design, data collection, date analysis, and the result communication
- Develop a comprehensive marketing strategy for an approved product or service
- Develop a multinational marketing plan considering the global and cultural issues of marketing
- Respond to developing trends such as e-marketing
- Operate in and respond to different environments (regulatory, economic, social, technology, etc.) that affect marketing
- Analyze dispositional topics such as the organizational ethics, values, and political and social factors in light of organizational goals

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# BSBA-MKTG PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-MKTG program must complete all of the following courses:

| Course No.                          | Course Name                                     | Hrs. |
|-------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>   |                                                 |      |
| IT190                               | Introduction to IT                              | 4    |
| IT254                               | Spreadsheet Applications                        | 4    |
| ENGL111                             | English Composition I                           | 4    |
| ENGL112                             | English Composition II                          | 4    |
| ENGL200                             | Professional Writing                            | 4    |
| ENGL210                             | Professional Speaking                           | 4    |
| PHIL310                             | Ethics                                          | 4    |
| HIST150                             | World History Since 1500                        | 4    |
| or                                  |                                                 |      |
| HIST210                             | World History and Culture 1                     | 4    |
| LITR220                             | Values in World Literature                      | 4    |
| INTD111                             | Creating Academic and Professional Success      | 4    |
| SCI120                              | The Impact of Science and Technology on Society | 4    |
| MATH143                             | Business Algebra                                | 4    |
| MATH306                             | Computer Assisted Statistics                    | 4    |
| ECON201                             | Macroeconomics                                  | 4    |
| BADM100                             | Introduction to Business                        | 4    |
| PSYC100                             | Introduction to Psychology                      | 4    |
| <b>MATHEMATICS (4 hrs)</b>          |                                                 |      |
| MATH476                             | Quantitative Decision Making                    | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>       |                                                 |      |
| HIST250                             | World Cultures and Values                       | 4    |
| or                                  |                                                 |      |
| HIST310                             | World History and Culture II                    | 4    |
| SOCL101                             | Introduction to Sociology                       | 4    |
| <b>BUSINESS MANAGEMENT (68 hrs)</b> |                                                 |      |
| ACCT201                             | Accounting I                                    | 4    |
| ACCT202                             | Accounting II                                   | 4    |
| ACCT203                             | Accounting III                                  | 4    |
| BADM150                             | Contemporary Business Trends                    | 4    |
| BADM305                             | Organizational Behavior                         | 4    |
| BADM350                             | International Business                          | 4    |
| BADM360                             | Operations Management                           | 4    |
| BADM410                             | Business Law I                                  | 4    |
| BADM420                             | Business Law II                                 | 4    |
| BADM440                             | Research Design Methods and Applications        | 4    |
| BADM475                             | Small Business Management and Entrepreneurship  | 4    |

|         |                                                   |
|---------|---------------------------------------------------|
| or      |                                                   |
| BADM480 | Business Strategy and Policy                      |
| ECON202 | Microeconomics                                    |
| FINC400 | Financial Management                              |
| HRMT210 | Introduction to Human Resource Management         |
| HRMT440 | Managing Organizational Change                    |
| SCM210  | Introduction to Logistics/Supply Chain Management |
| PM210   | Introduction to Project Management                |

## GENERAL ELECTIVES (4 hrs)

Electives—Choose a minimum of 4 credit hours

## MARKETING MANAGEMENT CONCENTRATION (32 hrs)

|          |                                        |
|----------|----------------------------------------|
| MKTG210  | Introduction to Marketing              |
| MKTG220  | Advertising and Media Practices        |
| MKTG310  | Sales Management                       |
| MKTG320  | Consumer Behavior                      |
| MKTG330  | Marketing Research                     |
| MKTG410  | International Marketing                |
| MKTG420  | Product Service Planning               |
| MKTG430* | Integrated Marketing Strategy Capstone |

\* Capstone classes may be offered incrementally based on campus decision.

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**  
**CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)**

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
 Management Essentials (BADM100, BADM305, HRMT210)  
 Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
 Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
 Sales and Marketing (MKTG 210, MKTG220, MKTG310, MKTG320)  
 Marketing Research (MKTG320, MKTG330, MKTG410, BADM440)

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# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN MARKETING MANAGEMENT (BSBA-MKT) ONLINE

Opportunities for marketing professionals are expected to increase by as much as 20 percent through 2010. Marketing is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy organizational objectives. The BSBA-MKT is designed to prepare you to understand and apply marketing, sales and management principles in order to contribute to organizational success.

\*U.S. Bureau of Labor Statistics, "National Industry-Occupations Employment Matrix"

### PROGRAM OUTCOMES—

#### Marketing Management Concentration

- Explain the core areas of marketing within an organization
- Apply the fundamental concepts of marketing
- Describe the role of marketing in an organization
- Explain the roll marketing variables play in the success of any organization
- Perform marketing research, including problem definition, research design, data collection, data analysis, and result communication
- Develop a comprehensive marketing strategy for an approved product or service
- Develop a multinational marketing plan considering the global and cultural issues of marketing
- Respond to developing trends such as e-marketing
- Operate in and respond to different environments (regulatory, economic, social, technology, etc.) that affect marketing
- Analyze dispositional topics such as the organizational ethics, values, and political and social factors in light of organizational goals

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

# BSBA-MKT PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-MKT program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>Total credit hours for ASBA</b>                          |                                            | <b>90</b> |
| <b>UPPER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (20 CREDITS)</b>          |                                            |           |
| ENG116                                                      | English Composition II                     | 6         |
| ENG202                                                      | Professional Writing and Composition       | 6         |
| MGM110                                                      | Principles of Business                     | 4         |
| IT254                                                       | Spreadsheet Applications                   | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>20</b> |

## BUSINESS CORE REQUIREMENTS (42 CREDITS)

|        |                                       |   |
|--------|---------------------------------------|---|
| ACC350 | Managerial Accounting                 | 4 |
| MKT305 | Marketing and the Virtual Marketplace | 4 |
| MGM310 | e-Business                            | 4 |
| MGM330 | Business Decision Making              | 4 |
| MGM465 | Business Strategy                     | 6 |
| FIN310 | Financial Management Principles       | 4 |
| HRM450 | Organizational Change                 | 6 |
| MPM401 | Project Management Theory             | 6 |
| ECO305 | Global Managerial Economics           | 4 |

**Total credit hours**

**42**

## CONCENTRATION REQUIREMENTS (28 HRS)

|        |                                                |   |
|--------|------------------------------------------------|---|
| MKT380 | Applied Marketing Management                   | 4 |
| MKT325 | Consumer Behavior fundamentals                 | 4 |
| MKT355 | Principles of Advertising and Public Relations | 4 |
| MKT430 | Personal Selling and Customer Focus            | 6 |
| MKT350 | Marketing Research Practices                   | 4 |
| MKT460 | Integrated Marketing Strategy                  | 6 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Sales and Marketing (MKT305, MKT325, MKT430, MKT355)  
Marketing Research (MKT250, MKT350, MGM330, MKT460)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Colorado Technical University™**

# BACHELOR OF SCIENCE

## IN BUSINESS ADMINISTRATION IN PROJECT MANAGEMENT (BSBA-PM) ONLINE

The BSBA-PM degree is designed to provide you with the basic tools, techniques and skills needed to effectively organize and manage projects. The curriculum covers in detail the process and knowledge areas defined by the Project Management Institute (PMI) in the Guide to the Project Management Book of Knowledge (PMBOK), the industry standard for project management. In addition, the program integrates business foundation courses with the theory and practice of project management in order to develop well-equipped and skilled project managers. The program utilizes a practical approach, helping to develop project team skills.

### PROGRAM OUTCOMES—Project Management

- Define a project, project management, and type of project structures, project life cycle phases, knowledge areas, and processes
- Organize and staff a project office with appropriate structure, personnel and processes
- Explain cultural, legal, political, and financial issues associated with managing a project in domestic and international environments
- Align project goals with the corporate strategic planning process
- Manage and integrate organizational programs and project portfolio
- Analyze project scope and identify project key tasks and stakeholders; manage scope changes
- Align project tasks into a project schedule, determine task time, order of precedence and resources required
- Construct and implement an approach for using contracting and procurement activities to fulfill project goals
- Create and implement a proactive risk management and quality plan. Assess potential and actual risks. Develop contingency plans. Mitigate the effects of risks

### PROGRAM OUTCOMES—Business Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

# BSBA-PM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSBA-PM program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>Total credit hours for ASBA</b>                          |                                            | <b>90</b> |
| <b>UPPER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (20 CREDITS)</b>          |                                            |           |
| ENG116                                                      | English Composition II                     | 6         |
| ENG202                                                      | Professional Writing and Composition       | 6         |
| MGM110                                                      | Principles of Business                     | 4         |
| IT254                                                       | Spreadsheet Applications                   | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>20</b> |

## BUSINESS CORE REQUIREMENTS (42 CREDITS)

|        |                                       |   |
|--------|---------------------------------------|---|
| ACC350 | Managerial Accounting                 | 4 |
| MKT305 | Marketing and the Virtual Marketplace | 4 |
| MGM310 | e-Business                            | 4 |
| MGM330 | Business Decision Making              | 4 |
| MGM465 | Business Strategy                     | 6 |
| FIN310 | Financial Management Principles       | 4 |
| HRM450 | Organizational Change                 | 6 |
| MPM401 | Project Management Theory             | 6 |
| ECO305 | Global Managerial Economics           | 4 |

**Total credit hours**

**42**

## CONCENTRATION REQUIREMENTS (28 HRS)

|        |                                           |   |
|--------|-------------------------------------------|---|
| MPM332 | Organizational Leadership                 | 4 |
| MPM434 | Project Scheduling and Cost               | 6 |
| MPM344 | Project Risk Management                   | 4 |
| MPM346 | Contract and Procurement                  | 4 |
| MPM466 | HR Project Management                     | 6 |
| MPM357 | Project Performance and Quality Assurance | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Project Management Fundamentals (MPM401, MPM332, MPM346, MPM466)  
Project Quality and Control (MPM401, MPM434, MPM344, MPM357)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Colorado Technical University™**

# ASSOCIATE OF SCIENCE IN

## ACCOUNTING (ASACC)

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of a personal financial advisor. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory role. In addition to openings resulting from growth, the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The ASACC degree programs are designed to equip you with a variety of basic accounting skills that will be useful in an entry level accounting position. The curriculum provides you with an opportunity to develop your intellectual, interpersonal and communication skills that are needed to succeed in the business world.

### PROGRAM OUTCOMES

- Identify and resolve complex accounting problems independently and ethically
- Demonstrate professional written and verbal communication skills
- Manage accounts for a small to medium-size organization
- Prepare financial statements for business needs
- Use accounting tools for decision making

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# ASACC PROGRAM REQUIREMENTS

## Required Courses

All students in the ASACC program must complete all of the following courses:

| Course No.                              | Course Name                                     | Hrs. |
|-----------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (32 hrs)</b>       |                                                 |      |
| IT190                                   | Introduction to IT                              | 4    |
| ENGL111                                 | English Composition I                           | 4    |
| ENGL112                                 | English Composition II                          | 4    |
| HIST150                                 | World History Since 1500                        | 4    |
| or                                      |                                                 |      |
| HIST210                                 | World History and Culture 1                     | 4    |
| LITR220                                 | Values in World Literature                      | 4    |
| or                                      |                                                 |      |
| HIST250                                 | World Culture and Values                        | 4    |
| or                                      |                                                 |      |
| HIST310                                 | World History and Culture II                    | 4    |
| INTD111                                 | Creating Academic and Professional Success      | 4    |
| MATH143                                 | Business Algebra                                | 4    |
| ECON201                                 | Macroeconomics                                  | 4    |
| <b>COMMUNICATIONS (8 hrs)</b>           |                                                 |      |
| ENGL200                                 | Professional Writing                            | 4    |
| ENGL210                                 | Professional Speaking                           | 4    |
| <b>SOCIAL SCIENCE (8 hrs)</b>           |                                                 |      |
| ECON202                                 | Microeconomics                                  | 4    |
| PSYC100                                 | Introduction to Psychology                      | 4    |
| or                                      |                                                 |      |
| SOCL101                                 | Introduction to Sociology                       | 4    |
| <b>INFORMATION TECHNOLOGY (4 hrs)</b>   |                                                 |      |
| IT254                                   | Spreadsheet Applications                        | 4    |
| <b>SCIENCE (4 hrs)</b>                  |                                                 |      |
| SCI120                                  | The Impact of Science and Technology On Society | 4    |
| <b>BUSINESS AND ACCOUNTING (32 hrs)</b> |                                                 |      |
| BADM100                                 | Introduction to Business                        | 4    |
| BADM150                                 | Contemporary Business Trends                    | 4    |
| ACCT201                                 | Accounting I                                    | 4    |
| ACCT202                                 | Accounting II                                   | 4    |
| ACCT203                                 | Accounting III                                  | 4    |

|         |                              |   |
|---------|------------------------------|---|
| ACCT210 | Computerized Accounting      | 4 |
| ACCT215 | Introduction to Taxation     | 4 |
| FINC220 | Financial Statement Analysis | 4 |

### BUSINESS ELECTIVE (4 hrs)

Choose one additional course from ACCT, BADM, FINC, or FINP 4

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 92

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, ACCT210, FINC400)

Business Fundamentals (BADM100, HRMT210, IT190, MKTG210)

Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# ASSOCIATE OF SCIENCE IN

## ACCOUNTING (ASACC) ONLINE

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of a personal financial advisor. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory role. In addition to openings resulting from growth (projected at 18 to 26 percent through 2014), the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings. The ASACC degree programs are designed to equip graduates with a variety of basic accounting skills that will be useful in an entry level accounting position. The curriculum provides students with an opportunity to develop intellectual, interpersonal and communication skills needed to succeed in the business world.

### PROGRAM OUTCOMES

- Identify and resolve complex accounting problems independently and ethically
- Demonstrate professional written and verbal communication skills
- Manage accounts for a small to medium-size organization
- Prepare financial statements for business needs
- Use accounting tools for decision making

# ASACC PROGRAM REQUIREMENTS

## Required Courses

All students in the ASACC program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (48 hrs)</b>          |                                            |           |
| IT105                                      | Information and Technology Literacy        | 4         |
| ENG115                                     | English Composition                        | 4         |
| MGM105                                     | Professional Communication                 | 4         |
| PHL210                                     | Ethics                                     | 4         |
| HIS150                                     | World History since 1500                   | 4         |
| HUM140                                     | Art Appreciation                           | 4         |
| INTD111                                    | Creating Academic and Professional Success | 4         |
| SCI205                                     | Environmental Science                      | 4         |
| MAT105                                     | Business Math                              | 4         |
| MAT205                                     | College Math                               | 4         |
| PSY105                                     | Psychology                                 | 4         |
| SOC205                                     | Introduction to Sociology                  | 4         |
| <b>CORE REQUIREMENTS (42 hrs)</b>          |                                            |           |
| FINC220                                    | Financial Statement Analysis               | 4         |
| PFP110                                     | Personal Finance Concepts                  | 4         |
| ACC201                                     | Accounting I                               | 4         |
| ACC202                                     | Accounting II                              | 4         |
| ACC203                                     | Accounting III                             | 4         |
| ACC210                                     | Computerized Accounting                    | 4         |
| ACC211                                     | Computerized Accounting Lab                | 2         |
| MGM260                                     | Fundamental of Management                  | 6         |
| ECO254                                     | Microeconomics                             | 6         |
| ECO201                                     | Macroeconomics                             | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>90</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Concepts (ACC201, MGM105, MGM110, MGM260)

Accounting Fundamentals (ACC201, ACC202, ACC203)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Accounting courses at CTU meet the education standards of the American Institute of Certified Public Accountants (AICPA). The student who meets the unique requirements of the State Board of Accounting in their state's Application for CPA Licensure is qualified to sit for the CPA exam.

# ASSOCIATE OF SCIENCE IN

## BUSINESS ADMINISTRATION (ASBA)

The ASBA degree is designed to provide a strong base consisting of business fundamentals that will prepare students to enter today's competitive business world. The program focuses on teaching students key business administration techniques, including critical-thinking and decision-making skills, and incorporates that knowledge with the communication skills every student needs to be successful. Students will gain practical, real-world knowledge from our professors—all with extensive business experience.

### PROGRAM OUTCOMES

- Demonstrate an understanding of the fundamentals of management
- Apply appropriate concepts and principles of business administration to participate in effective, ethical decision making
- Explain the nature and role of business in global markets

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# ASBA PROGRAM REQUIREMENTS

## Required Courses

All students in the ASBA program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (36 hrs)

|         |                                            |
|---------|--------------------------------------------|
| ENGL111 | English Composition I                      |
| ENGL112 | English Composition II                     |
| ENGL210 | Professional Speaking                      |
| HIST150 | World History Since 1500                   |
| LITR220 | Values in World Literature                 |
| MATH143 | Business Algebra                           |
| INTD111 | Creating Academic and Professional Success |
| ECON201 | Macroeconomics                             |
| SOCL101 | Introduction to Sociology                  |

#### CORE REQUIREMENTS (56 hrs)

|         |                                                 |
|---------|-------------------------------------------------|
| HIST250 | World Cultures and Values                       |
| IT190   | Introduction to IT                              |
| PSYC100 | Introduction to Psychology                      |
| IT254   | Spreadsheet Applications                        |
| ACCT201 | Accounting I                                    |
| ACCT202 | Accounting II                                   |
| ACCT203 | Accounting III                                  |
| BADM100 | Introduction to Business                        |
| BADM305 | Organizational Behavior                         |
| BADM350 | International Business                          |
| SCI250  | The Impact of Science and Technology on Society |
| HRMT210 | Introduction to Human Resource Management       |
| MKTG301 | Introduction to Marketing                       |

Electives—Chose a minimum of 4 credit hours

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**Hrs.**

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92

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, elective FINC400)

Business Fundamentals (BADM100, elective IT190, MKTG210, HRMT210)

Financial Accounting (ACCT341, ACCT342, elective ACCT421)

Management Essentials (BADM100, BADM305, HRMT210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Colorado Technical University™**



# ASSOCIATE OF SCIENCE IN

## BUSINESS ADMINISTRATION WITH A CONCENTRATION IN MANAGEMENT (ASBA) ONLINE

Professional education in business administration serves to develop your capabilities so that you may assume positions of leadership and responsibility at all levels of management in our society. Business managers formulate the policies and direct the operations of corporations, nonprofit institutions and government agencies. General managers and top executives hold over two million jobs in the U.S.\* They are found in every industry, but wholesale and retail trade, and service industries employ over six out of ten business managers.

\*Source: [www.acinet.org](http://www.acinet.org)

### PROGRAM OUTCOMES—ASBA Core

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

# ASBA PROGRAM REQUIREMENTS

## Required Courses

All students in the ASBA program must complete all of the following courses:

| Course No.                                                  | Course Name                                | Hrs.      |
|-------------------------------------------------------------|--------------------------------------------|-----------|
| <b>LOWER DIVISION REQUIREMENTS</b>                          |                                            |           |
| <b>GENERAL EDUCATION REQUIREMENTS (48)</b>                  |                                            |           |
| IT105                                                       | Information and Technology Literacy        | 4         |
| ENG115                                                      | English Composition                        | 4         |
| PHL210                                                      | Ethics                                     | 4         |
| HIS150                                                      | World History since 1500                   | 4         |
| HUM140                                                      | Art Appreciation                           | 4         |
| INTD111                                                     | Creating Academic and Professional Success | 4         |
| SCI205                                                      | Environmental Science                      | 4         |
| MAT105                                                      | Business Math                              | 4         |
| MAT205                                                      | College Math                               | 4         |
| PSY105                                                      | Psychology                                 | 4         |
| SOC205                                                      | Sociology                                  | 4         |
| MGM105                                                      | Professional Communications                | 4         |
| <b>Total credit hours</b>                                   |                                            | <b>48</b> |
| <b>PROGRAM COMPLETION REQUIREMENTS FOR ASBA DEGREE (42)</b> |                                            |           |
| ACC201                                                      | Accounting 1                               | 4         |
| ECO201                                                      | Macroeconomics                             | 4         |
| MGM230                                                      | Business Law                               | 6         |
| MGM260                                                      | Fundamentals of Management                 | 6         |
| ECO254                                                      | Microeconomics                             | 6         |
| MKT250                                                      | Marketing                                  | 6         |
| PFP110                                                      | Personal Financial Concepts                | 4         |
| HRM246                                                      | Human Resource Management                  | 6         |
| <b>Total credit hours</b>                                   |                                            | <b>42</b> |
| <b>TOTAL CREDIT HOURS FOR ASBA</b>                          |                                            | <b>90</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Concepts (ACC205, MGM105, MGM110, and MGM260) ACC201 has been substituted for ACC205 and MGM230 is substituted for MGM110

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# ASSOCIATE OF SCIENCE IN

## GENERAL STUDIES (ASGS)

The ASGS is designed to provide the foundation for future career advancement while giving graduates a solid general education background and the flexibility to explore other interest areas.

### PROGRAM OUTCOMES

- Demonstrate a basic knowledge of the importance of the moral standards embodied in a professional code of ethics
- Communicate in written and verbal modes of communications
- Show an understanding of the diverse national and global cultural environments in which they work
- Work effectively as a problem-solving team member
- Access, evaluate, and use information to create knowledge
- Solve complex problems independently and creatively

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# ASGS PROGRAM REQUIREMENTS

## Required Courses

All students in the ASGS program must complete all of the following courses:

| Course No.                                    | Course Name                                | Hrs.      |
|-----------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (52 hrs)</b>             |                                            |           |
| ENGL111                                       | English Composition I                      | 4         |
| ENGL112                                       | English Composition II                     | 4         |
| ENGL200                                       | Professional Writing                       | 4         |
| ENGL210                                       | Professional Speaking                      | 4         |
| HUMN200                                       | Art and Music Appreciation                 | 4         |
| LITR220                                       | Values in World Literature                 | 4         |
| PHIL310                                       | Ethics                                     | 4         |
| MATH143                                       | Business Algebra                           | 4         |
| INTD111                                       | Creating Academic and Professional Success | 4         |
| ECON201                                       | Macroeconomics                             | 4         |
| HIST150                                       | World History Since 1500                   | 4         |
| or                                            |                                            |           |
| HIST210                                       | World History and Culture 1                | 4         |
| HIST250                                       | World Cultures and Values                  | 4         |
| or                                            |                                            |           |
| HIST310                                       | World History and Culture II               | 4         |
| PSYC100                                       | Introduction to Psychology                 | 4         |
| or                                            |                                            |           |
| SOCL101                                       | Introduction to Sociology                  | 4         |
| <b>CORE REQUIREMENTS (40 hrs)</b>             |                                            |           |
| EBUS208                                       | Web Site/Portfolio Development             | 4         |
| IT190                                         | Introduction to IT                         | 4         |
| IT235                                         | Database Applications with Access          | 4         |
| IT254                                         | Spreadsheet Applications                   | 4         |
| BADM100                                       | Introduction to Business                   | 4         |
| BADM305                                       | Organizational Behavior                    | 4         |
| Electives—Choose a minimum of 16 credit hours |                                            | 16        |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>    |                                            | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# ASSOCIATE OF SCIENCE IN

## GENERAL STUDIES (ASGS) ONLINE

The Associate of Science in General Studies degree is designed to provide the foundation for future career advancement while giving you a solid general education background and the flexibility to explore other areas of interest. It is an excellent option if you are undecided about a major or if you plan to pursue a baccalaureate degree. This degree will fulfill the requirements as a 2+2, with the exception of the BSIT program. Electives will not provide a concentration but rather an interdisciplinary foundation for your future studies.

### PROGRAM OUTCOMES

- Demonstrate a basic knowledge of the importance of the moral standards embodied in a professional code of ethics
- Communicate in written and verbal modes of communications
- Show an understanding of the diverse national and global cultural environments in which they work
- Work effectively as a problem-solving team member
- Access, evaluate, and use information to create knowledge
- Solve complex problems independently and creatively



# ASGS PROGRAM REQUIREMENTS

## Required Courses

All students in the ASGS program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (32 hrs)</b>          |                                            |           |
| ENG115                                     | English Composition                        | 4         |
| HIS150                                     | World History since 1500                   | 4         |
| IT105                                      | Information and Technology Literacy        | 4         |
| MGM110                                     | Principles of Business                     | 4         |
| PSY105                                     | Psychology                                 | 4         |
| HUM140                                     | Art Appreciation                           | 4         |
| or                                         |                                            |           |
| LTR215                                     | World Literature                           | 4         |
| INTD111                                    | Creating Academic and Professional Success | 4         |
| or                                         |                                            |           |
| INTD340                                    | Career Planning                            | 4         |
| MAT105                                     | Business Math                              | 4         |
| or                                         |                                            |           |
| MAT205                                     | College Math                               | 4         |
| <b>CORE REQUIREMENTS (22 hrs)</b>          |                                            |           |
| ENG202                                     | Professional Writing and Composition       | 6         |
| MGM105                                     | Professional Communication                 | 4         |
| PHL210                                     | Ethics                                     | 4         |
| SOC205                                     | Sociology                                  | 4         |
| IT208                                      | Web Portfolio Publishing                   | 4         |
| or                                         |                                            |           |
| IT254                                      | Spreadsheet Applications                   | 4         |
| <b>ELECTIVES (36 hrs)</b>                  |                                            |           |
| Choose a minimum of 36 credit hours        |                                            | 36        |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>90</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Professional Communication (ENG202, MGM105)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# ASSOCIATE OF SCIENCE IN

## MARKETING (ASBA-MKT)

Opportunities for the marketing professional are expected to increase by as much as 20 percent through 2010\*.

Marketing is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives. The ASBA-Marketing is designed to prepare you to understand and apply marketing, sales and management principles in order to contribute to organizational success.

\* US Bureau of Labor Statistics, "National Industry -Occupation Matrix"

## PROGRAM OUTCOMES

- Explain the core areas of marketing within an organization
- Describe the universal marketing process for consumers and organizational markets
- Utilize business computer application and software to create and develop business/marketing documents and reports
- Analyze the benefits and consequences of marketing activities on the physical environment and on the lives of buyers
- Develop appropriate career and professional skills for the marketing field

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# ASBA-MKT PROGRAM REQUIREMENTS

## Required Courses

All students in the ASBA-MKT program must complete all of the following courses:

| Course No.                                 | Course Name                                     | Hrs.      |
|--------------------------------------------|-------------------------------------------------|-----------|
| <b>GENERAL EDUCATION (32 hrs)</b>          |                                                 |           |
| IT190                                      | Introduction to IT                              | 4         |
| ENGL111                                    | English Composition I                           | 4         |
| ENGL112                                    | English Composition II                          | 4         |
| HIST150                                    | World History Since 1500                        | 4         |
| or                                         |                                                 |           |
| HIST210                                    | World History and Culture 1                     | 4         |
| LITR220                                    | Values in World Literature                      | 4         |
| INTD111                                    | Creating Academic and Professional Success      | 4         |
| MATH143                                    | Business Algebra                                | 4         |
| ECON201                                    | Macroeconomics                                  | 4         |
| <b>COMMUNICATIONS (8 hrs)</b>              |                                                 |           |
| ENGL200                                    | Professional Writing                            | 4         |
| ENGL210                                    | Professional Speaking                           | 4         |
| <b>SOCIAL SCIENCE (12 hrs)</b>             |                                                 |           |
| HIST250                                    | World Cultures and Values                       | 4         |
| or                                         |                                                 |           |
| HIST310                                    | World History and Culture II                    | 4         |
| PSYC100                                    | Introduction to Psychology                      | 4         |
| SOCL101                                    | Introduction to Sociology                       | 4         |
| <b>INFORMATION TECHNOLOGY (4 hrs)</b>      |                                                 |           |
| IT254                                      | Spreadsheet Applications                        | 4         |
| <b>SCIENCE (4 hrs)</b>                     |                                                 |           |
| SCI120                                     | The Impact of Science and Technology On Society | 4         |
| <b>BUSINESS MANAGEMENT (24 hrs)</b>        |                                                 |           |
| ACCT201                                    | Accounting I                                    | 4         |
| ACCT202                                    | Accounting II                                   | 4         |
| ACCT203                                    | Accounting III                                  | 4         |
| BADM100                                    | Introduction to Business                        | 4         |
| BADM150                                    | Contemporary Business Trends                    | 4         |
| ECON202                                    | Microeconomics                                  | 4         |
| <b>MARKETING (8 hrs)</b>                   |                                                 |           |
| MKTG210                                    | Introduction to Marketing                       | 4         |
| MKTG220                                    | Advertising and Media Practices                 | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                 | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting (ACCT201, ACCT202, ACCT203)  
Business Fundamentals (BADM100, HRMT210, IT190, MKTG210)  
Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# ASSOCIATE OF APPLIED SCIENCE

## IN BUSINESS ADMINISTRATION IN ACCOUNTING (AASBA-ACC)

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of a personal financial advisor. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory role. In addition to openings resulting from growth, the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The AASBA-ACC degree programs are designed to equip you with a variety of basic accounting skills that will be useful in an entry level accounting position. The curriculum provides you with an opportunity to develop intellectual, interpersonal and communication skills that are needed to succeed in the business world.

### PROGRAM OUTCOMES

- Apply the knowledge and skills of accounting, management, business mathematics, and the liberal arts to identify, resolve, and communicate relevant accounting issues
- Demonstrate a basic knowledge of the importance of the moral standards embodied in the professional code of ethics
- Demonstrate the ability to communicate in written and verbal modes of communication
- Manage a complete set of accounts for a small to moderate-size organization
- Show the ability to formulate and resolve complex problems independently and creatively

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# AASBA-ACC PROGRAM REQUIREMENTS

## Required Courses

All students in the AASBA-ACC program must complete all of the following courses:

| Course No.                                         | Course Name                                | Hrs.      |
|----------------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (36 hrs)</b>                  |                                            |           |
| ENGL111                                            | English Composition I                      | 4         |
| ENGL112                                            | English Composition II                     | 4         |
| PHIL310                                            | Ethics                                     | 4         |
| MATH143                                            | Business Algebra                           | 4         |
| INTD111                                            | Creating Academic and Professional Success | 4         |
| INTD340                                            | Career Planning                            | 4         |
| ECON201                                            | Macroeconomics                             | 4         |
| HIST150                                            | World History Since 1500                   | 4         |
| or                                                 |                                            |           |
| HIST210                                            | World History and Culture I                | 4         |
| PSYC100                                            | Introduction to Psychology                 | 4         |
| or                                                 |                                            |           |
| SOCL101                                            | Introduction to Sociology                  | 4         |
| <b>CORE REQUIREMENTS (56 hrs)</b>                  |                                            |           |
| EBUS208                                            | Web Site/Portfolio Development             | 4         |
| IT190                                              | Introduction to IT                         | 4         |
| IT235                                              | Database Applications with Access          | 4         |
| IT254                                              | Spreadsheet Applications                   | 4         |
| ACCT201                                            | Accounting I                               | 4         |
| ACCT202                                            | Accounting II                              | 4         |
| ACCT203                                            | Accounting III                             | 4         |
| ACCT341                                            | Intermediate Accounting I                  | 4         |
| ACCT342                                            | Intermediate Accounting II                 | 4         |
| BADM100                                            | Introduction to Business                   | 4         |
| BADM305                                            | Organizational Behavior                    | 4         |
| or                                                 |                                            |           |
| EBUS308                                            | Introduction to e-Business                 | 4         |
| ECON202                                            | Microeconomics                             | 4         |
| MKT210                                             | Introduction to Marketing                  | 4         |
| <b>Elective—Choose a minimum of 4 credit hours</b> |                                            | <b>4</b>  |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>         |                                            | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, elective FINC400)  
Business Fundamentals (BADM100, elective IT190, MKTG210, HRMT210)  
Financial Accounting (ACCT341, ACCT342, elective ACCT421)  
Management Essentials (BADM100, BADM305, HRMT210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA). The student who meets the unique requirements of the State Board of Accounting in their state's Application for CPA Licensure is qualified to sit for the CPA exam.





# ASSOCIATE OF APPLIED SCIENCE IN

## GENERAL STUDIES (AASGS)

The AASGS is designed to provide the foundation for future career advancement while giving graduates a solid general education background and the flexibility to explore other interest areas.

### PROGRAM OUTCOMES

- Demonstrate a basic knowledge of the importance of the moral standards embodied in a professional code of ethics
- Communicate in written and verbal modes of communications
- Show an understanding of the diverse national and global cultural environments in which they work
- Work effectively as a problem-solving team member
- Access, evaluate, and use information to create knowledge
- Solve complex problems independently and creatively

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# AASGS PROGRAM REQUIREMENTS

## Required Courses

All students in the AASGS program must complete all of the following courses:

| Course No.                                    | Course Name                                | Hrs.      |
|-----------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (52 hrs)</b>             |                                            |           |
| ENGL111                                       | English Composition I                      | 4         |
| ENGL112                                       | English Composition II                     | 4         |
| ENGL200                                       | Professional Writing                       | 4         |
| ENGL210                                       | Professional Speaking                      | 4         |
| HUMN200                                       | Art and Music Appreciation                 | 4         |
| LITR220                                       | Values in World Literature                 | 4         |
| PHIL310                                       | Ethics                                     | 4         |
| MATH143                                       | Business Algebra                           | 4         |
| INTD111                                       | Creating Academic and Professional Success | 4         |
| ECON201                                       | Macroeconomics                             | 4         |
| HIST150                                       | World History Since 1500                   | 4         |
| or                                            |                                            |           |
| HIST210                                       | World History and Culture 1                | 4         |
| HIST250                                       | World Cultures and Values                  | 4         |
| or                                            |                                            |           |
| HIST310                                       | World History and Culture II               | 4         |
| PSYC100                                       | Introduction to Psychology                 | 4         |
| or                                            |                                            |           |
| SOCL101                                       | Introduction to Sociology                  | 4         |
| <b>CORE REQUIREMENTS (40 hrs)</b>             |                                            |           |
| EBUS208                                       | Web Site/Portfolio Development             | 4         |
| IT190                                         | Introduction to IT                         | 4         |
| IT235                                         | Database Applications with Access          | 4         |
| IT254                                         | Spreadsheet Applications                   | 4         |
| BADM100                                       | Introduction to Business                   | 4         |
| BADM305                                       | Organizational Behavior                    | 4         |
| Electives—Choose a minimum of 16 credit hours |                                            | 16        |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>    |                                            | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# ASSOCIATE OF APPLIED SCIENCE

## IN BUSINESS ADMINISTRATION IN MANAGEMENT (AASBA-MGM)

Professional education in business administration serves to develop your capabilities so that you may enter the management of corporations, non-profit institutions and government agencies. Business managers formulate the policies and direct the operations of corporations, non-profit institutions and government agencies. Organizations require leaders in technical areas and in teambuilding supervision, coaching and problem solving.

### PROGRAM OUTCOMES

- Demonstrate an understanding of the fundamentals of management
- Apply appropriate concepts and principles of business administration to participate in effective, ethical decision making
- Explain the nature and role of business in global markets
- Demonstrate professional written and verbal communication skills
- Compare and contrast the different forms (size, structure and legal entities) of businesses
- Utilize emerging technologies, considering the impact on organizations both internally and externally
- Discuss how HR and management skills can be used in organizational settings
- Discuss the regulatory environments impacting business
- Describe the functions of law in the United States

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# AASBA-MGM PROGRAM REQUIREMENTS

## Required Courses

All students in the AASBA-MGM program must complete all of the following courses:

| Course No.                                   | Course Name                                | Hrs.      |
|----------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (40 hrs)</b>            |                                            |           |
| ENGL111                                      | English Composition I                      | 4         |
| ENGL112                                      | English Composition II                     | 4         |
| LITR220                                      | Values in World Literature                 | 4         |
| MATH143                                      | Business Algebra                           | 4         |
| INTD111                                      | Creating Academic and Professional Success | 4         |
| INTD340                                      | Career Planning                            | 4         |
| ECON201                                      | Macroeconomics                             | 4         |
| HIST150                                      | World History Since 1500                   | 4         |
| or                                           |                                            |           |
| HIST210                                      | World History and Culture 1                | 4         |
| PSYC100                                      | Introduction to Psychology                 | 4         |
| or                                           |                                            |           |
| SOCL101                                      | Introduction to Sociology                  | 4         |
| <b>CORE REQUIREMENTS (52 hrs)</b>            |                                            |           |
| EBUS208                                      | Web Site/Portfolio Development             | 4         |
| IT190                                        | Introduction to IT                         | 4         |
| IT235                                        | Database Applications with Access          | 4         |
| IT254                                        | Spreadsheet Applications                   | 4         |
| ACCT201                                      | Accounting I                               | 4         |
| ACCT202                                      | Accounting II                              | 4         |
| ACCT203                                      | Accounting III                             | 4         |
| BADM100                                      | Introduction to Business                   | 4         |
| BADM305                                      | Organizational Behavior                    | 4         |
| EBUS308                                      | Introduction to e-Business                 | 4         |
| HRMT210                                      | Introduction to Human Resource Management  | 4         |
| MKTG301                                      | Introduction to Marketing                  | 4         |
| Electives—Choose a minimum of 8 credit hours |                                            | 8         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>   |                                            | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, elective FINC400)

Business Fundamentals (BADM100, elective IT190, MKTG210, HRMT210)

Financial Accounting (ACCT341, ACCT342, elective ACCT421)

Management Essentials (BADM100, BADM305, HRMT210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# ASSOCIATE OF APPLIED SCIENCE

## IN BUSINESS ADMINISTRATION IN MARKETING AND SALES (AASBA-MKT)

Opportunities for marketing professionals are expected to increase by as much as 20 percent through 2010.\* Marketing is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives. The AASBA-MKT is designed to prepare you to understand and apply marketing, sales and management principles in order to contribute to organizational success.

\*U.S. Bureau of Labor Statistics, "National Industry-Occupation Employment Matrix"

### PROGRAM OUTCOMES

- Explain the core areas of marketing within an organization
- Describe the universal marketing processes for consumers and organizational markets
- Utilize business computer applications and software to create and develop business/marketing documents and reports
- Analyze the benefits and consequences of marketing activities on the physical environment and on the lives of buyers
- Develop appropriate career and professional skills for the marketing field

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# AASBA-MKT PROGRAM REQUIREMENTS

## Required Courses

All students in the AASBA-MKT program must complete all of the following courses:

| Course No.                                   | Course Name                                | Hrs.      |
|----------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (40 hrs)</b>            |                                            |           |
| ENGL111                                      | English Composition I                      | 4         |
| ENGL112                                      | English Composition II                     | 4         |
| LITR220                                      | Values in World Literature                 | 4         |
| MATH143                                      | Business Algebra                           | 4         |
| INTD111                                      | Creating Academic and Professional Success | 4         |
| INTD340                                      | Career Planning                            | 4         |
| ECON201                                      | Macroeconomics                             | 4         |
| HIST150                                      | World History Since 1500                   | 4         |
| or                                           |                                            |           |
| HIST210                                      | World History and Culture 1                | 4         |
| PSYC100                                      | Introduction to Psychology                 | 4         |
| or                                           |                                            |           |
| SOCL101                                      | Introduction to Sociology                  | 4         |
| <b>CORE REQUIREMENTS (52 hrs)</b>            |                                            |           |
| EBUS208                                      | Web Site/Portfolio Development             | 4         |
| IT190                                        | Introduction to IT                         | 4         |
| IT235                                        | Database Applications with Access          | 4         |
| IT254                                        | Spreadsheet Applications                   | 4         |
| ACCT201                                      | Accounting I                               | 4         |
| ACCT202                                      | Accounting II                              | 4         |
| ACCT203                                      | Accounting III                             | 4         |
| BADM100                                      | Introduction to Business                   | 4         |
| BADM305                                      | Organizational Behavior                    | 4         |
| BADM350                                      | International Business                     | 4         |
| MKTG110                                      | Salesmanship                               | 4         |
| MKTG301                                      | Introduction to Marketing                  | 4         |
| MKTG310                                      | Sales Management                           | 4         |
| Electives—Choose a minimum of 4 credit hours |                                            | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>   |                                            | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, elective FINC400)  
Business Fundamentals (BADM100, elective IT190, MKTG210, HRMT210)  
Financial Accounting (ACCT341, ACCT342, elective ACCT421)  
Management Essentials (BADM100, BADM305, HRMT210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# Criminal Justice and Public Administration

Some College of Criminal Justice degree programs have special admission and academic requirements. Please see page 367 for more details.





# MASTER OF SCIENCE IN MANAGEMENT

## WITH A CONCENTRATION IN CRIMINAL JUSTICE (MSM-CJ)

The Master of Science in Management with a concentration in Criminal Justice is designed to meet the emerging administrative and leadership needs of the criminal justice system. The criminal justice field is rapidly expanding in the areas of corrections, law enforcement, law and the courts, and in many types of diversionary and ancillary programs that support the system. As a result, those with leadership and management skills, and those with expertise in program evaluation, budgeting and policy-making will help forge the future of the criminal justice system.

This program is designed specifically to develop the knowledge base and skills essential to those who will become the managers of people, money and programs, and leaders in planning and decision making in the criminal justice system. These skills are applicable to a wide spectrum of employment areas for both public and non-profit organizations within the criminal justice system and ancillary agencies. The Master of Science in Management with a concentration in Criminal Justice was developed with the direction of leaders in the criminal justice industry and reflects the balance needed for developing excellent administrative skills along with the information base necessary to enhance responsible policy-making.

### PROGRAM OUTCOMES

- Discuss trends in the development of public policies and apply management principles and policy analysis techniques to current issues facing criminal justice and juvenile justice agencies
- Use research results to enhance administrative problem solving and decision making
- Explore proactive strategies that reflect responsible organizational values
- Examine how court rulings, public opinion, research findings, and legislative actions have influenced justice-related policies
- Analyze the realities of translating public policy into operational practice in law enforcement, correctional and juvenile justice agencies
- Evaluate the impact and cost-effectiveness of justice policies and organizational practices
- Identify innovative approaches for developing rational, fiscally-responsible policy choices
- Apply management and leadership theories to the challenges faced by modern public safety agencies

# MSM-CJ PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-CJ program must complete all of the following courses:

| Course No.                          | Course Name                                | Hrs. |
|-------------------------------------|--------------------------------------------|------|
| INTD607                             | Creative Leadership                        | 4    |
| HRMT640                             | Strategic Human Resource Management        | 4    |
| MGMT604                             | Organizational Behavior                    | 4    |
| MGMT623                             | Public Administration                      | 4    |
| MGMT635                             | Grants and Contracts                       | 4    |
| CJUS610                             | Crime Lab/Evidence Management              | 4    |
| CJUS620                             | Court Services Management                  | 4    |
| CJUS630                             | Law Enforcement Management                 | 4    |
| CJUS640                             | Corrections Management                     | 4    |
| CJUS650                             | Terrorism and Homeland Security Management | 4    |
| IT600                               | Information Technology Management          | 4    |
| TOTAL PROGRAM QUARTER CREDIT HOURS: |                                            | 44   |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Public Administration (INTD607, HRMT640, MGMT604, MGMT623)  
Grant Writing (MGMT635, MGMT623)  
Criminal Justice (CJUS610, CJUS620, CJUS630, CJUS640)  
Homeland Security Management (CJUS650, CJUS630)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# BACHELOR OF SCIENCE

## IN CRIMINAL JUSTICE (BSCJ)

The BSCJ degree program is designed to provide graduates with a solid foundation in law enforcement, the courts, and corrections. The program's emphasis on communication skills, management, and professional skills along with technical knowledge will prepare students for positions of responsibility and leadership within the criminal justice community and related professions.

### PROGRAM OUTCOMES

- Demonstrate professional written and verbal communication skills
- Resolve complex problems independently and ethically
- Demonstrate knowledge of the psychological and sociological dimensions of human behavior and crime
- Identify and apply strategies in the areas of corrections and parole, including incarceration, community-based corrections and treatment of offenders
- Demonstrate proficiency in the area of crime scene investigation and forensics
- Examine and integrate the emerging trends in the criminal justice system

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSCJ PROGRAM REQUIREMENTS

## Required Courses

All students in the BSCJ program must complete all of the following courses:

| Course No.                                     | Course Name                                | Hrs. |
|------------------------------------------------|--------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>              |                                            |      |
| IT105                                          | Information and Technology Literacy        | 4    |
| IT235                                          | Database Applications with Access          | 4    |
| ENGL111                                        | English Composition I                      | 4    |
| ENGL112                                        | English Composition II                     | 4    |
| ENGL200                                        | Professional Writing                       | 4    |
| ENGL210                                        | Professional Speaking                      | 4    |
| PHIL310                                        | Ethics                                     | 4    |
| INTD111                                        | Creating Academic and Professional Success | 4    |
| BIO122                                         | Anatomy and Physiology I                   | 4    |
| MATH143                                        | Business Algebra                           | 4    |
| MATH306                                        | Computer Assisted Statistics               | 4    |
| BADM100                                        | Introduction to Business                   | 4    |
| ECON201                                        | Macroeconomics                             | 4    |
| LITR220                                        | Values in World Literature                 | 4    |
| PSYC100                                        | Introduction to Psychology                 | 4    |
| HIST210                                        | World History and Culture I                | 4    |
| <b>BUSINESS / MANAGEMENT (28 hrs)</b>          |                                            |      |
| ACCT201                                        | Accounting I                               | 4    |
| BADM305                                        | Organizational Behavior                    | 4    |
| HRMT210                                        | Introduction to Human Resource Management  | 4    |
| HRMT430                                        | Managing Diversity                         | 4    |
| IT254                                          | Spreadsheets                               | 4    |
| PBAD201                                        | Public Administration                      | 4    |
| PM210                                          | Introduction to Project Management         | 4    |
| <b>SOCIAL SCIENCE (24 hrs)</b>                 |                                            |      |
| PSYC336                                        | Abnormal Psychology                        | 4    |
| PSYC346                                        | Forensic Psychology                        | 4    |
| SOCL101                                        | Introduction to Sociology                  | 4    |
| SOCL325                                        | Licit and Illicit Drugs                    | 4    |
| SOCL350                                        | Social Psychology                          | 4    |
| SOCL356                                        | American Diversity                         | 4    |
| <b>INTERDISCIPLINARY / HUMANITIES (12 hrs)</b> |                                            |      |
| INTD340                                        | Career Planning                            | 4    |
| HIST310                                        | World History and Culture II               | 4    |
| HUMN200                                        | Art and Music Appreciation                 | 4    |

## CRIMINAL JUSTICE (52 hrs)

|         |                                               |   |
|---------|-----------------------------------------------|---|
| CJUS141 | Introduction to Criminal Justice              | 4 |
| CJUS201 | Law Enforcement Operations and Report Writing | 4 |
| CJUS250 | Homeland Security                             | 4 |
| CJUS263 | Community Corrections                         | 4 |
| CJUS300 | Victimology                                   | 4 |
| CJUS342 | Juvenile Delinquency                          | 4 |
| CJUS343 | Criminology                                   | 4 |
| CJUS365 | Criminal Law                                  | 4 |
| CJUS375 | Criminal Procedure                            | 4 |
| CJUS440 | The Laws of Evidence                          | 4 |
| CJUS448 | Criminal Investigation                        | 4 |
| CJUS450 | Forensic Criminology                          | 4 |
| CJUS475 | Internship                                    | 4 |
| or      |                                               |   |
| CJUS480 | Criminal Justice Capstone                     | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Corrections Technician (CJUS201, CJUS263, BADM305)  
 Crime Scene Investigation (CJUS440, CJUS448, CJUS450, PSYC436)  
 Domestic Violence Interventions (CJUS201, CJUS300, CJUS365)  
 Juvenile Delinquency and Victim Services (CJUS300, CJUS342, SOCL356)  
 Law Enforcement Skills (CJUS201, CJUS365, CJUS375, CJUS448)  
 Legal Studies and Court Process (CJUS365, CJUS375, CJUS440)  
 Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# BACHELOR OF SCIENCE IN

## CRIMINAL JUSTICE (BSCJ) ONLINE

The BSCJ degree program is designed to provide graduates with a solid foundation in law enforcement, the courts, and corrections. The program's emphasis on communication skills, management, and professional skills along with technical knowledge will prepare students for positions of responsibility and leadership within the criminal justice community and related professions.

### PROGRAM OUTCOMES

- Demonstrate professional written and verbal communication skills
- Resolve complex problems independently and ethically
- Demonstrate knowledge of the psychological and sociological dimensions of human behavior and crime
- Identify and apply strategies in the areas of corrections and parole, including incarceration, community-based corrections and treatment of offenders
- Demonstrate proficiency in the area of crime scene investigation and forensics
- Examine and integrate the emerging trends in the criminal justice system

# BSCJ PROGRAM REQUIREMENTS

## Required Courses

All students in the BSCJ program must complete all of the following courses:

| Course No.                         | Course Name                                 | Hrs. |
|------------------------------------|---------------------------------------------|------|
| <b>GENERAL EDUCATION (68 hrs)</b>  |                                             |      |
| MGM110                             | Principles of Business                      | 4    |
| ENG115                             | English Composition                         | 4    |
| ENG116                             | English Composition II                      | 6    |
| ENG200                             | Professional Writing                        | 6    |
| HIS150                             | World History Since 1500                    | 4    |
| HUM140                             | Art Appreciation                            | 4    |
| INTD111                            | Creating Academic & Professional Success    | 4    |
| IT105                              | Information and Technology Literacy         | 4    |
| IT254                              | Spreadsheet Applications                    | 4    |
| MAT105                             | Business Math                               | 4    |
| MAT205                             | College Math                                | 4    |
| MGM105                             | Professional Communication                  | 4    |
| PHL210                             | Ethics                                      | 4    |
| PSY105                             | Psychology                                  | 4    |
| SCI205                             | Environmental Science                       | 4    |
| SOC205                             | Introduction to Sociology                   | 4    |
| <b>CORE REQUIREMENTS (116 hrs)</b> |                                             |      |
| ACC310                             | Accounting for Non-Accounting Majors        | 4    |
| HRM315                             | Managing Human Resources                    | 4    |
| SOCL325                            | Licit and Illicit Drugs                     | 4    |
| SOCL350                            | Social Psychology                           | 4    |
| SOCL356                            | American Diversity                          | 4    |
| PBAD201                            | Public Administration                       | 4    |
| MPM332                             | Organizational Leadership                   | 4    |
| HRM335                             | Legal Issues in Human Resources Management  | 4    |
| PSYC336                            | Abnormal Psychology                         | 4    |
| PSYC436                            | Forensic Psychology                         | 4    |
| CJUS141                            | Introduction to Criminal Justice            | 4    |
| CJUS201                            | Law Enforcement Operations & Report Writing | 4    |
| CJUS252                            | Homeland Security                           | 6    |
| CJUS263                            | Community Corrections                       | 4    |
| CJUS277                            | Security Management                         | 6    |
| CJUS302                            | Victimology                                 | 6    |
| CJUS344                            | Juvenile Delinquency                        | 6    |
| CJUS367                            | Criminal Law                                | 6    |
| CJUS343                            | Criminology                                 | 4    |

|         |                                    |   |
|---------|------------------------------------|---|
| CJUS375 | Criminal Procedure                 | 4 |
| CJUS448 | Criminal Investigation             | 4 |
| CJUS440 | The Laws of Evidence               | 4 |
| CJUS450 | Forensic Criminology               | 4 |
| CJUS399 | Special Topics in Criminal Justice | 4 |
| CJUS480 | Criminal Justice Capstone          | 5 |
| CJUS481 | Criminal Justice Capstone          | 5 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 180

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Corrections Technician (CJUS201, CJUS263, CJUS277)  
 Crime Scene Investigation (CJUS440, CJUS448, CJUS450, PSYC436)  
 Domestic Violence Interventions (CJUS201, CJUS367, CJUS302)  
 Juvenile Delinquency and Victim Services (CJUS302, CJUS344, SOCL356)  
 Law Enforcement Skills (CJUS201, CJUS367, CJUS375, CJUS448)  
 Legal Studies and Court Process (CJUS367, CJUS375, CJUS440)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# BACHELOR OF SCIENCE IN CRIMINAL JUSTICE

## WITH A CONCENTRATION IN FORENSIC INVESTIGATION (BSCJ-FI)

The BSCJ with concentration in Forensic Investigation is designed to provide a solid foundation in law enforcement, the courts, and corrections, and also equips the student with a foundational forensic investigative knowledge and skill base. Combining the best of theory and practice, the BSCJ with concentration in Forensic Investigation provides the student with exciting opportunities through lab and practicum experiences in the investigation of crimes and criminal profiling.

### PROGRAM OUTCOMES

- Demonstrate professional written and verbal communication skills
- Resolve complex problems independently and ethically
- Demonstrate knowledge of the psychological and sociological dimensions of human behavior and crime
- Identify basic concepts relating to law enforcement, corrections, and the courts
- Demonstrate proficiency in crime scene investigation and forensics

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# BSCJ-FI PROGRAM REQUIREMENTS

## Required Courses

All students in the BSCJ-FI program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (64 hrs)

|         |                                            |   |
|---------|--------------------------------------------|---|
| IT105   | Information and Technology Literacy        | 4 |
| IT254   | Spreadsheet Applications                   | 4 |
| ENGL111 | English Composition I                      | 4 |
| ENGL112 | English Composition II                     | 4 |
| ENGL200 | Professional Writing                       | 4 |
| ENGL210 | Professional Speaking                      | 4 |
| PHIL310 | Ethics                                     | 4 |
| INTD111 | Creating Academic and Professional Success | 4 |
| BIO122  | Anatomy and Physiology I                   | 4 |
| MATH143 | Business Algebra                           | 4 |
| MATH306 | Computer Assisted Statistics               | 4 |
| BADM100 | Introduction to Business                   | 4 |
| LITR220 | Values in World Literature                 | 4 |
| or      |                                            |   |
| HUMN200 | Art and Music Appreciation                 | 4 |
| PSYC100 | Introduction to Psychology                 | 4 |
| HIST150 | World History Since 1500                   | 4 |
| or      |                                            |   |
| HIST210 | World History and Culture 1                | 4 |
| SOCL101 | Introduction to Sociology                  | 4 |

#### BUSINESS / MANAGEMENT (8 hrs)

|         |                           |   |
|---------|---------------------------|---|
| BADM305 | Organizational Behavior   | 4 |
| HRMT310 | Human Resource Management | 4 |

#### PUBLIC ADMINISTRATION / SOCIAL SCIENCE (28 hrs)

|         |                                    |   |
|---------|------------------------------------|---|
| PBAD200 | American Government                | 4 |
| PBAD201 | Public Administration              | 4 |
| PBAD301 | Grant Writing Basics               | 4 |
| PSYC336 | Abnormal Psychology                | 4 |
| PSYC436 | Introduction to Criminal Profiling | 4 |
| SOCL350 | Social Psychology                  | 4 |
| SOCL356 | American Diversity                 | 4 |

#### CRIMINAL JUSTICE CORE (48 hrs)

|         |                                             |   |
|---------|---------------------------------------------|---|
| CJUS141 | Introduction to Criminal Justice            | 4 |
| CJUS201 | Law Enforcement Operations & Report Writing | 4 |
| CJUS250 | Homeland Security                           | 4 |
| CJUS263 | Corrections in America                      | 4 |
| CJUS300 | Victimology                                 | 4 |
| CJUS342 | Juvenile Delinquency                        | 4 |
| CJUS343 | Criminology                                 | 4 |

|         |                        |   |
|---------|------------------------|---|
| CJUS365 | Criminal Law           | 4 |
| CJUS375 | Criminal Procedure     | 4 |
| CJUS440 | The Laws of Evidence   | 4 |
| CJUS448 | Criminal Investigation | 4 |
| CJUS475 | Internship             | 4 |
| or      |                        |   |
| CJUS480 | Capstone               | 4 |

#### FORENSIC INVESTIGATION CONCENTRATION (28 hrs)

|         |                                                               |   |
|---------|---------------------------------------------------------------|---|
| CJUS460 | Interview & Interrogation                                     | 4 |
| CJFI360 | Introduction to Criminalistics                                | 4 |
| CJFI410 | Advanced Crime Scene Forensics                                | 4 |
| CJFI420 | Forensic Photography & Crime Scene Documentation              | 4 |
| CJFI430 | Medico-Legal Death Investigation                              | 4 |
| CJFI440 | Bones, Bugs, & Teeth – The Recovery of Human Remains          | 4 |
| CJFI450 | Dactylography – Fingerprint Identification and Classification | 4 |

#### ELECTIVE (4 hrs)

Select 1 course from:

|         |                                               |   |
|---------|-----------------------------------------------|---|
| LANG100 | Survival Spanish                              | 4 |
| CHE100  | Basic Chemistry                               | 4 |
| CJHS310 | Alcohol Use and Abuse                         | 4 |
| CJUS380 | White Collar Crime – Forensic Accounting      | 4 |
| CJFI455 | Courtroom Presentation of Scientific Evidence | 4 |
| CJFI456 | Forensic Investigation of Dynamic Events      | 4 |
| CJFI457 | Taphonomy – Applied Decomposition Research    | 4 |

#### TOTAL PROGRAM QUARTER CREDIT HOURS:

180

#### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Corrections Technician (CJUS201, CJUS263, BADM305)  
 Crime Scene Investigation (CJUS440, CJUS448, CJFI360, PSYC436)  
 Domestic Violence Interventions (CJUS201, CJUS300, CJUS365)  
 Juvenile Delinquency and Victim Services (CJUS300, CJUS342, SOCL350, SOCL356)  
 Law Enforcement Skills (CJUS201, CJUS365, CJUS375, CJUS448)  
 Legal Studies and Court Process (CJUS365, CJUS375, CJUS440)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Colorado Technical University™**

# BACHELOR OF SCIENCE IN CRIMINAL JUSTICE

## WITH A CONCENTRATION IN HUMAN SERVICES (BSCJ-HS)

The Bachelor of Science in Criminal Justice with concentration in Human Services is designed to provide a solid foundation in law enforcement, the courts, and corrections, while equipping the student with a Human Services core that will prepare the student for Human Services work in the Criminal Justice context. Special emphasis is placed on working with youth. Additionally, the student will complete the coursework needed for professional work in chemical dependency. Students will also have the opportunity to gain valuable experience provided through the Internship component of the program.

### PROGRAM OUTCOMES

- Demonstrate professional written and verbal communication skills
- Resolve complex problems independently and ethically
- Demonstrate knowledge of the psychological and sociological dimensions of human behavior and crime
- Demonstrate competency in the key areas of the criminal justice system
- Demonstrate knowledge of the core activities and skills of the Human Services professional in the context of the criminal justice system
- Demonstrate appropriate knowledge and skills of the chemical dependency professional
- Examine and integrate the emerging trends in the criminal justice system

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSCJ-HS PROGRAM REQUIREMENTS

## Required Courses

All students in the BSCJ-HS program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (64 hrs)

|         |                                            |   |
|---------|--------------------------------------------|---|
| IT105   | Information and Technology Literacy        | 4 |
| IT254   | Spreadsheet Applications                   | 4 |
| ENGL111 | English Composition I                      | 4 |
| ENGL112 | English Composition II                     | 4 |
| ENGL200 | Professional Writing                       | 4 |
| ENGL210 | Professional Speaking                      | 4 |
| PHIL310 | Ethics                                     | 4 |
| INTD111 | Creating Academic and Professional Success | 4 |
| BIO122  | Anatomy and Physiology I                   | 4 |
| MATH143 | Business Algebra                           | 4 |
| MATH306 | Computer Assisted Statistics               | 4 |
| BADM100 | Introduction to Business                   | 4 |
| LITR220 | Values in World Literature                 | 4 |
| or      |                                            |   |
| HUMN200 | Art and Music Appreciation                 | 4 |
| PSYC100 | Introduction to Psychology                 | 4 |
| HIST150 | World History Since 1500                   | 4 |
| or      |                                            |   |
| HIST210 | World History and Culture I                | 4 |
| SOCL101 | Introduction to Sociology                  | 4 |

#### BUSINESS (4 hrs)

|         |                         |   |
|---------|-------------------------|---|
| BADM305 | Organizational Behavior | 4 |
|---------|-------------------------|---|

#### PUBLIC ADMINISTRATION / SOCIAL SCIENCE (24 hrs)

|         |                       |   |
|---------|-----------------------|---|
| PBAD200 | American Government   | 4 |
| PBAD201 | Public Administration | 4 |
| PBAD301 | Grant Writing Basics  | 4 |
| PSYC336 | Abnormal Psychology   | 4 |
| SOCL350 | Social Psychology     | 4 |
| SOCL356 | American Diversity    | 4 |

#### INTERDISCIPLINARY (4 hrs)

|         |                 |   |
|---------|-----------------|---|
| INTD340 | Career Planning | 4 |
|---------|-----------------|---|

#### CRIMINAL JUSTICE (52 hrs)

|         |                                               |   |
|---------|-----------------------------------------------|---|
| CJUS141 | Introduction to Criminal Justice              | 4 |
| CJUS201 | Law Enforcement Operations and Report Writing | 4 |
| CJUS250 | Homeland Security                             | 4 |
| CJUS263 | American Corrections                          | 4 |
| CJUS300 | Victimology                                   | 4 |

|         |                                |   |
|---------|--------------------------------|---|
| CJUS342 | Juvenile Delinquency           | 4 |
| CJUS343 | Criminology                    | 4 |
| CJUS365 | Criminal Law                   | 4 |
| CJUS375 | Criminal Procedure             | 4 |
| CJUS440 | The Laws of Evidence           | 4 |
| CJUS460 | Interview and Interrogation    | 4 |
| CJFI360 | Introduction to Criminalistics | 4 |
| CJUS475 | Internship                     | 4 |

|         |                           |   |
|---------|---------------------------|---|
| or      |                           |   |
| CJUS480 | Criminal Justice Capstone | 4 |

#### HUMAN SERVICES CORE (32 hrs)

|         |                                                         |   |
|---------|---------------------------------------------------------|---|
| PSYC300 | Child and Adolescent Psychopathology                    | 4 |
| CJHS300 | Human Services Practice in the Criminal Justice Setting | 4 |
| CJHS310 | Alcohol Use and Abuse                                   | 4 |
| CJHS315 | Child Abuse                                             | 4 |
| SOCL325 | Licit and Illicit Drugs                                 | 4 |
| CJHS336 | Ethics for the CD Counselor                             | 4 |
| CJHS410 | Foundations of Individual Counseling                    | 4 |
| CJHS420 | Foundations of Group Counseling                         | 4 |

#### TOTAL PROGRAM QUARTER CREDIT HOURS:

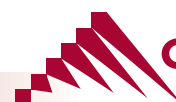
180

#### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Corrections Technician (CJUS201, CJUS263, BADM305)  
 Domestic Violence Interventions (CJUS201, CJUS300, CJUS365)  
 Juvenile Delinquency and Victim Services (CJUS300, CJUS342, SOCL356)  
 Legal Studies and Court Process (CJUS365, CJUS375, CJUS440)  
 Chemical Dependency Counseling (CJHS310, SOCL325, CJHS336, CJHS410, CJHS420)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



Colorado Technical University™

# BACHELOR OF SCIENCE IN CYBERCRIME INVESTIGATION (BSCI)

Computer-based crime has become an enormous global problem for business and law enforcement agencies at all levels. As a result, there is a growing need for individuals who combine criminal justice knowledge with computer technology skills to investigate this new and growing area of criminal activity.

The Bachelor of Science in Cybercrime Investigation (BSCI) degree program is designed to equip graduates with a base of practical, real-world applications in the field of criminal justice with strong emphasis on foundational studies in the electronic criminal investigation of such crimes as fraud, identity theft, computer terrorism and other computer-related crimes that are committed in both a national and global environment. The investigation of computer-based crimes is not limited to federal, state, and local agencies, but is also increasing in organizations that conduct business in an electronic environment.

## PROGRAM OUTCOMES

- Interpret the basic organizational structure and functionality of the criminal justice system
- Identify the phases of an ethical and legal criminal investigation conducted through the proper phases of the investigative process
- Explain the importance of security in an organization as well as an understanding of security architecture for common computer platforms and applications
- Analyze the relationship between criminal law and computer and cyber crime and concepts for collecting, analyzing, recovering and preserving computer forensic evidence
- Define and explain the fundamentals of current computer networks and protocols of data communications
- Explain database concepts and capabilities of modern database systems, and apply those concepts in identifying the use of database systems in criminal activity

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSCI PROGRAM REQUIREMENTS

## Required Courses

All students in the BSCI program must complete all of the following courses:

| Course No.                             | Course Name                                                    | Hrs. |
|----------------------------------------|----------------------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>      |                                                                |      |
| IT105                                  | Information and Technology Literacy                            | 4    |
| IT254                                  | Spreadsheet Applications                                       | 4    |
| ENGL111                                | English Composition I                                          | 4    |
| ENGL112                                | English Composition II                                         | 4    |
| ENGL200                                | Professional Writing                                           | 4    |
| ENGL210                                | Professional Speaking                                          | 4    |
| PHIL310                                | Ethics                                                         | 4    |
| INTD111                                | Creating Academic and Professional Success                     | 4    |
| SCI120                                 | The Impact of Science and Technology on Society                | 4    |
| MATH143                                | Business Algebra                                               | 4    |
| MATH306                                | Computer Assisted Statistics                                   | 4    |
| BADM100                                | Introduction to Business                                       | 4    |
| ECON201                                | Macroeconomics                                                 | 4    |
| HIST210                                | World History and Culture I                                    | 4    |
| HUMN200                                | Art and Music Appreciation                                     | 4    |
| PSYC100                                | Introduction to Psychology                                     | 4    |
| <b>INFORMATION TECHNOLOGY (20 hrs)</b> |                                                                |      |
| IT145                                  | Introduction to Operating Systems & Client/Server Environments | 4    |
| IT200                                  | Introduction to Networking                                     | 4    |
| IT235                                  | Database Applications with Access                              | 4    |
| IT340                                  | Client/Server System & Network Administration                  | 4    |
| IT400                                  | Information Technology Architectures                           | 4    |
| <b>COMPUTER SCIENCE (24 hrs)</b>       |                                                                |      |
| CS104                                  | Problem Solving Concepts with C++                              | 4    |
| CS146                                  | Introduction to UNIX                                           | 4    |
| CSS150                                 | Introduction to Computer Security                              | 4    |
| CSS200                                 | Principles of Network Security                                 | 4    |
| CSS350                                 | Computer Forensics I                                           | 4    |
| CSS351                                 | Computer Forensics II                                          | 4    |
| <b>BUSINESS / MANAGEMENT (20 hrs)</b>  |                                                                |      |
| BADM305                                | Organizational Behavior                                        | 4    |
| HRMT210                                | Introduction to Human Resource Management                      | 4    |
| PBAD201                                | Public Administration                                          | 4    |
| ACCT199                                | Special Topics in Accounting                                   | 4    |
| ACCT201                                | Accounting I                                                   | 4    |

## SOCIAL SCIENCE / HUMANITIES (24 hrs)

|         |                            |   |
|---------|----------------------------|---|
| LITR220 | Values in World Literature | 4 |
| SOCL101 | Introduction to Sociology  | 4 |
| SOCL350 | Social Psychology          | 4 |
| SOCL356 | American Diversity         | 4 |
| PSYC336 | Abnormal Psychology        | 4 |
| PSYC436 | Forensic Psychology        | 4 |

## CRIMINAL JUSTICE (28 hrs)

|         |                                  |   |
|---------|----------------------------------|---|
| CJUS141 | Introduction to Criminal Justice | 4 |
| CJUS250 | Homeland Security                | 4 |
| CJUS365 | Criminal Law                     | 4 |
| CJUS375 | Criminal Procedure               | 4 |
| CJUS440 | The Laws of Evidence             | 4 |
| CJUS448 | Criminal Investigation           | 4 |
| CJUS475 | Internship                       | 4 |
| or      |                                  |   |
| CJUS480 | Capstone                         | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 180**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Professional Communication (ENGL200, ENGL210)  
 UNIX Network Administration (IT200, IT340)  
 Legal Studies and Court Process (CJUS365, CJUS375, CJUS440)  
 Computer Forensics (CSS350)  
 Computer Forensics (Advanced) (CSS351)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# BACHELOR OF SCIENCE

## IN PARALEGAL STUDIES (BSPS)

The Bachelor of Science Degree in Paralegal Studies (BSPS) provides the student with advanced study in critical areas of legal work along with the technical and communication skills necessary for success in this competitive field. The BSPS will prepare students for a life-long career working in the legal community and is an excellent choice for those considering law school in the future.

### PROGRAM OUTCOMES

- Analyze complex facts
- Demonstrate a well-rounded knowledge base in key areas of law
- Demonstrate competence in legal research and writing
- Distinguish the role of the paralegal from the lawyer and the ethical guidelines for paralegal practice
- Demonstrate knowledge of the legal processes and the courts
- Demonstrate proficiency in tasks common to paralegal practice such as client interviews, fact gathering, document preparation, and case management

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSPS PROGRAM REQUIREMENTS

## Required Courses

All students in the BSPS program must complete all of the following courses:

| Course No.                                               | Course Name                                | Hrs. |
|----------------------------------------------------------|--------------------------------------------|------|
| <b>GENERAL EDUCATION (60 hrs)</b>                        |                                            |      |
| IT105                                                    | Information and Technology Literacy        | 4    |
| IT254                                                    | Spreadsheet Applications                   | 4    |
| ENGL111                                                  | English Composition I                      | 4    |
| ENGL112                                                  | English Composition II                     | 4    |
| ENGL200                                                  | Professional Writing                       | 4    |
| ENGL210                                                  | Professional Speaking                      | 4    |
| PHIL310                                                  | Ethics                                     | 4    |
| INTD111                                                  | Creating Academic and Professional Success | 4    |
| BIO122                                                   | Anatomy and Physiology I                   | 4    |
| MATH143                                                  | Business Algebra                           | 4    |
| MATH306                                                  | Computer Assisted Statistics               | 4    |
| BADM100                                                  | Introduction to Business                   | 4    |
| LITR220                                                  | Values in World Literature                 | 4    |
| HIST150                                                  | World History Since 1500                   | 4    |
| or                                                       |                                            |      |
| HIST210                                                  | World History and Culture 1                | 4    |
| SOCL101                                                  | Introduction to Sociology                  | 4    |
| <b>BUSINESS / MEDICAL / INTERDISCIPLINE (16 hrs)</b>     |                                            |      |
| INTD340                                                  | Career Planning                            | 4    |
| ACCT201                                                  | Accounting I                               | 4    |
| HSS121                                                   | Medical Terminology                        | 4    |
| HSS300                                                   | Healthcare Law and Regulations             | 4    |
| <b>HUMAN RESOURCE MANAGEMENT (8 hrs)</b>                 |                                            |      |
| HRMT310                                                  | Human Resource Management                  | 4    |
| HRMT330                                                  | HRM Legal Environment                      | 4    |
| <b>CRIMINAL JUSTICE / PUBLIC ADMINISTRATION (28 hrs)</b> |                                            |      |
| PBAD200                                                  | American Government                        | 4    |
| CJUS365                                                  | Criminal Law                               | 4    |
| CJUS375                                                  | Criminal Procedure                         | 4    |
| CJUS440                                                  | The Laws of Evidence                       | 4    |
| CJUS448                                                  | Criminal Investigation                     | 4    |
| LANG100                                                  | Survival Spanish                           | 4    |
| SOCL356                                                  | American Diversity                         | 4    |

## PARALEGAL STUDIES CORE (68 hrs)

|         |                                              |   |
|---------|----------------------------------------------|---|
| PALS200 | Introduction to Paralegal Studies and Ethics | 4 |
| PALS215 | Legal Research and Writing I                 | 4 |
| PALS216 | Legal Technology                             | 4 |
| PALS225 | Civil Litigation I                           | 4 |
| PALS226 | Torts                                        | 4 |
| PALS230 | Contracts                                    | 4 |
| PALS250 | Commercial Law                               | 4 |
| PALS265 | Property / Real Estate                       | 4 |
| PALS275 | Family Law                                   | 4 |
| PALS285 | Trusts, Wills, & Estates                     | 4 |
| PALS315 | Advanced Legal Research and Writing          | 4 |
| PALS325 | Civil Litigation II                          | 4 |
| PALS330 | Practicum                                    | 4 |
| PALS400 | Uniform Commercial Code                      | 4 |
| PALS425 | Debtor / Creditor                            | 4 |
| PALS450 | Intellectual Property                        | 4 |
| PALS475 | Internship                                   | 4 |
| or      |                                              |   |
| PALS480 | Capstone                                     | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**180**



**Colorado Technical University™**

# BACHELOR OF SCIENCE IN PUBLIC ADMINISTRATION (BSPBAD)

Public Administration in the twenty-first century is facing new challenges both in the scope and the pace of change affecting the role of public administration today. This program is designed to equip the graduate with the essential skills crucial to effective management in the public sector. Three themes dominate this dynamic approach to training leaders and managers in public administration – providing accountability of public administrative agencies, training and development of leaders and managers in public organizations, and establishing the core functions of public management to ensure the effectiveness of programs in the real world of public administration. Graduates of the Bachelor of Science in Public Administration program will be able to demonstrate measurable skills and technical understanding from policy analysis to writing grants. The program will equip the student to communicate, use technology, define and apply the core functions of public management today.

## PROGRAM OUTCOMES

- Define various public issues at the local, state, and federal level
- Demonstrate the ability to utilize a multidisciplinary approach in the analysis of an issue impacting a governmental or non-profit organization
- Conduct a public policy analysis to determine the need to change the policy involved
- Demonstrate an understanding of the process involved in enacting a legislative act and a governmental regulation
- Research and evaluate funding alternatives available for the agency involved
- Research, develop, and prepare a fundable grant proposal
- Evaluate the fiscal responsibility of an organization
- Demonstrate an understanding of the knowledge, skills, and abilities needed by a public administrator to effectively manage an organizational unit

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSPBAD PROGRAM REQUIREMENTS

## Required Courses

All students in the BSPBAD program must complete all of the following courses:

| Course No.                                   | Course Name                                     | Hrs. |
|----------------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>            |                                                 |      |
| IT105                                        | Information and Technology Literacy             | 4    |
| IT254                                        | Spreadsheet Applications                        | 4    |
| ENGL111                                      | English Composition I                           | 4    |
| ENGL112                                      | English Composition II                          | 4    |
| ENGL200                                      | Professional Writing                            | 4    |
| ENGL210                                      | Professional Speaking                           | 4    |
| PHIL310                                      | Ethics                                          | 4    |
| INTD111                                      | Creating Academic and Professional Success      | 4    |
| SCI120                                       | The Impact of Science and Technology on Society | 4    |
| MATH143                                      | Business Algebra                                | 4    |
| MATH306                                      | Computer Assisted Statistics                    | 4    |
| BADM100                                      | Introduction to Business                        | 4    |
| ECON201                                      | Macroeconomics                                  | 4    |
| LITR220                                      | Values in World Literature                      | 4    |
| HIST210                                      | World History and Culture I                     | 4    |
| SOCL101                                      | Introduction to Sociology                       | 4    |
| <b>HUMANITIES / SOCIAL SCIENCES (20 hrs)</b> |                                                 |      |
| HUMN200                                      | Art and Music Appreciation                      | 4    |
| HIST310                                      | World History and Culture II                    | 4    |
| SOCL325                                      | Licit and Illicit Drugs                         | 4    |
| SOCL350                                      | Social Psychology                               | 4    |
| SOCL356                                      | American Diversity                              | 4    |
| <b>INTERDISCIPLINARY (4 hrs)</b>             |                                                 |      |
| INTD340                                      | Career Planning                                 | 4    |
| <b>BUSINESS ADMINISTRATION (48 hrs)</b>      |                                                 |      |
| ACCT201                                      | Accounting I                                    | 4    |
| ACCT202                                      | Accounting II                                   | 4    |
| ACCT203                                      | Accounting III                                  | 4    |
| BADM305                                      | Organizational Behavior                         | 4    |
| BADM360                                      | Operations Management                           | 4    |
| EBUS308                                      | Introduction to e-Business                      | 4    |
| HRMT210                                      | Introduction to Human Resource Management       | 4    |
| HRMT430                                      | Managing Diversity                              | 4    |
| IT235                                        | Database Applications with Access               | 4    |

|         |                                    |   |
|---------|------------------------------------|---|
| MKTG301 | Introduction to Marketing          | 4 |
| MKTG320 | Consumer Behavior                  | 4 |
| PM210   | Introduction to Project Management | 4 |

## PUBLIC ADMINISTRATION (44 hrs)

|         |                                                             |   |
|---------|-------------------------------------------------------------|---|
| CJUS250 | Homeland Security                                           | 4 |
| PBAD200 | American Government                                         | 4 |
| PBAD201 | Public Administration                                       | 4 |
| PBAD301 | Grant Writing Basics                                        | 4 |
| PBAD311 | Shaping Public Policy: Politics and the Legislative Process | 4 |
| PBAD321 | Public Finance                                              | 4 |
| PBAD401 | Bureaucratic Power and Politics                             | 4 |
| PBAD411 | Administrative Law and the Adjudicatory Process             | 4 |
| PBAD441 | Public Policy Analysis: Concepts and Practice               | 4 |
| PBAD450 | Research Methods                                            | 4 |
| PBAD475 | Internship                                                  | 4 |
| or      |                                                             |   |
| PBAD481 | Public Administration Capstone                              | 4 |

**TOTAL DEGREE QUARTER CREDIT HOURS:** 180

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Fundamentals (BADM100, HRMT210, IT190, MKTG210)  
Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# ASSOCIATE OF SCIENCE IN CRIMINAL JUSTICE (ASCJ)

The Associate of Science in Criminal Justice program is designed to prepare graduates to enter into the criminal justice profession in a variety of first-tier positions. Students will be exposed to the foundational areas of the discipline: investigation and law enforcement, law and courts, and corrections and parole. The program also addresses juvenile delinquency and the juvenile justice system.

## PROGRAM OUTCOMES

- Describe and explain the fundamental concepts and elements of the criminal justice system
- Identify different forms of human behavior within the context of the criminal justice system
- Demonstrate effective writing skills
- Explain diversity and ethics within society

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# ASCJ PROGRAM REQUIREMENTS

## Required Courses

All students in the ASCJ program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (32 hrs)

|         |                                            |   |
|---------|--------------------------------------------|---|
| ENGL111 | English Composition I                      | 4 |
| ENGL112 | English Composition II                     | 4 |
| MATH143 | Business Algebra                           | 4 |
| LITR220 | Values in World Literature                 | 4 |
| INTD111 | Creating Academic and Professional Success | 4 |
| IT105   | Information and Technology Literacy        | 4 |
| PSYC100 | Introduction to Psychology                 | 4 |
| BADM100 | Introduction to Business                   | 4 |

#### COMPUTING / INFORMATION TECHNOLOGY (8 hrs)

|       |                                   |   |
|-------|-----------------------------------|---|
| IT235 | Database Applications with Access | 4 |
| IT254 | Spreadsheet Applications          | 4 |

#### ENGLISH (4 Hours)

|         |                      |   |
|---------|----------------------|---|
| ENGL200 | Professional Writing | 4 |
|---------|----------------------|---|

#### HUMANITIES / SOCIAL SCIENCES (12 hrs)

|         |                            |   |
|---------|----------------------------|---|
| HUMN200 | Art and Music Appreciation | 4 |
| ECON201 | Macroeconomics             | 4 |
| SOCL101 | Introduction to Sociology  | 4 |

#### SCIENCE (4 Hours)

|        |                          |   |
|--------|--------------------------|---|
| BIO122 | Anatomy and Physiology I | 4 |
|--------|--------------------------|---|

#### BUSINESS / MANAGEMENT (4 hrs)

|         |                         |   |
|---------|-------------------------|---|
| BADM305 | Organizational Behavior | 4 |
|---------|-------------------------|---|

#### CRIMINAL JUSTICE (28 hrs)

|         |                                               |   |
|---------|-----------------------------------------------|---|
| CJUS141 | Introduction to Criminal Justice              | 4 |
| CJUS201 | Law Enforcement Operations and Report Writing | 4 |
| CJUS250 | Homeland Security                             | 4 |
| CJUS263 | Community Corrections                         | 4 |
| CJUS300 | Victimology                                   | 4 |
| CJUS342 | Juvenile Delinquency                          | 4 |
| CJUS365 | Criminal Law                                  | 4 |

TOTAL PROGRAM QUARTER CREDIT HOURS: 92

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Corrections Technician (CJUS201, CJUS263, BADM305)

Domestic Violence Interventions (CJUS201, CJUS300, CJUS365)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# ASSOCIATE OF SCIENCE IN

## CRIMINAL JUSTICE (ASCJ) ONLINE

The Associate of Science in Criminal Justice program is designed to prepare graduates to enter into the criminal justice profession in a variety of first-tier positions. Students will be exposed to the foundational areas of the discipline: investigation and law enforcement, law and courts, and corrections and parole. The program also addresses juvenile delinquency and the juvenile justice system.

### PROGRAM OUTCOMES

- Describe and explain the fundamental concepts and elements of the criminal justice system
- Identify different forms of human behavior within the context of the criminal justice system
- Demonstrate effective writing skills
- Explain diversity and ethics within society

# ASCJ PROGRAM REQUIREMENTS

## Required Courses

All students in the ASCJ program must complete all of the following courses:

| Course No.                                 | Course Name                                 | Hrs.      |
|--------------------------------------------|---------------------------------------------|-----------|
| <b>GENERAL EDUCATION (48 hrs)</b>          |                                             |           |
| ENG115                                     | English Composition                         | 4         |
| HIS150                                     | World History Since 1500                    | 4         |
| HUM140                                     | Art Appreciation                            | 4         |
| INTD111                                    | Creating Academic & Professional Success    | 4         |
| IT105                                      | Information and Technology Literacy         | 4         |
| MAT105                                     | Business Math                               | 4         |
| MAT205                                     | College Math                                | 4         |
| MGM105                                     | Professional Communication                  | 4         |
| PHL210                                     | Ethics                                      | 4         |
| PSY105                                     | Psychology                                  | 4         |
| SCI205                                     | Environmental Science                       | 4         |
| SOC205                                     | Introduction to Sociology                   | 4         |
| <b>CORE REQUIREMENTS (42 hrs)</b>          |                                             |           |
| CJUS141                                    | Introduction to Criminal Justice            | 4         |
| CJUS201                                    | Law Enforcement Operations & Report Writing | 4         |
| CJUS252                                    | Homeland Security                           | 6         |
| CJUS263                                    | Corrections Solutions                       | 4         |
| CJUS277                                    | Security Management                         | 6         |
| CJUS302                                    | Victimology                                 | 6         |
| CJUS344                                    | Juvenile Delinquency                        | 6         |
| CJUS367                                    | Criminal Law                                | 6         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                             | <b>90</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Corrections Technician (CJUS201, CJUS263, CJUS277)

Domestic Violence Interventions (CJUS201, CJUS302, CJUS367)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# ASSOCIATE OF SCIENCE IN

## CYBERCRIME INVESTIGATION (ASCI) ONLINE

The Associate in Cybercrime Investigation is designed specifically to develop the knowledge base and skills essential to those who will pursue a career in security and investigations of cybercrimes. These skills are applicable to a wide spectrum of employment areas for both public and private organizations within the criminal justice system and ancillary agencies.

### PROGRAM OUTCOMES

- Demonstrate knowledge of the basic organizational structure and functionality of the criminal justice system
- Apply the knowledge and skills of gathering and preserving both physical and electronic evidence
- Identify the phases of an ethical and legal criminal investigation conducted through the proper application of the investigation process
- Demonstrate the ability to electronically identify criminal activity and search for possible perpetrators

# ASCI PROGRAM REQUIREMENTS

## Required Courses

All students in the ASCI program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (48 hrs)</b>          |                                            |           |
| INTD111                                    | Creating Academic and Professional Success | 4         |
| IT105                                      | Information and Technology Literacy        | 4         |
| ENG115                                     | English Composition                        | 4         |
| HIS150                                     | World History Since 1500                   | 4         |
| HUM140                                     | Art Appreciation                           | 4         |
| MAT105                                     | Business Math                              | 4         |
| MAT205                                     | College Math                               | 4         |
| PHL210                                     | Ethics                                     | 4         |
| MGM105                                     | Professional Communication                 | 4         |
| PSY105                                     | Introduction to Psychology                 | 4         |
| SCI205                                     | Environmental Science                      | 4         |
| SOC205                                     | Introduction to Sociology                  | 4         |
| <b>CORE REQUIREMENTS (42 hrs)</b>          |                                            |           |
| CJUS141                                    | Introduction to Criminal Justice           | 4         |
| CJUS252                                    | Homeland Security                          | 6         |
| CJUS367                                    | Criminal Law                               | 6         |
| PBAD201                                    | Public Administration                      | 4         |
| CS150                                      | Introduction to Computer System Security   | 4         |
| CS123                                      | Problem Solving Concepts with Programming  | 6         |
| IT122                                      | Fundamentals of Operating Systems          | 4         |
| IT242                                      | Operating Systems and Practical Networking | 4         |
| CJUS448                                    | Criminal Investigation                     | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>90</b> |





# ASSOCIATE OF SCIENCE IN

## PARALEGAL STUDIES (ASPS)

The Associate's Degree in Paralegal Studies is designed specifically to develop the organizational, research, writing, critical thinking, and communication skills necessary to paralegal work in addition to providing a foundation of legal knowledge. Students will be trained in the skills and knowledge required for providing quality legal assistance to the increasing number of organizations and law firms needing such services.

### PROGRAM OUTCOMES

- Demonstrate an understanding of the legal process and the role of the paralegal in providing legal services
- Demonstrate competence in legal research, analysis, and writing skills
- Demonstrate knowledge of the steps of the litigation process
- Demonstrate competence in legal technology commonly used by paralegals
- Develop interpersonal and organizational skills that allow the student to work effectively as a problem-solving team member
- Demonstrate an understanding of key legal concepts and terminology

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# ASPS PROGRAM REQUIREMENTS

## Required Courses

All students in the ASPS program must complete all of the following courses:

| Course No.                                              | Course Name                                  | Hrs.      |
|---------------------------------------------------------|----------------------------------------------|-----------|
| <b>GENERAL EDUCATION (28 hrs)</b>                       |                                              |           |
| ENGL111                                                 | English Composition I                        | 4         |
| ENGL112                                                 | English Composition II                       | 4         |
| HIST210                                                 | World History & Culture I                    | 4         |
| LITR220                                                 | World Literature                             | 4         |
| INTD111                                                 | Creating Academic & Professional Success     | 4         |
| IT105                                                   | Information and Technology Literacy          | 4         |
| MATH143                                                 | Business Algebra                             | 4         |
| <b>BUSINESS (8 hrs)</b>                                 |                                              |           |
| ACCT201                                                 | Accounting I                                 | 4         |
| BADM100                                                 | Introduction to Business                     | 4         |
| <b>CRIMINAL JUSTICE / PUBLIC ADMINISTRATION (8 hrs)</b> |                                              |           |
| PBAD200                                                 | American Government                          | 4         |
| CJUS365                                                 | Criminal Law                                 | 4         |
| <b>PARALEGAL STUDIES CORE (48 hrs)</b>                  |                                              |           |
| PALS200                                                 | Introduction to Paralegal Studies and Ethics | 4         |
| PALS215                                                 | Legal Research and Writing I                 | 4         |
| PALS216                                                 | Legal Technology                             | 4         |
| PALS225                                                 | Civil Litigation I                           | 4         |
| PALS226                                                 | Torts                                        | 4         |
| PALS230                                                 | Contracts                                    | 4         |
| PALS250                                                 | Commercial Law                               | 4         |
| PALS265                                                 | Property / Real Estate                       | 4         |
| PALS275                                                 | Family Law                                   | 4         |
| PALS285                                                 | Trusts, Wills, & Estates                     | 4         |
| PALS325                                                 | Civil Litigation II                          | 4         |
| PALS330                                                 | Practicum                                    | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>              |                                              | <b>92</b> |



# ASSOCIATE OF SCIENCE IN

## PARALEGAL STUDIES (ASPS) ONLINE

The Associate Degree in Paralegal Studies is designed specifically to develop the organizational, research, writing, critical thinking, and communication skills necessary to paralegal work in addition to providing a foundation of legal knowledge. Students will be trained in the skills and knowledge required for providing quality legal assistance to the increasing number of organizations and law firms needing such services.

### PROGRAM OUTCOMES

- Demonstrate an understanding of the legal process and the role of the paralegal in providing legal services
- Demonstrate competence in legal research, analysis, and writing skills
- Demonstrate knowledge of the steps of the litigation process
- Demonstrate competence in legal technology commonly used by paralegals
- Develop interpersonal and organizational skills that allow the student to work effectively as a problem-solving team member
- Demonstrate an understanding of key legal concepts and terminology

# ASPS PROGRAM REQUIREMENTS

## Required Courses

All students in the ASPS program must complete all of the following courses:

| Course No.                                 | Course Name                                  | Hrs.      |
|--------------------------------------------|----------------------------------------------|-----------|
| <b>GENERAL EDUCATION (28 hrs)</b>          |                                              |           |
| ENG115                                     | Composition                                  | 4         |
| HIS150                                     | World History Since 1500                     | 4         |
| LTR215                                     | World Literature                             | 4         |
| INTD111                                    | Creating Academic & Professional Success     | 4         |
| IT105                                      | Information and Technology Literacy          | 4         |
| MAT105                                     | Business Math                                | 4         |
| MGM105                                     | Professional Communication                   | 4         |
| <b>BUSINESS (12 hrs)</b>                   |                                              |           |
| ACC205                                     | Financial Accounting Concepts                | 6         |
| MGM230                                     | Introduction to Business Law                 | 6         |
| <b>CRIMINAL JUSTICE (6 hrs)</b>            |                                              |           |
| CJUS367                                    | Criminal Law                                 | 6         |
| <b>PARALEGAL STUDIES CORE (44 hrs)</b>     |                                              |           |
| PALS200                                    | Introduction to Paralegal Studies and Ethics | 4         |
| PALS215                                    | Legal Research and Writing I                 | 4         |
| PALS216                                    | Legal Technology                             | 4         |
| PALS225                                    | Civil Litigation I                           | 4         |
| PALS226                                    | Torts                                        | 4         |
| PALS230                                    | Contracts                                    | 4         |
| PALS250                                    | Commercial Law                               | 4         |
| PALS265                                    | Property / Real Estate                       | 4         |
| PALS275                                    | Family Law                                   | 4         |
| PALS285                                    | Trusts, Wills, & Estates                     | 4         |
| PALS325                                    | Civil Litigation II                          | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                              | <b>90</b> |



# ASSOCIATE OF APPLIED SCIENCE IN

## CRIMINAL JUSTICE (AASCJ)

The Associate of Applied Science in Criminal Justice program is designed to prepare graduates to enter into the criminal justice profession in a variety of first-tier positions. Students will be exposed to the foundational areas of the discipline: investigation and law enforcement, law and courts, and corrections and parole. The program also addresses juvenile delinquency and the juvenile justice system.

## PROGRAM OUTCOMES

- Describe and explain the fundamental concepts and elements of the criminal justice system
- Identify different forms of human behavior within the context of the criminal justice system
- Demonstrate effective writing skills
- Explain diversity and ethics within society

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# AASCJ PROGRAM REQUIREMENTS

## Required Courses

All students in the AASCJ program must complete all of the following courses:

| Course No.                                        | Course Name                                   | Hrs.      |
|---------------------------------------------------|-----------------------------------------------|-----------|
| <b>GENERAL EDUCATION (32 hrs)</b>                 |                                               |           |
| ENGL111                                           | English Composition I                         | 4         |
| ENGL112                                           | English Composition II                        | 4         |
| MATH143                                           | Business Algebra                              | 4         |
| LITR220                                           | Values in World Literature                    | 4         |
| INTD111                                           | Creating Academic and Professional Success    | 4         |
| IT105                                             | Information and Technology Literacy           | 4         |
| PSYC100                                           | Introduction to Psychology                    | 4         |
| BADM100                                           | Introduction to Business                      | 4         |
| <b>COMPUTING / INFORMATION TECHNOLOGY (8 hrs)</b> |                                               |           |
| IT235                                             | Database Applications with Access             | 4         |
| IT254                                             | Spreadsheet Applications                      | 4         |
| <b>ENGLISH (4 Hours)</b>                          |                                               |           |
| ENGL200                                           | Professional Writing                          | 4         |
| <b>HUMANITIES / SOCIAL SCIENCES (12 hrs)</b>      |                                               |           |
| HUMN200                                           | Art and Music Appreciation                    | 4         |
| ECON201                                           | Macroeconomics                                | 4         |
| SOCL101                                           | Introduction to Sociology                     | 4         |
| <b>SCIENCE (4 hrs)</b>                            |                                               |           |
| BIO122                                            | Anatomy and Physiology I                      | 4         |
| <b>BUSINESS / MANAGEMENT (4 hrs)</b>              |                                               |           |
| BADM305                                           | Organizational Behavior                       | 4         |
| <b>CRIMINAL JUSTICE (28 hrs)</b>                  |                                               |           |
| CJUS141                                           | Introduction to Criminal Justice              | 4         |
| CJUS201                                           | Law Enforcement Operations and Report Writing | 4         |
| CJUS250                                           | Homeland Security                             | 4         |
| CJUS263                                           | Community Corrections                         | 4         |
| CJUS300                                           | Victimology                                   | 4         |
| CJUS342                                           | Juvenile Delinquency                          | 4         |
| CJUS365                                           | Criminal Law                                  | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>        |                                               | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Corrections Technician (CJUS201, CJUS263, BADM305)

Domestic Violence Interventions (CJUS201, CJUS300, CJUS365)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

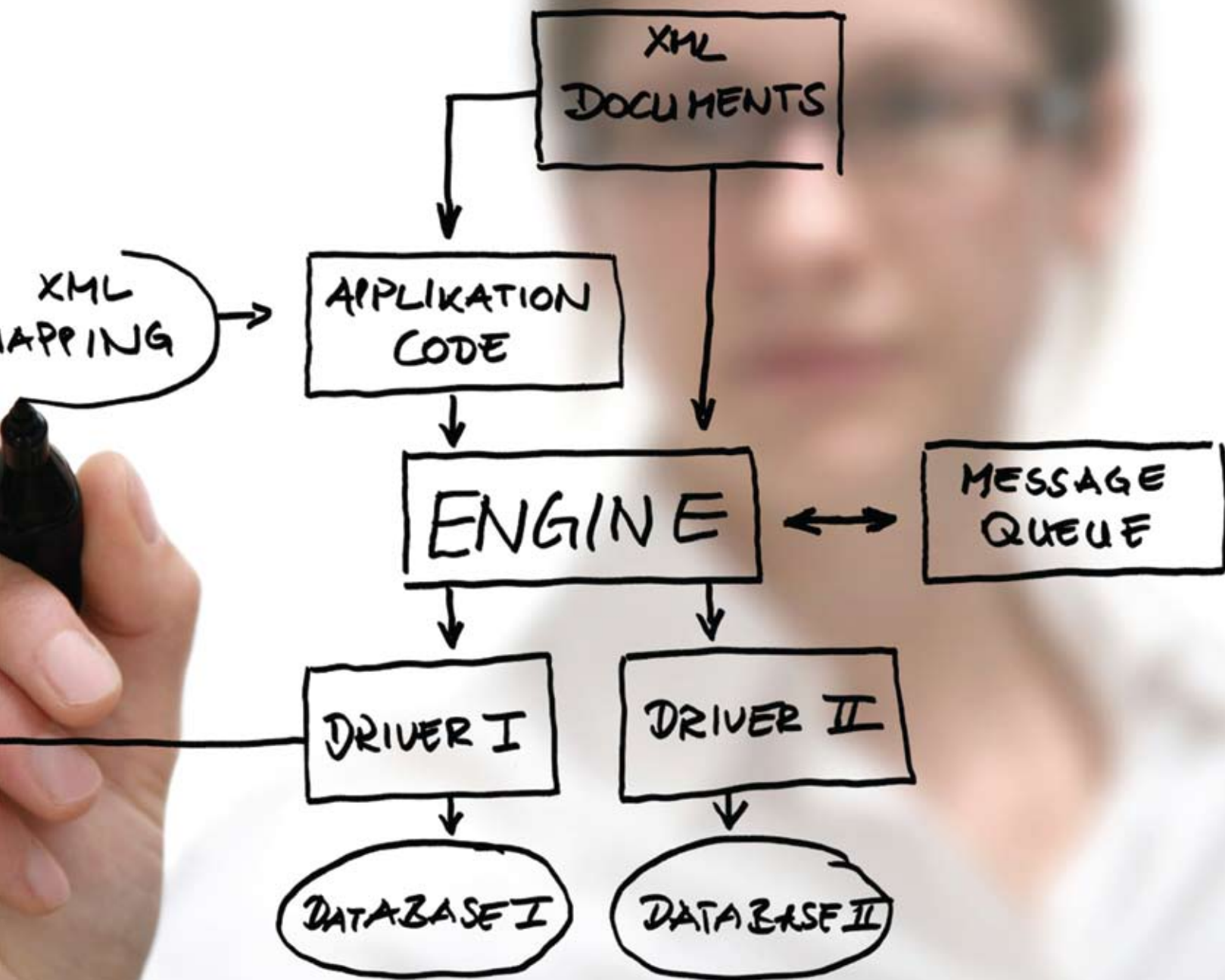


College of

Engineering

and Computer Science.





# DOCTORATE OF COMPUTER SCIENCE (DCS)

The Doctor of Computer Science program at Colorado Technical University is the terminal degree for computer science professionals, consultants and academics. The program encourages students to think and act strategically and facilitates in developing the ability to predict future trends and make positive contributions in their area of technical expertise.

Each year of the DCS program is designed to provide candidates with the theoretical, research and application capabilities necessary to pursue a successful career in their chosen field. The organization of each year is described below.

## Year 1: The Foundation

Year one focuses on general software engineering and computer science topics. Statistical analysis, simulation and modeling enable the student to produce an experimental design. The research will result in a broad overview of the student's area of specialty in order to put the research into context and inform the student's choice of research question.

## Year 2: Acquisition of Knowledge

Once the foundation is in place, year two is where the student begins to form a personal understanding of the advanced research and methods used in the specialized area of study. The focus is on database, systems, software usability, requirements, concurrent and distributed systems. The student prepares a research proposal and begins the research.

## Year 3: Leadership and Professional Advancement

The final year of the program involves developing metrics and risk analysis programs, exploration of high level design issues, evaluation of methods of maintaining security, and anticipating and planning for the future. The deliverable in year three is the documentation of the student's applied research in either a dissertation or a series of articles.

The DCS program includes twelve 5-credit classes, one per term for three years. These are taught using the Professional Learning Model™ in an executive format. Each combines an active online component with an intensive residential session, lasting four days at our Colorado Springs campus. These are graded classes, and you must maintain an average of 3.3 out of a possible 4.0 in these classes.

There are also 12 Research and Writing courses that result in either four publishable papers or a dissertation. One research and writing course is taken each quarter in conjunction with one formal course. There are two options: publishable paper and dissertation. Both require a literature review and a research proposal. The research proposal for both options must be approved by the mentor. The publishable paper option requires the approval by the mentor and two readers for four papers: a publishable literature review, two publishable empirical papers (at least one of which must be publishable as an academic article), and a proposal for programmatic research covering a planned stream of research. This could also serve as a proposal for funding through a company or granting agency. The dissertation option requires a more extensive document that incorporates the literature review, a major empirical study, and the proposal for programmatic research. It must be approved by the mentor and two readers.

## PROGRAM OUTCOMES

- Critically evaluate, analyze, and solve problems within a breadth of computer science disciplines
- Demonstrate expertise within a discipline of Computer Science by summarizing the state of the art, selecting an important problem, conducting research addressing the problem, extending current knowledge with the results, and developing a research program for further contributions
- Communicate by presenting research results and preparing them for publication
- Make well-founded predictions about future challenges and developments in Computer Science
- Demonstrate ethical behavior in all aspects of the program including honesty, integrity, professional practice, and protection of research subjects

# DCS PROGRAM REQUIREMENTS

## Required Courses

All students in the DCS program must complete all of the following courses:

| Course No. | Course Name                         | Hrs. |
|------------|-------------------------------------|------|
| CS800      | Processes Methods and Environments  | 5    |
| CS801      | Research and Writing I              | 3    |
| CS805      | Experimental Design / Analysis      | 5    |
| CS806      | Research and Writing II             | 3    |
| CS810      | Simulation and Modeling Techniques  | 5    |
| CS811      | Research and Writing III            | 3    |
| CS815      | Foundations in Computer Science     | 5    |
| CS816      | Research and Writing IV             | 3    |
| CS820      | Usability and Interaction           | 5    |
| CS821      | Research and Writing V              | 3    |
| CS825      | Advanced Topics in Database Systems | 5    |
| CS826      | Research and Writing VI             | 3    |
| CS837      | Requirements Engineering            | 5    |
| CS831      | Research and Writing VII            | 3    |
| CS838      | Concurrent and Distributed Systems  | 5    |
| CS836      | Research and Writing VIII           | 3    |
| CS840      | System Metrics and Risk Analysis    | 5    |
| CS841      | Research and Writing IX             | 3    |
| CS845      | Software Architecture and Design    | 5    |
| CS846      | Research and Writing X              | 3    |
| CS850      | Networking and Security             | 5    |
| CS851      | Research and Writing XI             | 3    |
| CS855      | Futuring and Innovation             | 5    |
| CS856      | Research and Writing XII            | 3    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 96





# DOCTORATE OF COMPUTER SCIENCE - ENTERPRISE INFORMATION SYSTEMS (DCS-EIS)

The Doctor of Computer Science – Enterprise Information Systems program at Colorado Technical University is designed to develop leaders in designing, implementing and managing large-scale systems in their chosen profession.

Each year of the DCS-EIS program is designed to provide candidates with the theoretical, research and application capabilities necessary to pursue a successful career in their chosen field. The organization of each year is described below.

## Year 1: The Foundation

The beginning of the program focuses on research. Each student will spend the first year learning about analysis and design from a user perspective while forming the ability to think critically and creatively. This experience will enable the student to complete a literature review and develop an enterprise information system designed to improve business processes.

## Year 2: Acquisition of Knowledge

Once the foundation is in place, year two is the time the student chooses an area of specialization and gains an in-depth knowledge of four common areas: strategy, structure, requirements engineering, and decision support. This deeper level of understanding will result in a practitioner article and a proposal for research to be conducted in the third year.

## Year 3: Leadership and Professional Advancement

The final year of the program involves developing a formal implementation program, taking into consideration budget, training and testing and developing a critical path to completion, anticipating and planning for the future. The deliverables in year three are an applied research project, to be submitted to an academic journal and a proposal for programmatic research.

The DCS-EIS program includes twelve 5-credit classes, one per quarter for three years. These are taught using the Professional Learning Model™ in an executive format. Each combines an active

online component with an intensive residential session, lasting four days at our Colorado Springs campus. These are graded classes, and you must maintain an average of 3.3 out of a possible 4.0 in these classes.

There are also 12 Research and Writing courses that result in either four publishable papers or a dissertation. One research and writing course is taken each quarter in conjunction with one formal course. There are two options: publishable paper and dissertation. Both require a literature review and a research proposal. The research proposal for both options must be approved by the mentor. The publishable paper option requires the approval by the mentor and two readers for four papers: a publishable literature review, two publishable empirical papers (at least one of which must be publishable as an academic article), and a proposal for programmatic research covering a planned stream of research. This could also serve as a proposal for funding through a company or granting agency. The dissertation option requires a more extensive document that incorporates the literature review, a major empirical study, and the proposal for programmatic research. It must be approved by the mentor and two readers.

## PROGRAM OUTCOMES

- Critically evaluate, analyze, and solve practical technical and managerial challenges within multiple disciplines of Information Systems
- Demonstrate expertise within a discipline Information Systems by summarizing the state of the art, selecting an important practical problem or phenomenon, conducting research addressing it, extending current knowledge with the results, and developing a research program for further contributions
- Communicate by presenting research results and preparing them for publication
- Make well-founded predictions about future challenges and developments in Information Systems
- Demonstrate ethical behavior in all aspects of the program including honesty, integrity, professional practice, and protection of research subjects

# DCS-EIS PROGRAM REQUIREMENTS

## Required Courses

All students in the DCS-EIS program must complete all of the following courses:

| Course No. | Course Name                                   | Hrs. |
|------------|-----------------------------------------------|------|
| CS817      | Foundations of Enterprise Information Systems | 5    |
| CS801      | Research and Writing I                        | 3    |
| CS802      | Qualitative Analysis                          | 5    |
| CS806      | Research and Writing II                       | 3    |
| CS805      | Experimental Design / Analysis                | 5    |
| CS811      | Research and Writing III                      | 3    |
| CS812      | Quantitative Analysis                         | 5    |
| CS816      | Research and Writing IV                       | 3    |
| CS820      | Usability and Interaction                     | 5    |
| CS821      | Research and Writing V                        | 3    |
| CS822      | Systems Analysis and Design                   | 5    |
| CS826      | Research and Writing VI                       | 3    |
| CS827      | Enterprise Information Systems Governance     | 5    |
| CS831      | Research and Writing VII                      | 3    |
| CS832      | Business Alignment and Strategic IS           | 5    |
| CS836      | Research and Writing VIII                     | 3    |
| CS842      | Business Intelligence                         | 5    |
| CS841      | Research and Writing IX                       | 3    |
| CS847      | Enterprise Systems Architecture Planning      | 5    |
| CS846      | Research and Writing X                        | 3    |
| CS852      | Information Assurance                         | 5    |
| CS851      | Research and Writing XI                       | 3    |
| CS855      | Futuring and Innovation                       | 5    |
| CS856      | Research and Writing XII                      | 3    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 96



# MASTER OF SCIENCE IN

## COMPUTER ENGINEERING (MSCE)

The computer industry is one of the fastest growing segments of our economy. To maintain a competitive edge, industry and commerce must continue to make creative scientific and engineering advances as well as produce high quality products. More than ever there is a demand for computer engineering professionals who can motivate and lead the technical workers responsible for these advances. The MSCE program emphasizes effective optimization of computer systems within organizations to strengthen competitive advantage. The program covers research, design, development and testing of computer hardware and software, along with the project management and leadership skills necessary for increased responsibility in the engineering career field.

### PROGRAM OUTCOMES

- Design advanced computer architectures
- Use advanced techniques for life-cycle design of software systems
- Use modern information system security techniques
- Design advanced CMOS circuitry
- Effectively use project management techniques

### PREPARATORY REQUIREMENTS

The CTU Master of Science in Computer Engineering degree program is designed to provide technical depth in engineering topics that require a solid foundation in advanced mathematics (including calculus, differential equations and linear algebra), engineering and physics. Students who possess this background but need to refresh their technical or mathematical skills are highly encouraged to take MATH500. Students who have the technical or mathematical background but possess an undergraduate engineering degree other than electrical or computer engineering are highly encouraged to take EE500. Students from a non-engineering undergraduate background should consult with an Admission's Advisor Engineering Dean to design an undergraduate foundation engineering program in preparation for this degree.

# MSCE PROGRAM REQUIREMENTS

## Required Courses

All students in the MSCE program must complete all of the following courses:

| Course No. | Course Name                                   | Hrs. |
|------------|-----------------------------------------------|------|
| CE605      | Modern Computer Architecture                  | 4    |
| CE660      | Modern Computer Design                        | 4    |
| CS651      | Computer Systems Security Foundations         | 4    |
| CS671      | Software Systems Engineering Process          | 4    |
| CS6XX      | Graduate CS Elective                          | 4    |
| EE600      | Modern Solid State Devices                    | 4    |
| EE660      | Modern Electronic Design                      | 4    |
| EE6XX*     | Graduate EE Elective                          | 4    |
| INTD607    | Creative Leadership                           | 4    |
| PM600      | Project Management Processes in Organizations | 4    |
| PM610      | Project Planning, Execution and Closure       | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 44

\* Note: Students seeking dual degrees (MSEE and MSCE) are required to take one additional CS6XX course instead of the Graduate EE Elective in the MSCE program

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Computer Engineering (CE605, CE660, CS651, CS671)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF SCIENCE IN

## COMPUTER SCIENCE (MSCS)

This program centers on a set of core courses which are designed to provide the student with an understanding of operating systems and networking, as well as knowledge of computer system architecture and the software system engineering process. The concentration courses provide the foundation in the software engineering process, computer system security or database management. These concentrations give the student skills necessary for the organization and control of software and database development, management of computer system security, or using state-of-the-practice software engineering techniques to successfully deliver software systems requiring a multi-person effort.

### MSCS PROGRAM OUTCOMES

- Apply effective leadership strategies and skills
- Critically evaluate the issues that affect the development and modification of complex software systems
- Conduct professional, scholarly, applied research
- Acquire a breadth of knowledge and understanding of the field of computer science
- Use analytical and critical thinking skills for effective decision analysis and problem solving

### MSCS WITH A CONCENTRATION IN

#### SOFTWARE ENGINEERING (MSCS-SE)

According to the U.S. Bureau of Labor Statistics, the explosive impact of computers and information technology on our everyday lives has generated a need to design and develop new computer software systems and to incorporate new technologies in a rapidly growing range of applications. The tasks performed by software engineers evolve quickly, reflecting new areas of specialization or changes in technology, as well as the preferences and practices of employers. Software engineers apply the principles and techniques of computer science, engineering and mathematical analysis to the design, development, testing and evaluation of the software and systems that enable computers to perform their many applications.

### MSCS-SE PROGRAM OUTCOMES

- Perform at the project lead level concerning software systems
- Identify and apply the skills necessary for the organization and control of software development efforts
- Use state-of-the-practice software engineering techniques requiring a multi-person effort
- Explore the effective use of project management tools to provide for resource optimization to meet product delivery challenges
- Critically evaluate the software process improvement, quality assurance and risk management practices throughout the software development process



## PREPARATORY REQUIREMENTS

The CTU Master of Science in Computer Science degree program is designed to provide technical depth in computer science and in the three concentration areas—software engineering, security and database. In order to achieve this depth a solid foundation in mathematics, computer science, and the student's concentration area is required. In addition, the student must have an intermediate level of ability to program in a current object-oriented programming language such as C++ or Java, such as is provided by CS215 or IT215. Students who have the required background but need to refresh their mathematics skills are highly encouraged to take MATH501. Students who have the required background but need to refresh some of their computer science skills are highly encouraged to take CS500. Students who do not have the required background in mathematics, computer science, and the concentration or current object oriented programming skills should consult with an Admission's Advisor to design an undergraduate foundation program in preparation for this degree. A resume and entrance essay stating why the student wants to attend graduate school are required in order to successfully assess the student's preparation for entrance into the MSCS program.

## MSCS PROGRAM REQUIREMENTS

### Required Courses

**All students in the MSCS program must complete all of the following courses:**

| Course No. | Course Name                          | Hrs. |
|------------|--------------------------------------|------|
| CS630      | Modern Operating Systems             | 4    |
| CS635      | Computer Networking                  | 4    |
| CS640      | Software Project Management          | 4    |
| CS644      | Computer Systems Architecture        | 4    |
| CS671      | Software Systems Engineering Process | 4    |
| INTD607    | Creative Leadership                  | 4    |

## MSCS-SE PROGRAM REQUIREMENTS

### Required Courses

**All students in the MSCS-SE program must complete all of the following courses:**

| Course No.              | Course Name                       | Hrs. |
|-------------------------|-----------------------------------|------|
| CS641                   | Software Requirements Engineering | 4    |
| CS649                   | Software Design                   | 4    |
| CS672                   | Systems Engineering Methods       | 4    |
| CS675                   | System Integration and Test       | 4    |
| CS/IT/EE/CE/SE Elective |                                   | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:**

**44**

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Computer Systems Architecture (Core CS630, CS635, CS644)  
Software Systems Engineering (Core CS640, CS644, CS671, CS672)  
Information Systems Security (CSS CS651)  
Information Systems Security Architecture (CSS CS651, CS652, CS653, CS654)  
Information Systems Security Management (CSS CS651, CS654)  
Software Development (Core CS640, SE CS649, CS675)  
Database Design (DB CS660, CS681)  
Database Administration (DB CS651, CS660, CS682)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# MASTER OF SCIENCE IN COMPUTER SCIENCE (MSCS)

This program centers on a set of core courses which are designed to provide the student with an understanding of operating systems and networking, as well as knowledge of computer system architecture and the software system engineering process. The concentration courses provide the foundation in the software engineering process, computer system security or database management. These concentrations give the student skills necessary for the organization and control of software and database development, management of computer system security, or using state-of-the-practice software engineering techniques to successfully deliver software systems requiring a multi-person effort.

## MSCS WITH A CONCENTRATION IN COMPUTER SYSTEMS SECURITY (MSCS-CSS)

Protecting vital enterprise computer systems from unauthorized change, improper access, theft of information and monetary theft has always been important. It is becoming more so with the rapid growth of networking, the Internet and e-business. This concentration presents an overview of computer systems security, together with the specialized knowledge required to develop a security policy, formulate an implementation plan, design and implement security measures, and monitor and manage computer systems security.

### MSCS-CSS PROGRAM OUTCOMES

- Assess the need for, and make recommendations on the technical requirements necessary for the implementation of an effective security infrastructure
- Identify and describe the impact of implementing security components at the operating system and network level
- Develop effective enterprise level security policies, standards and procedures

## MSCS WITH A CONCENTRATION IN DATABASE SYSTEMS CONCENTRATION (MSCS-DB)

Successful organizations recognize the importance of high-performance database management systems. The effective operation of these data resources offers strategic advantages in the competitive marketplace. Specialized skills are required to design, configure, and manage these data warehouses. The Database Systems concentration provides the skills necessary to effectively analyze, design, implement and optimize complex data repositories. Students learn to transform data into powerful information systems for business.

### MSCS-DB PROGRAM OUTCOMES

- Identify, describe and analyze database models, database languages, and database management systems
- Use state-of-the-practice techniques to design and implement databases and data warehouses to support an organization's information needs
- Apply database administration skills to maintain optimized performance of database applications, databases, and data warehouses
- Analyze the implications and effects on design, implementation, use, and performance of distributing a database across multiple nodes
- Analyze risks, develop security policies, and apply effective techniques to maintain the integrity and security of an organization's databases

## PREPARATORY REQUIREMENTS

The CTU Master of Science in Computer Science degree program is designed to provide technical depth in computer science and in the three concentration areas—software engineering, security and database. In order to achieve this depth a solid foundation in mathematics, computer science, and the student's concentration area is required. In addition, the student must have an intermediate level of ability to program in a current object-oriented programming language such as C++ or Java, such as is provided by CS215 or IT215. Students who have the required background but need to refresh their mathematics skills are highly encouraged to take MATH501. Students who have the required background but need to refresh some of their computer science skills are highly encouraged to take CS500. Students who do not have the required background in mathematics, computer science, and the concentration or current object oriented programming skills should consult with an Admission's Advisor to design an undergraduate foundation program in preparation for this degree. A resume and entrance essay stating why the student wants to attend graduate school are required in order to successfully assess the student's preparation for entrance into the MSCS program.

## MSCS-CSS PROGRAM REQUIREMENTS

### Required Courses

**All students in the MSCS-CSS program must complete all of the following courses:**

| Course No.              | Course Name                           | Hrs. |
|-------------------------|---------------------------------------|------|
| CS651                   | Computer Systems Security Foundations | 4    |
| CS652                   | Operating Systems Security            | 4    |
| CS653                   | Network Security                      | 4    |
| CS654                   | Security Management                   | 4    |
| CS/IT/EE/CE/SE Elective |                                       | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 44**

## MSCS-DB PROGRAM REQUIREMENTS

### Required Courses

**All students in the MSCS-DB program must complete all of the following courses:**

| Course No.              | Course Name                           | Hrs. |
|-------------------------|---------------------------------------|------|
| CS651                   | Computer Systems Security Foundations | 4    |
| CS660                   | Database Systems                      | 4    |
| CS681                   | Database Design                       | 4    |
| CS682                   | Database Administration               | 4    |
| CS/IT/EE/CE/SE Elective |                                       | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 44**

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Computer Systems Architecture (Core CS630, CS635, CS644)  
Software Systems Engineering (Core CS640, CS644, CS671, CS672)  
Information Systems Security (CSS CS651)  
Information Systems Security Architecture (CSS CS651, CS652, CS653, CS654)  
Information Systems Security Management (CSS CS651, CS654)  
Software Development (Core CS640, SE CS649, CS675)  
Database Design (DB CS660, CS681)  
Database Administration (DB CS651, CS660, CS682)

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# MASTER OF SCIENCE IN

## ELECTRICAL ENGINEERING (MSEE)

Advanced communications equipment, defense-related electronics and leading edge technologies in integrated circuit (IC) and computer system design have created an environment in which electrical engineers have enviable career prospects. The MSEE degree program is designed to provide state-of-the-practice knowledge in modern systems design as it is applied to emerging and evolving electrical engineering technologies. In particular, there is an emphasis on in-depth study of digital communications, CMOS technology and computer architecture. At the same time, MSEE students can acquire the valuable skills in project management and leadership necessary for increased responsibility in the engineering career field.

### PROGRAM OUTCOMES

- Design advanced digital, spread-spectrum and space communications systems
- Design advanced CMOS circuitry
- Design advanced computer architectures
- Effectively use project management techniques

### PREPARATORY REQUIREMENTS

The CTU Master of Science in Electrical Engineering degree program is designed to provide technical depth in engineering topics that require a solid foundation in advanced mathematics (including calculus, differential equations and linear algebra), engineering and physics. Students who possess this background but need to refresh their technical or mathematical skills are highly encouraged to take MATH500. Students who have the technical or mathematical background but possess an undergraduate engineering degree other than electrical or computer engineering are highly encouraged to take EE500. Students from a non-engineering undergraduate background should consult with an Admission's Advisor/Engineering Dean to design an undergraduate foundation engineering program in preparation for this degree.

# MSEE PROGRAM REQUIREMENTS

## Required Courses

All students in the MSEE program must complete all of the following courses:

| Course No. | Course Name                                   | Hrs. |
|------------|-----------------------------------------------|------|
| CE605      | Modern Computer Architecture                  | 4    |
| CE660      | Modern Computer Design                        | 4    |
| EE600      | Modern Solid State Devices                    | 4    |
| EE605      | Digital Signal Processing                     | 4    |
| EE625      | Spread-Spectrum Communications                | 4    |
| EE645      | Digital Communications                        | 4    |
| EE650      | Space Communications                          | 4    |
| EE660      | Modern Electronic Design                      | 4    |
| INTD607    | Creative Leadership                           | 4    |
| PM600      | Project Management Processes in Organizations | 4    |
| PM610      | Project Planning, Execution and Closure       | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 44

Note: Students seeking dual degrees (MSEE and MSCE) are required to take one additional CS6XX course instead of the Graduate EE Elective in the MSCE program.

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Digital Communications (EE605, EE625, EE645, EE650)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

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# MASTER OF SCIENCE IN

## SYSTEMS ENGINEERING (MSSE)

In the design of today's complex products and systems, too much is at stake not to approach product and system development in a systematic manner. Commercial and government contractor companies simply cannot afford design processes that do not provide for detailed analysis of the requirements, requirements traceability, detailed documentation, modern design synthesis techniques and a thorough validation that the design meets specifications. In addition, designers and managers must observe accepted quality assurance standards and employ appropriate project management techniques to ensure that budget, schedule and quality requirements are met. All of these skills may eventually be obtained by years of experience on the job, but today's companies cannot afford to wait! The answer is systems engineering education. This program has been designed by industry to meet industry needs for systems engineering (SE) skills.

### PROGRAM OUTCOMES

- Plan, manage and participate in the complete SE life-cycle process and sub-processes from commercial industry and government contractor perspectives
- Select and apply modern SE tools, including operations research, system modeling/simulation/test methods, synthesis techniques, process control and system integration tools
- Define the role and scope of SE and its interface with the related areas of project management, operations, logistics, performance, test, manufacturing, training and support, reliability/maintainability, quality assurance and disposal
- Select and apply appropriate industry/government standards, models, metrics and documentation standards incorporated in SE practice
- Apply oral and written communications skills essential to the SE process

### PREPARATORY REQUIREMENTS

The CTU Master of Science in Systems Engineering degree program is designed to provide technical depth in engineering topics that require a solid foundation in advanced mathematics (including calculus, differential equations, Laplace and Fourier transforms, probability, and linear algebra), engineering and physics. Students who possess this background but need to refresh their mathematics and/or systems skills are highly encouraged to take MATH500 and SE500. Electives in CS may require additional background in undergraduate computer science topics. CS500, Foundations in Computer Science, and knowledge of a current programming language may be required to ensure an adequate foundation. These courses may be skipped with sufficient undergraduate preparation or life experience. Electives in EE or CE may require a background in undergraduate electrical or computer engineering. Students from a non-engineering undergraduate background should consult with an Admission's Advisor/Dean of Engineering to design an undergraduate foundation engineering program in preparation for this degree.

# MSSE PROGRAM REQUIREMENTS

## Required Courses

All students in the MSSE program must complete all of the following courses:

| Course No.                                 | Course Name                                 | Hrs.      |
|--------------------------------------------|---------------------------------------------|-----------|
| SCM620                                     | Design and Production Considerations        | 4         |
| MGMT600                                    | Applied Managerial Decision-Making          | 4         |
| PM610                                      | Project Planning, Execution and Closure     | 4         |
| PM620                                      | Schedule and Cost Control Techniques        | 4         |
| SE600                                      | Systems Engineering I                       | 4         |
| SE610                                      | Systems Engineering II                      | 4         |
| SE620                                      | System Dynamics, Modeling and Simulation    | 4         |
| SE630                                      | Systems Acquisition Processes and Standards | 4         |
| Selected Elective Courses                  |                                             |           |
| Choose three CS/CE/IT/EE 600 level courses |                                             | 12        |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                             | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Systems Engineering (SE600, SE610)

Advanced Systems Engineering (SE620, SE630)

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# BACHELOR OF SCIENCE IN COMPUTER ENGINEERING (BSCE)

The Bachelor of Science in Computer Engineering degree program is designed to prepare graduates to enter one of the newest and most exciting engineering fields.

Computer engineers are not only involved in the design of the computer hardware essential to today's world, they may be called on to develop software, program microprocessors, or design wired or wireless networks. The BSCE program at CTU is accredited by the Accreditation Board for Engineering and Technology (ABET).

The objectives of the BSCE program are: 1) to develop a student's discipline and expertise to a sufficient degree to be a productive, entry-level computer engineer within industry; and 2) to prepare a student academically for entry into the Master of Science in Computer Engineering (MSCE) program.

## PROGRAM OUTCOMES

- Apply the knowledge of mathematics, science and engineering to identify, formulate and solve engineering problems
- Design and conduct experiments, as well as analyze and interpret data
- Design a system, component or process to meet desired needs within the context of hardware systems, software systems, computer networks and IC-based digital electronic circuits (chips)
- Assess the impact of engineering solutions in a global and societal context
- Use the techniques, skills and modern engineering tools necessary for current engineering practice

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                       | Hrs. |
|------------|-----------------------------------|------|
| ENGL080    | English Composition Preparation   | 4    |
| IT080      | Introduction to Computing         | 4    |
| CS104      | Problem Solving Concepts with C++ | 4    |
| MATH060    | Pre-Algebra                       | 4    |
| MATH080    | Elementary Algebra                | 4    |
| MATH103    | College Algebra                   | 4    |
| MATH104    | Trigonometry                      | 4    |
| MATH115    | Pre-Calculus                      | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSCE PROGRAM REQUIREMENTS

## Required Courses

All students in the BSCE program must complete all of the following courses:

| Course No.                        | Course Name                        |
|-----------------------------------|------------------------------------|
| <b>GENERAL EDUCATION (66 hrs)</b> |                                    |
| CS115                             | Programming with C++               |
| EBUS208                           | Web Site/Portfolio Development     |
| ENGL111                           | English Composition I              |
| ENGL112                           | English Composition II             |
| ENGL200                           | Professional Writing               |
| ENGL210                           | Professional Speaking              |
| PHIL310                           | Ethics                             |
| INTD121                           | Introduction to the Design Process |
| CHE105                            | Introduction to Chemistry          |
| MATH201                           | Calculus I                         |
| MATH202                           | Calculus II                        |
| ECON201                           | Macroeconomics                     |
| HIST150                           | World History                      |
| or                                |                                    |
| HIST210                           | World History and Culture 1        |
| PM210                             | Introduction to Project Management |
| PSYC100                           | Introduction to Psychology         |
| LITR220                           | Values in World Literature         |
| or                                |                                    |
| HUMN200                           | Art and Music Appreciation         |

## COMPUTING / INFORMATION TECHNOLOGY (8 hrs)

|       |                      |
|-------|----------------------|
| CS115 | Programming with C++ |
| CS146 | Introduction to UNIX |

## MATHEMATICS / SCIENCE (33 hrs)

|         |                                    |
|---------|------------------------------------|
| MATH200 | Discrete Mathematics               |
| MATH302 | Differential Equations             |
| MATH304 | Linear Algebra                     |
| MATH366 | Probability and Statistics         |
| PHY211  | Physics I – Mechanics              |
| PHY212  | Physics II – Heat, Light and Sound |
| PHY350  | Solid State Physics                |

## GENERAL ENGINEERING (4 hrs)

|       |                             |
|-------|-----------------------------|
| EE110 | Introduction to Engineering |
|-------|-----------------------------|

## CIRCUIT ANALYSIS (15 hrs)

|       |                           |
|-------|---------------------------|
| EE221 | Circuit Analysis I        |
| EE331 | Circuit Analysis II       |
| EE341 | Advanced Circuit Analysis |

Hrs.

## ELECTRONIC SYSTEMS ANALYSIS AND DESIGN (10 hrs)

|       |                     |
|-------|---------------------|
| EE325 | CMOS Design         |
| EE375 | Electronic Design I |

## COMPUTER SOFTWARE DEVELOPMENT (20 hrs)

|       |                              |
|-------|------------------------------|
| CS215 | Intermediate C++ Programming |
| CS230 | Data Structures              |
| CS340 | Operating Systems            |
| CS366 | Software Engineering Methods |
| CS376 | Object-Oriented Methods      |

## PRODUCT DESIGN (8 hrs)

|       |                   |
|-------|-------------------|
| EE490 | Product Design I  |
| EE491 | Product Design II |

## TOTAL PROGRAM QUARTER CREDIT HOURS:

191

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Electronic System Design (Advanced) (EE472, EE490, EE491, PM210)  
C++ Programming (CS115, CS215, CS230)  
Object-Oriented Methods (CS376)  
Professional Communication (ENGL200, ENGL210)  
Software Engineering Process (CS366, CS376)

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**THE COLORADO SPRINGS CAMPUS IS AFFILIATED WITH:**  
The Accreditation Board for Engineering and Technology

CTU has met the requirements for affiliation with the Accreditation Board for Engineering and Technology.  
[www.abet.org](http://www.abet.org)



**Colorado Technical University™**

# BACHELOR OF SCIENCE

## COMPUTER SCIENCE (BSCS)

According to the Bureau of Labor Statistics, computer science and software engineering are among the fastest growing career fields in the United States. Technology is pervasive and will continue to touch our lives on a daily basis. This program contains a set of core courses which are designed to provide an understanding of the varied aspects of technology, operating systems and networking, as well as knowledge of computer system architecture and the software system engineering process.

### PROGRAM OUTCOMES

- Program in at least one high level programming language using programming fundamentals, abstraction modeling for problem solving, algorithms, data structures, and complexity
- Examine computer architecture, operating systems, and network-centric computing, including Internet technology
- Implement the goals and techniques of software engineering
- Demonstrate effective use of technical and professional communication
- Extend the breadth of computer science knowledge through the completion of various technical options, which include proficiency in another high level language and database systems

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

## BSCS PROGRAM REQUIREMENTS

### Required Courses

This program consists of two parts; one is the set of courses required for all students enrolled in the program. The other part consists of sets of courses from which students may select based on their interests and courses available on their campus.

| Course No.                        | Course Name                                     | Hrs. |
|-----------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b> |                                                 |      |
| CS250                             | Fundamentals of Database Systems                | 4    |
| IT254                             | Spreadsheet Applications                        | 4    |
| ENGL111                           | English Composition I                           | 4    |
| ENGL112                           | English Composition II                          | 4    |
| ENGL200                           | Professional Writing                            | 4    |
| ENGL210                           | Professional Speaking                           | 4    |
| PHIL310                           | Ethics                                          | 4    |
| INTD111                           | Creating Academic and Professional Success      | 4    |
| SCI120                            | The Impact of Science and Technology on Society | 4    |
| MATH103                           | College Algebra                                 | 4    |
| MATH306                           | Computer Assisted Statistics                    | 4    |
| BADM100                           | Introduction to Business                        | 4    |
| ECON201                           | Macroeconomics                                  | 4    |
| LITR220                           | Values in World Literature                      | 4    |
| or                                |                                                 |      |
| HUMN200                           | Art and Music Appreciation                      | 4    |
| HIST150                           | World History Since 1500                        | 4    |
| or                                |                                                 |      |
| HIST210                           | World History and Culture I                     | 4    |
| PSYC100                           | Introduction to Psychology                      | 4    |
| or                                |                                                 |      |
| SOCL101                           | Introduction to Sociology                       | 4    |
| <b>MATHEMATICS (20 hrs)</b>       |                                                 |      |
| MATH104                           | Trigonometry                                    | 4    |
| MATH115                           | Pre-Calculus                                    | 4    |
| MATH200                           | Discrete Mathematics                            | 4    |
| MATH201                           | Calculus I                                      | 4    |
| MATH304                           | Linear Algebra                                  | 4    |
| <b>PROJECT MANAGEMENT (4 hrs)</b> |                                                 |      |
| PM210                             | Introduction to Project Management              | 4    |



## COMPUTING / INFORMATION TECHNOLOGY (36 hrs)

|         |                                      |  |
|---------|--------------------------------------|--|
| CE242   | Computer Architecture                |  |
| CS104   | Problem Solving Concepts with C++    |  |
| CS115   | Programming with C++                 |  |
| CS146   | Introduction to UNIX                 |  |
| CS215   | Intermediate C++ Programming         |  |
| CS230   | Data Structures                      |  |
| EBUS208 | Web Site/ Portfolio Development      |  |
| IT200   | Introduction to Networking           |  |
| IT300   | Computer Networks and Communications |  |

## SOFTWARE ENGINEERING (36 hrs)

|              |                                   |  |
|--------------|-----------------------------------|--|
| CS265        | Algorithms                        |  |
| CS340        | Operating Systems                 |  |
| CS366        | Software Engineering Methods      |  |
| or           |                                   |  |
| SWE410       | Software Processes                |  |
| CS376        | Object-Oriented Methods           |  |
| CS381        | Software Requirements Engineering |  |
| CS382        | Software Design                   |  |
| CS383        | Software Testing                  |  |
| CS481/SWE481 | Software Engineering Capstone I   |  |
| CS482/SWE482 | Software Engineering Capstone II  |  |

### Selected Elective Courses

All students in the BSCS program must complete the specified number of hours by selecting courses in each of the following categories:

### PROGRAMMING BREADTH ELECTIVE (4 hrs) Select one from:

|       |                                                 |  |
|-------|-------------------------------------------------|--|
| CS245 | Programming Languages: Java for C++ Programmers |  |
| CS246 | Structured Query Language                       |  |

### ELECTIVES (16 hrs)

Choose 16 credits from the Computer Science Elective list

### TOTAL PROGRAM QUARTER CREDIT HOURS:

### COMPUTER SCIENCE ELECTIVES

|         |                                                 |   |
|---------|-------------------------------------------------|---|
| CS320   | Computer Graphics                               | 4 |
| CS325   | Advanced C++ Programming                        | 4 |
| CS345   | UNIX Systems Programming                        | 4 |
| CS346   | User Interface Design                           | 4 |
| CS352   | Advanced Database Systems                       | 4 |
| CS360   | Windows® Programming                            | 4 |
| CS495   | Advanced Research and Study in Computer Science | 4 |
| CS499   | Special Topics in Computer Science              | 4 |
| CSS150  | Introduction to Computer Security               | 4 |
| EBUS218 | Multimedia for the Web                          | 4 |
| EBUS228 | Advanced Web Publishing                         | 4 |
| EBUS420 | Web-Based Database Applications                 | 4 |

|         |                                                                   |   |
|---------|-------------------------------------------------------------------|---|
| IT315   | Advanced Java                                                     | 4 |
| IT340   | Client/Server System and Network Administration                   | 4 |
| IT400   | Information Technology Architectures                              | 4 |
| IT410   | Web Page-Based Database Application Programming with Visual Basic | 4 |
| MATH302 | Differential Equations                                            | 5 |
| SWE311  | The Software Engineering Profession                               | 4 |
| SWE345  | Survey of Programming Languages                                   | 4 |
| SWE400  | Software Construction                                             | 4 |
| SWE420  | Distributed Systems and Concurrency                               | 4 |
| SWE440  | Software Project Management                                       | 4 |
| SWE441  | Human Elements in Projects and Organizations                      | 4 |

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

|   |                                                    |
|---|----------------------------------------------------|
| 4 | Programmer Analyst (CS265, CS340, CS366, CS383)    |
| 4 | C++ Programming (CS115, CS215, CS230)              |
| 4 | C++ Programming (Advanced) (CS265, CS325)          |
| 4 | Client Java Programming (IT115, IT215)             |
| 4 | Computer Network Telecommunications (IT200, IT300) |
| 4 | Computer Systems Architecture (CE242, IT400)       |
| 4 | Object-Oriented Methods (CS376)                    |
| 4 | Professional Communication (ENGL200, ENGL210)      |
|   | Server Java Programming (IT315)                    |
|   | Software Engineering Application (CS481, CS482)    |
|   | Software Engineering Process (CS366, CS376)        |
|   | UNIX Network Administration (IT200, IT340)         |
|   | UNIX Programming (CS146, CS345)                    |

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# BACHELOR OF SCIENCE IN

## COMPUTER SYSTEMS SECURITY (BSCSS)

A key requirement in today's technical environment is to protect organizational systems from theft of data, unauthorized change or access, and other acts of crime. Today's technical industry is growing at a fast pace, and it is essential that industries keep abreast of the latest changes and be prepared to combat the potential for computer crime brought about by new advances in technology. The Bachelor of Science in Computer Systems Security program provides students with a comprehensive knowledge and skills in various aspects of System security as it relates to computer systems. Students will study the essentials of computer systems security including network security; Web, Internet and e-Commerce security; and wireless security. This program will expose students to essential skills, techniques, and knowledge necessary to deploy and manage security systems and configure security solutions.

### PROGRAM OUTCOMES

- Explain network communication protocols and the supporting network hardware
- Demonstrate proficiency in a current programming language
- Explain the importance of security in an organization as well as security architecture for common computer platforms and applications
- Describe the relationship between criminal law and computer and cyber crime and concepts for collecting, analyzing, recovering and preserving forensic evidence
- Identify computer systems security problems and configure security solutions to solve
- Explain current regulations, statutes, treaties and laws of other countries regarding legal aspects of computer systems security
- Demonstrate an understanding of analysis and evaluation of security risks, monitoring and detection techniques, contingency planning and disaster recovery, formulation of security policies, and preparation of implementation plans for those policies
- Identify and apply the fundamental knowledge needed to secure computer systems using available hardware and software

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSCSS PROGRAM REQUIREMENTS

## Required Courses

All students in the BSCSS program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (64 hrs)

|         |                                                 |   |
|---------|-------------------------------------------------|---|
| CS250   | Fundamentals of Database Systems                | 4 |
| IT254   | Spreadsheet Applications                        | 4 |
| ENGL111 | English Composition I                           | 4 |
| ENGL112 | English Composition II                          | 4 |
| ENGL200 | Professional Writing                            | 4 |
| ENGL210 | Professional Speaking                           | 4 |
| HUMN200 | Art and Music Appreciation                      | 4 |
| PHIL310 | Ethics                                          | 4 |
| HIST150 | World History Since 1500                        | 4 |
| or      |                                                 |   |
| HIST210 | World History and Culture 1                     | 4 |
| INTD111 | Creating Academic and Professional Success      | 4 |
| SCI120  | The Impact of Science and Technology on Society | 4 |
| MATH103 | College Algebra                                 | 4 |
| MATH306 | Computer Assisted Statistics                    | 4 |
| BADM100 | Introduction to Business                        | 4 |
| ECON201 | Macroeconomics                                  | 4 |
| PSYC100 | Introduction to Psychology                      | 4 |

#### MATHEMATICS (20 hrs)

|         |                      |   |
|---------|----------------------|---|
| MATH104 | Trigonometry         | 4 |
| MATH115 | Pre-Calculus         | 4 |
| MATH200 | Discrete Mathematics | 4 |
| MATH201 | Calculus I           | 4 |
| MATH304 | Linear Algebra       | 4 |

#### PROJECT MANAGEMENT (4 hrs)

|       |                                    |   |
|-------|------------------------------------|---|
| PM210 | Introduction to Project Management | 4 |
|-------|------------------------------------|---|

#### CRIMINAL JUSTICE (8 hrs)

|         |                                  |   |
|---------|----------------------------------|---|
| CJUS141 | Introduction to Criminal Justice | 4 |
| CJUS365 | Criminal Law                     | 4 |

#### COMPUTING / INFORMATION TECHNOLOGY (36 hrs)

|       |                                   |   |
|-------|-----------------------------------|---|
| CE242 | Computer Architecture             | 4 |
| CS104 | Problem Solving Concepts with C++ | 4 |
| CS115 | Programming with C++              | 4 |
| CS146 | Introduction to UNIX              | 4 |
| CS215 | Intermediate C++ Programming      | 4 |

|         |                                |   |
|---------|--------------------------------|---|
| CS230   | Data Structures                | 4 |
| CS265   | Algorithms                     | 4 |
| CS340   | Operating Systems              | 4 |
| EBUS208 | Web Site/Portfolio Development | 4 |

#### COMPUTER SECURITY (40 hrs)

|        |                                                    |   |
|--------|----------------------------------------------------|---|
| CSS150 | Introduction to Computer Security                  | 4 |
| CSS200 | Principles of Network Security                     | 4 |
| CSS250 | Security Risk Management                           | 4 |
| CSS300 | Vulnerability Assessment and Management            | 4 |
| CSS320 | Process Engineering                                | 4 |
| CSS350 | Computer Forensics I                               | 4 |
| CSS351 | Computer Forensics II                              | 4 |
| CSS380 | Business Continuity and Disaster Recovery Planning | 4 |
| CSS440 | Security Policy and Leadership                     | 4 |
| CSS450 | Security Capstone                                  | 4 |

#### COMPUTER NETWORKING (8 hrs)

|       |                                     |   |
|-------|-------------------------------------|---|
| IT200 | Introduction to Networking          | 4 |
| IT300 | Computer Networks and Communication | 4 |

#### TOTAL PROGRAM QUARTER CREDIT HOURS:

180

#### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

C++ Programming (CS115, CS215, CS230)  
CompTIA Security+™ Fundamentals (CSS150, CSS200)  
Computer Forensics (CSS350)  
Computer Forensics (Advanced) (CSS351)  
Computer Network Telecommunications (IT200, IT300)  
Computer Security Methods (CSS300, CSS320, CSS380)  
Disaster Planning and Recovery (CSS380)  
Professional Communication (ENGL200, ENGL210)  
Security Risk Management (CSS200, CSS250)  
Security System Management (CSS300, CSS440)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Colorado Technical University™**

# BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (BSEE)

The Bachelor of Science in Electrical Engineering degree program is designed to prepare graduates to enter what is arguably the most diverse and useful engineering discipline in our world today. From global positioning technology that can track the location of a vehicle to sub-micron, integrated circuit (IC) chips that power today's wireless technologies, electrical engineers are responsible for some of the world's most exciting technological breakthroughs. The BSEE program at CTU is accredited by the Accreditation Board for Engineering and Technology (ABET).

The objectives of the BSEE program are: 1) to develop a student's discipline and expertise to a sufficient degree to be a productive, entry-level electrical engineer within industry; and 2) to prepare a student academically for entry into the Master of Science in Electrical Engineering (MSEE) program.

## PROGRAM OUTCOMES

- Apply the knowledge of mathematics, science and engineering to identify, formulate and solve engineering problems
- Design and conduct experiments, as well as analyze and interpret data
- Design a system, component or process to meet desired needs within the context of digital systems, electronics systems and communication systems
- Assess the impact of engineering solutions in a global and societal context
- Use the techniques, skills and modern engineering tools necessary for current engineering practice

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                       | Hrs. |
|------------|-----------------------------------|------|
| ENGL080    | English Composition Preparation   | 4    |
| IT080      | Introduction to Computing         | 4    |
| CS104      | Problem Solving Concepts with C++ | 4    |
| MATH060    | Pre-Algebra                       | 4    |
| MATH080    | Elementary Algebra                | 4    |
| MATH103    | College Algebra                   | 4    |
| MATH104    | Trigonometry                      | 4    |
| MATH115    | Pre-Calculus                      | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSEE PROGRAM REQUIREMENTS

## Required Courses

All students in the BSEE program must complete all of the following courses:

| Course No.                                          | Course Name                        | Hrs. |
|-----------------------------------------------------|------------------------------------|------|
| <b>GENERAL EDUCATION (66 hrs)</b>                   |                                    |      |
| CS115                                               | Programming with C++               | 4    |
| EBUS208                                             | Web Site/Portfolio Development     | 4    |
| ENGL111                                             | English Composition I              | 4    |
| ENGL112                                             | English Composition II             | 4    |
| ENGL200                                             | Professional Writing               | 4    |
| ENGL210                                             | Professional Speaking              | 4    |
| PHIL310                                             | Ethics                             | 4    |
| INTD121                                             | Introduction to the Design Process | 4    |
| CHE105                                              | Introduction to Chemistry          | 5    |
| MATH201                                             | Calculus I                         | 4    |
| MATH202                                             | Calculus II                        | 5    |
| ECON201                                             | Macroeconomics                     | 4    |
| HIST150                                             | World History                      | 4    |
| or                                                  |                                    |      |
| HIST210                                             | World History and Culture 1        | 4    |
| PM210                                               | Introduction to Project Management | 4    |
| PSYC100                                             | Introduction to Psychology         | 4    |
| LITR220                                             | Values in World Literature         | 4    |
| or                                                  |                                    |      |
| HUMN200                                             | Art and Music Appreciation         | 4    |
| <b>MATHEMATICS AND SCIENCE (39 hrs)</b>             |                                    |      |
| MATH302                                             | Differential Equations             | 5    |
| MATH304                                             | Linear Algebra                     | 4    |
| MATH366                                             | Probability and Statistics         | 5    |
| EE335                                               | Advanced Engineering Mathematics   | 5    |
| PHY211                                              | Physics I – Mechanics              | 5    |
| PHY212                                              | Physics II – Heat, Light and Sound | 5    |
| PHY340                                              | Electromagnetics                   | 5    |
| PHY350                                              | Solid State Physics                | 5    |
| <b>GENERAL ENGINEERING (4 hrs)</b>                  |                                    |      |
| EE110                                               | Introduction to Engineering        | 4    |
| <b>CIRCUIT ANALYSIS (15 hrs)</b>                    |                                    |      |
| EE221                                               | Circuit Analysis I                 | 5    |
| EE331                                               | Circuit Analysis II                | 5    |
| EE341                                               | Advanced Circuit Analysis          | 5    |
| <b>DIGITAL SYSTEMS ANALYSIS AND DESIGN (19 hrs)</b> |                                    |      |
| CE242                                               | Computer Architecture              | 4    |
| EE252                                               | Digital Design I                   | 5    |

|                                                        |                            |   |
|--------------------------------------------------------|----------------------------|---|
| EE312                                                  | Embedded Microcontrollers  | 5 |
| EE352                                                  | Digital Design II          | 5 |
| <b>ELECTRONIC SYSTEMS ANALYSIS AND DESIGN (20 hrs)</b> |                            |   |
| EE325                                                  | CMOS Design                | 5 |
| EE375                                                  | Electronic Design I        | 5 |
| EE395                                                  | Electronic Design II       | 5 |
| EE415                                                  | Advanced Electronic Design | 5 |

|                                                            |                           |   |
|------------------------------------------------------------|---------------------------|---|
| <b>COMMUNICATIONS SYSTEMS ANALYSIS AND DESIGN (12 hrs)</b> |                           |   |
| EE343                                                      | Signals and Systems       | 4 |
| EE443                                                      | Communications Systems I  | 4 |
| EE463                                                      | Communications Systems II | 4 |

|                               |                   |   |
|-------------------------------|-------------------|---|
| <b>PRODUCT DESIGN (8 hrs)</b> |                   |   |
| EE490                         | Product Design I  | 4 |
| EE491                         | Product Design II | 4 |

|                                                     |                                       |   |
|-----------------------------------------------------|---------------------------------------|---|
| <b>SYSTEM DESIGN ELECTIVES (select two - 8 hrs)</b> |                                       |   |
| EE472                                               | Advanced Digital System Design        | 4 |
| EE473                                               | Advanced Communications System Design | 4 |
| EE474                                               | Advanced Control System Design        | 4 |
| EE475                                               | Advanced Electronic System Design     | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 191

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Electronic System Design (Advanced) (EE47X, EE490, EE491, PM210)  
Professional Communication (ENGL200, ENGL210)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**THE COLORADO SPRINGS CAMPUS IS AFFILIATED WITH:**  
The Accreditation Board for Engineering and Technology

CTU has met the requirements for affiliation with the Accreditation Board for Engineering and Technology.  
[www.abet.org](http://www.abet.org)



# BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING (BSSE)

The Bachelor of Science in Software Engineering degree program is designed to prepare graduates to enter the expanding domain of software as an engineering discipline. As software systems grow in size and complexity, more disciplined, rigorous approaches are required. This program engages students in the entire software development lifecycle effort including requirements, architecture, detailed design, implementation, risk analysis, testing, deployment and finally software evolution.

The objectives of the BSSE program are designed to prepare the graduate for entry level positions as software engineers, software architects, designers, etc. Students will also have entry level skills in software project management, cost estimation, risk analysis, scheduling and planning. A graduate of this program is prepared to enter a Master's program in Software Engineering or to begin a challenging career in the field.

## PROGRAM OUTCOMES

- Investigate and apply the theories, processes, models, and techniques that provide a basis for problem identification and analysis, software design, development, implementation, verification, and documentation
- Explore and synthesize ways to apply new technology, models and techniques to develop the software engineering and professional skills necessary to begin practice as a software engineer, including the need for continuing professional development
- Design appropriate solutions using software engineering methods and approaches that integrate ethical, social, legal, security and economic concerns
- Analyze conflicting project objectives and employ the principles of negotiation, effective work habits, leadership, and good communication with stakeholders within the limitations of cost, time, knowledge and resources in a typical software development environment
- Design, develop and deliver quality software artifacts using individual and team software engineering skills

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                       | Hrs. |
|------------|-----------------------------------|------|
| ENGL080    | English Composition               | 4    |
| IT080      | Introduction to Computing         | 4    |
| CS104      | Problem Solving Concepts with C++ | 4    |
| MATH060    | Pre-Algebra                       | 4    |
| MATH080    | Elementary Algebra                | 4    |
| MATH103    | College Algebra                   | 4    |
| MATH104    | Trigonometry                      | 4    |
| MATH115    | Pre-Calculus                      | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

## BSSE PROGRAM REQUIREMENTS

### Required Courses

**All students in the BSSE program must complete all of the following courses:**

| Course No.                        | Course Name                                | Hrs. |
|-----------------------------------|--------------------------------------------|------|
| <b>GENERAL EDUCATION (62 hrs)</b> |                                            |      |
| CS250                             | Fundamentals of Database Systems           | 4    |
| ENGL111                           | English Composition I                      | 4    |
| ENGL112                           | English Composition II                     | 4    |
| ENGL200                           | Professional Writing                       | 4    |
| ENGL210                           | Professional Speaking                      | 4    |
| PHIL310                           | Ethics                                     | 4    |
| HUMN200                           | Art and Music Appreciation                 | 4    |
| or                                |                                            |      |
| LITR220                           | World Values in Literature                 | 4    |
| HIST150                           | World History Since 1500                   | 4    |
| or                                |                                            |      |
| HIST210                           | World History and Culture I                | 4    |
| INTD111                           | Creating Academic and Professional Success | 4    |
| PHY211                            | Physics I - Mechanics                      | 5    |
| MATH201                           | Calculus I                                 | 4    |
| MATH366                           | Probability and Statistics                 | 5    |
| ECON202                           | Microeconomics                             | 4    |
| SWE311                            | The Software Engineering Profession        | 4    |

|                                                                |                                         |            |
|----------------------------------------------------------------|-----------------------------------------|------------|
| SOCL101                                                        | Introduction to Sociology               |            |
| or                                                             |                                         |            |
| PSYC100                                                        | Introduction to Psychology              |            |
| <b>MATHEMATICS (25 hrs)</b>                                    |                                         |            |
| MATH200                                                        | Discrete Mathematics                    |            |
| MATH202                                                        | Calculus II                             |            |
| MATH300                                                        | Advanced Discrete Mathematics           |            |
| MATH304                                                        | Linear Algebra                          |            |
| MATH465                                                        | Formal Methods for Software Engineering |            |
| CS265                                                          | Algorithms                              |            |
| <b>SCIENCE (9 hrs)</b>                                         |                                         |            |
| PHY212                                                         | Physics II – Heat, Light and Sound      |            |
| Math/Science Elective                                          |                                         |            |
| <b>COMPUTING / INFORMATION TECHNOLOGY (40 hrs)</b>             |                                         |            |
| CE242                                                          | Computer Architecture                   |            |
| CS115                                                          | Programming with C++                    |            |
| CS215                                                          | Intermediate C++ Programming            |            |
| CS230                                                          | Data Structures                         |            |
| CS340                                                          | Operating Systems                       |            |
| CS346                                                          | User Interface Design                   |            |
| CSS150                                                         | Introduction to Computer Security       |            |
| EBUS208                                                        | Web Site/Portfolio Development          |            |
| IT200                                                          | Introduction to Networking              |            |
| SWE345                                                         | Survey of Programming Languages         |            |
| <b>SOFTWARE ENGINEERING (40 hrs)</b>                           |                                         |            |
| CS376                                                          | Object Oriented Methods                 |            |
| CS381                                                          | Software Requirements Engineering       |            |
| CS382                                                          | Software Design                         |            |
| CS383                                                          | Software Testing                        |            |
| SWE400                                                         | Software Construction                   |            |
| SWE410                                                         | Software Processes                      |            |
| SWE420                                                         | Distributed Systems and Concurrency     |            |
| SWE440                                                         | Software Project Management             |            |
| SWE481                                                         | Software Engineering Capstone I         |            |
| SWE482                                                         | Software Engineering Capstone II        |            |
| <b>TECHNICAL ELECTIVES (12 hrs)</b>                            |                                         |            |
| Choose 12 credits from the Software Engineering Electives list |                                         |            |
| Note: This must be a set of 3 related courses from the list    |                                         |            |
| <b>OPEN ELECTIVE (4 hrs)</b>                                   |                                         |            |
| Select any 4 credit hour course                                |                                         |            |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS</b>                      |                                         | <b>192</b> |
| Technical Electives: (Select one group of 3 courses)           |                                         |            |
| <b>SECURITY ELECTIVES:</b>                                     |                                         |            |
| CSS300                                                         | Vulnerability Assessment and Management | 4          |

|          |                                                                                                                                                                                                                                                                                                                                                                              |                                                    |   |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---|
| 4        | CSS320                                                                                                                                                                                                                                                                                                                                                                       | Process Engineering                                | 4 |
| 4        | CSS380                                                                                                                                                                                                                                                                                                                                                                       | Business Continuity and Disaster Recovery Planning | 4 |
| 4        | <b>NETWORKING ELECTIVES:</b>                                                                                                                                                                                                                                                                                                                                                 |                                                    |   |
| 4        | CSS200                                                                                                                                                                                                                                                                                                                                                                       | Principles of Network Security                     | 4 |
| 4        | IT300                                                                                                                                                                                                                                                                                                                                                                        | Computer Networks and Communications               | 4 |
| 5        | IT340                                                                                                                                                                                                                                                                                                                                                                        | Client/Server System and Network Administration    | 4 |
| 4        | <b>ELECTRICAL ENGINEERING ELECTIVES:</b>                                                                                                                                                                                                                                                                                                                                     |                                                    |   |
| 4        | <i>Note: This sequence requires that MATH302 be selected for the Math/Science elective.</i>                                                                                                                                                                                                                                                                                  |                                                    |   |
| 4        | EE221                                                                                                                                                                                                                                                                                                                                                                        | Circuit Analysis I                                 | 4 |
| 4        | EE331                                                                                                                                                                                                                                                                                                                                                                        | Circuit Analysis II                                | 4 |
| 4        | EE375                                                                                                                                                                                                                                                                                                                                                                        | Electronic Design I                                | 4 |
| 5        | <b>COMPUTER ENGINEERING ELECTIVES:</b>                                                                                                                                                                                                                                                                                                                                       |                                                    |   |
| 4 (or 5) | EE252                                                                                                                                                                                                                                                                                                                                                                        | Digital Design I                                   | 4 |
| 4        | EE312                                                                                                                                                                                                                                                                                                                                                                        | Embedded Microcontrollers                          | 4 |
| 4        | CE412                                                                                                                                                                                                                                                                                                                                                                        | Advanced Computer Architecture                     | 4 |
| 4        | <b>GAMING ELECTIVES:</b>                                                                                                                                                                                                                                                                                                                                                     |                                                    |   |
| 4        | SWE323                                                                                                                                                                                                                                                                                                                                                                       | Introduction to Game Design and Development        | 4 |
| 4        | SWE423                                                                                                                                                                                                                                                                                                                                                                       | Designing for Games                                | 4 |
| 4        | SWE443                                                                                                                                                                                                                                                                                                                                                                       | Game Programming and Production                    | 4 |
| 4        | <b>MATH / SCIENCE ELECTIVES:</b>                                                                                                                                                                                                                                                                                                                                             |                                                    |   |
| 4        | Select one:                                                                                                                                                                                                                                                                                                                                                                  |                                                    |   |
| 4        | CHE105                                                                                                                                                                                                                                                                                                                                                                       | Introduction to Chemistry                          | 5 |
| 4        | MATH302                                                                                                                                                                                                                                                                                                                                                                      | Differential Equations                             | 5 |
| 4        | MATH476                                                                                                                                                                                                                                                                                                                                                                      | Quantitative Decision-Making                       | 4 |
| 4        | <b>CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM:</b>                                                                                                                                                                                                                                                                                                                   |                                                    |   |
| 4        | <b>(NO ADDITIONAL TUITION COST)</b>                                                                                                                                                                                                                                                                                                                                          |                                                    |   |
| 4        | C++ Programming (CS115, CS215, CS230)                                                                                                                                                                                                                                                                                                                                        |                                                    |   |
| 4        | Computer Network Telecommunications (IT200, IT300)                                                                                                                                                                                                                                                                                                                           |                                                    |   |
| 4        | Computer Security Methods (CSS300, CSS320, CSS380)                                                                                                                                                                                                                                                                                                                           |                                                    |   |
| 4        | Object-Oriented Methods (CS376)                                                                                                                                                                                                                                                                                                                                              |                                                    |   |
| 4        | Professional Communication (ENGL200, ENGL210)                                                                                                                                                                                                                                                                                                                                |                                                    |   |
| 4        | Software Engineering Application (SWE481, SWE482)                                                                                                                                                                                                                                                                                                                            |                                                    |   |
| 4        | Software Engineering Process (CS366, CS376)                                                                                                                                                                                                                                                                                                                                  |                                                    |   |
| 4        | UNIX Network Administration (IT200, IT340)                                                                                                                                                                                                                                                                                                                                   |                                                    |   |
| 4        | Disaster Planning and Recovery (CSS380)                                                                                                                                                                                                                                                                                                                                      |                                                    |   |
| 12       | Computer Security Methods (CSS300, CSS320, CSS380)                                                                                                                                                                                                                                                                                                                           |                                                    |   |
| 4        | Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations. |                                                    |   |
| 192      | There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.                                                                                          |                                                    |   |

# ASSOCIATE OF SCIENCE IN

## COMPUTER SYSTEMS SECURITY (ASCSS)

According to the Department of Labor, careers involving network systems and security are included among the decade's fastest growing occupations. Network systems professionals are needed to design, install and support an organization's LAN, WAN and Internet systems, providing day-to-day onsite administrative support for software users in professional offices, small businesses, large corporations and government.

### PROGRAM OUTCOMES

- Examine and implement computer system security through risk management, network security, and computer forensics
- Program in at least one high level programming language to solve complex problems
- Demonstrate an understanding of current computer networks, protocols of data communications, and the role of network management software

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# COMPUTER SYSTEMS SECURITY

## ASCSS PROGRAM REQUIREMENTS

### Required Courses

All students in the ASCSS program must complete all of the following courses:

| Course No.                                         | Course Name                                | Hrs.      |
|----------------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (32 hrs)</b>                  |                                            |           |
| IT254                                              | Spreadsheet Applications                   | 4         |
| ENGL111                                            | English Composition I                      | 4         |
| ENGL112                                            | English Composition II                     | 4         |
| HUMN200                                            | Art and Music Appreciation                 | 4         |
| INTD111                                            | Creating Academic and Professional Success | 4         |
| MATH103                                            | College Algebra                            | 4         |
| ECON201                                            | Macroeconomics                             | 4         |
| PSYC100                                            | Introduction to Psychology                 | 4         |
| <b>COMPUTING / INFORMATION TECHNOLOGY (32 hrs)</b> |                                            |           |
| CS104                                              | Problem Solving Concepts with C++          | 4         |
| CS115                                              | Programming with C++                       | 4         |
| CS146                                              | Introduction to UNIX                       | 4         |
| CS215                                              | Intermediate C++ Programming               | 4         |
| CS230                                              | Data Structures                            | 4         |
| CS250                                              | Fundamentals of Database Systems           | 4         |
| EBUS208                                            | Web Site/Portfolio Development             | 4         |
| IT200                                              | Introduction to Networking                 | 4         |
| <b>MATHEMATICS (8 hrs)</b>                         |                                            |           |
| MATH104                                            | Trigonometry                               | 4         |
| MATH115                                            | Pre-Calculus                               | 4         |
| <b>CRIMINAL JUSTICE (4 hrs)</b>                    |                                            |           |
| CJUS141                                            | Introduction to Criminal Justice           | 4         |
| <b>SECURITY CONCENTRATION (16 hrs)</b>             |                                            |           |
| CSS150                                             | Introduction to Computer Security          | 4         |
| CSS200                                             | Principles of Network Security             | 4         |
| CSS250                                             | Security Risk Management                   | 4         |
| CSS350                                             | Computer Forensics I                       | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>         |                                            | <b>92</b> |

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

C++ Programming (CS115, CS215, CS230)  
CompTIA Network+™ Fundamentals (IT200)  
CompTIA Security+™ Fundamentals (CSS150, CSS200)  
Computer Forensics (CSS350)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# ASSOCIATE OF SCIENCE IN

## ELECTRONICS TECHNOLOGY (ASET)

Both private business and the government rely on sophisticated electronic equipment for a multitude of applications: manufacturing and production processes, communication systems, power plant operations, missile control and guidance, engineering test, and embedded control systems. Individuals with knowledge of analog and digital electronics are in demand, especially in commercial enterprises such as integrated circuit (IC) companies and telecommunications firms. This degree comprises the first two years of either the Bachelor of Science in Electrical Engineering (BSEE) or the Bachelor of Science in Computer Engineering (BSCE) degree programs.

### PROGRAM OUTCOMES

- Analysis of DC and AC circuits and electronics, including significant laboratory-based experience in each of these areas
- Analysis and design of digital hardware, as well as embedded microcontroller (software) systems
- Problem-solving and trouble-shooting techniques
- Design of integrated-circuit (IC) based digital electronics
- Use of modern, computer-based simulation tools
- Advanced laboratory instrumentation
- Communication skills essential to the workplace

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                       | Hrs. |
|------------|-----------------------------------|------|
| ENGL080    | English Composition Preparation   | 4    |
| IT080      | Introduction to Computing         | 4    |
| CS104      | Problem Solving Concepts with C++ | 4    |
| MATH060    | Pre-Algebra                       | 4    |
| MATH080    | Elementary Algebra                | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# ASET PROGRAM REQUIREMENTS

## Required Courses

All students in the ASET program must complete all of the following courses:

| Course No.                                 | Course Name                        | Hrs.      |
|--------------------------------------------|------------------------------------|-----------|
| <b>GENERAL EDUCATION (36 hours)</b>        |                                    |           |
| EBUS208                                    | Web Site/Portfolio Development     | 4         |
| ENGL111                                    | English Composition I              | 4         |
| ENGL112                                    | English Composition II             | 4         |
| ENGL200                                    | Professional Writing               | 4         |
| MATH103                                    | College Algebra                    | 4         |
| INTD121                                    | Introduction to the Design Process | 4         |
| HIST150                                    | World History                      | 4         |
| or                                         |                                    |           |
| HIST210                                    | World History and Culture 1        | 4         |
| PSYC100                                    | Introduction to Psychology         | 4         |
| LITR220                                    | Values in World Literature         | 4         |
| or                                         |                                    |           |
| HUMN200                                    | Art and Music Appreciation         | 4         |
| <b>MATHEMATICS / SCIENCE (27 hrs)</b>      |                                    |           |
| CHE105                                     | Introduction to Chemistry          | 5         |
| MATH104                                    | Trigonometry                       | 4         |
| MATH115                                    | Pre-Calculus                       | 4         |
| MATH201                                    | Calculus I                         | 4         |
| MATH202                                    | Calculus II                        | 5         |
| MATH302                                    | Differential Equations             | 5         |
| <b>ENGINEERING (33 hrs)</b>                |                                    |           |
| CE242                                      | Computer Architecture              | 4         |
| EE110                                      | Introduction to Engineering        | 4         |
| EE221                                      | Circuit Analysis I                 | 5         |
| EE252                                      | Digital Design I                   | 5         |
| EE331                                      | Circuit Analysis II                | 5         |
| EE312                                      | Embedded Microcontrollers          | 5         |
| EE375                                      | Electronic Design I                | 5         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                    | <b>96</b> |





College of

Health Sciences

Some College of Health Sciences degree programs have special admission and academic requirements. Please see page 367 for more details.





# MASTER OF BUSINESS ADMINISTRATION WITH A

## CONCENTRATION IN HEALTHCARE MANAGEMENT (MBA-HCM)

The MBA-HCM degree program combines graduate business administration skills with an emphasis on healthcare management. This concentration covers a range of skills relevant to the healthcare environment, including management concepts and processes, resource allocation, risk assessment, and financing. These concepts are applied within the ethical, legal, and policy framework of the healthcare environment advantage.

### PROGRAM OUTCOMES

- Apply sound business principles and practices to the unique field of healthcare
- Coordinate resources effectively within legal, regulatory, and ethical constraints
- Demonstrate visionary leadership skills by creating innovative solutions to management problems
- Apply critical thinking to the diverse disciplines found in healthcare organizations
- Demonstrate change agent skills that reflect critical and creative thinking regarding human resource management issues
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies

# MBA-HCM PROGRAM REQUIREMENTS

## Required Courses

All students in the MBA-HCM program must complete all of the following courses:

| Course No.                                 | Course Name                                      | Hrs.      |
|--------------------------------------------|--------------------------------------------------|-----------|
| <b>MBA CORE PROGRAM REQUIREMENT.</b>       |                                                  |           |
| ECON616                                    | Applied Managerial Economics                     | 4         |
| FINC615                                    | Applied Managerial Finance                       | 4         |
| IT600                                      | Information Technology Management                | 4         |
| MGMT600                                    | Applied Managerial Decision-Making               | 4         |
| INTD670                                    | Leadership and Ethical Decision-Making           | 4         |
| ACCT614                                    | Applied Managerial Accounting                    | 4         |
| <b>MBA-HCM REQUIREMENTS</b>                |                                                  |           |
| HCM612                                     | Managing the Healthcare Organization             | 4         |
| HCM621                                     | Ethics, Policy, and Law in Healthcare Management | 4         |
| HCM631                                     | Systems in Healthcare                            | 4         |
| HCM660                                     | Healthcare Capstone                              | 4         |
| <b>Campus Selection Option (1 Course)</b>  |                                                  |           |
| MKTG630                                    | Applied Managerial Marketing                     | 4         |
| or                                         |                                                  |           |
| MGMT604                                    | Organizational Behavior                          | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                  | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.





# BACHELOR OF SCIENCE IN

## HEALTHCARE MANAGEMENT (BSHCM)

Healthcare management professionals work in a dynamic field that affects the well being of individuals and families. A BSHCM degree is designed to prepare you to work in a healthcare environment using skills in finance, community relations and human resource management. The objective of this program is to provide trained healthcare workers with the appropriate general education, didactic theory, and hands-on skills required for advancement into management within healthcare.

### PROGRAM OUTCOMES

- Develop business management skills that support the growth of the organization
- Contribute to bottom-line financial profitability in the healthcare area
- Identify, analyze and participate in problem solving within the healthcare organization
- Assure the privacy, ethics, and challenges of securing confidential health information
- Provide leadership with technical competence, communication skills and knowledge related to the legal aspects of managing a healthcare business

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSHCM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSHCM program must complete all of the following courses:

| Course No.                         | Course Name                                      | Hrs. |
|------------------------------------|--------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>  |                                                  |      |
| HIT105                             | IT for Healthcare Professionals                  | 4    |
| IT235                              | Database Applications with Access                | 4    |
| ENGL111                            | English Composition I                            | 4    |
| ENGL112                            | English Composition II                           | 4    |
| ENGL200                            | Professional Writing                             | 4    |
| ENGL210                            | Professional Speaking                            | 4    |
| PHIL310                            | Ethics                                           | 4    |
| HIST250                            | World Cultures and Values                        | 4    |
| or                                 |                                                  |      |
| HIST310                            | World History and Culture II                     | 4    |
| HUMN200                            | Art and Music Appreciation                       | 4    |
| INTD111                            | Creating Academic and Professional Success       | 4    |
| INTD340                            | Career Planning                                  | 4    |
| BIO122                             | Anatomy and Physiology I                         | 4    |
| MATH143                            | Business Algebra                                 | 4    |
| MATH306                            | Computer Assisted Statistics                     | 4    |
| PSYC100                            | Introduction to Psychology                       | 4    |
| SOC101                             | Introduction to Sociology                        | 4    |
| <b>CORE REQUIREMENTS (116 hrs)</b> |                                                  |      |
| ACCT201                            | Accounting I                                     | 4    |
| ACCT202                            | Accounting II                                    | 4    |
| BADM100                            | Introduction to Business                         | 4    |
| BADM305                            | Organizational Behavior                          | 4    |
| BADM370                            | Quality Management                               | 4    |
| BIO121                             | Medical Terminology                              | 4    |
| BIO132                             | Anatomy and Physiology II                        | 4    |
| ECON201                            | Macroeconomics                                   | 4    |
| ECON202                            | Microeconomics                                   | 4    |
| HSS300                             | Healthcare Law and Regulations                   | 4    |
| HSA320                             | Administration in Healthcare Services            | 4    |
| HCM325                             | Policy and Ethical Issues in Healthcare Services | 4    |
| HCM400                             | Health Management and Supervision                | 4    |
| HSA410                             | Fiscal Management in Healthcare Services         | 4    |
| HCM415                             | Health Information Systems                       | 4    |
| HIT140                             | Healthcare Management                            | 4    |
| HIT210                             | Healthcare Economics                             | 4    |

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| HIT233  | Fundamentals of Health Tech Systems               | 4 |
| HRMT210 | Introduction to Human Resource Management         | 4 |
| HRMT330 | HRM Legal Environment                             | 4 |
| IT254   | Spreadsheet Applications                          | 4 |
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |
| MATH476 | Quantitative Decision Making                      | 4 |
| MEDA133 | Insurance, Coding and Billing                     | 4 |
| MEDA211 | Clinical Skills I                                 | 4 |
| MEDA222 | First Aid and Safety                              | 4 |
| MEAD223 | Pharmacology                                      | 4 |
| MEDA231 | Medical Transcription                             | 4 |
| MKGT301 | Introduction to Marketing                         | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 180

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# BACHELOR OF SCIENCE IN

## HEALTH SERVICES ADMINISTRATION (BSHSA) (2 + 2 PROGRAM - AS TO BS)

Healthcare professionals work in an ever changing environment designed to provide quality healthcare to individuals in a variety of settings. This BSHSA degree is designed for the individual with an associate's degree in a health related field or associate's degree in another field who has been employed in healthcare. This program prepares you to work in a healthcare environment using skills in finance, community relations and human resource management to allow advancement into health services administration. An extended externship offers the opportunity to learn from an experienced leader in health services.

### PROGRAM OUTCOMES

- Demonstrate leadership in the health services organization with a knowledge of forces shaping healthcare policy
- Exercise fiscal responsibility in a health services organization considering reimbursement and factors affecting reimbursement as appropriate for a departmental budget
- Assist with the implementation of change in the healthcare organization based on sound business, organizational behavior and human resource principles
- Utilize the continuous performance improvement process to provide quality healthcare services
- Support the development of appropriate strategies to market healthcare services appropriate to the organization
- Supervise a health services department while recognizing a variety of factors affecting personnel in the workforce

### PREPARATORY REQUIREMENTS

The student seeking a BSHSA must have an associate's degree in a health related field or possess an associate's degree and be employed in a healthcare setting. In addition, the following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name      | Hrs. |
|------------|------------------|------|
| MATH143    | Business Algebra | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSHSA PROGRAM REQUIREMENTS

## Required Courses

All students in the BSHSA program must complete all of the following courses:

| Course No.                        | Course Name                             | Hrs. |
|-----------------------------------|-----------------------------------------|------|
| <b>GENERAL EDUCATION (28 hrs)</b> |                                         |      |
| IT235                             | Database Applications with Access       | 4    |
| ENGL200                           | Professional Writing                    | 4    |
| ENGL210                           | Professional Speaking                   | 4    |
| PHIL310                           | Ethics                                  | 4    |
| MATH306                           | Computer Assisted Statistics            | 4    |
| SOCL100                           | Introduction to Sociology               | 4    |
| BADM301                           | Introduction to Business for Non-Majors | 4    |

Science Requirement met at the Associate's level

## CORE REQUIREMENTS (64 hrs)

|         |                                                             |   |
|---------|-------------------------------------------------------------|---|
| BADM305 | Organizational Behavior                                     | 4 |
| PM210   | Introduction to Project Management                          | 4 |
| PM410   | Project Risk and Quality                                    | 4 |
| MKGT210 | Introduction to Marketing                                   | 4 |
| HRMT210 | Introduction to Human Resource Management                   | 4 |
| HRMT330 | HRM Legal Environment                                       | 4 |
| HRMT430 | Managing Diversity                                          | 4 |
| HRMT440 | Managing Organizational Change                              | 4 |
| PBAD311 | Shaping Public Policy: Politics and the Legislative Process | 4 |
| HSS300  | Healthcare Law and Regulations                              | 4 |
| HSA310  | Economics of Healthcare                                     | 4 |
| HSA320  | Administration in Healthcare Services                       | 4 |
| HSA350  | Healthcare Systems                                          | 4 |
| HSA410  | Fiscal Management in Healthcare Services                    | 4 |
| HSA481  | HSA Externship / Project I                                  | 4 |
| HSA482  | HSA Externship / Project II                                 | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 92**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# BACHELOR OF SCIENCE IN

## NURSING (BSN) (RN TO BSN COMPLETION) ONLINE

The mission of Colorado Technical University's RN to BSN nursing program is to inspire lifelong nursing leadership that will improve the quality of healthcare for individuals and communities; revamp workforce management; provide resources and support for professional nursing practice; facilitate nurse participation in shaping and improving the cost and quality of patient care; and engage nursing graduates in scholarly activities that address wellness, health promotion and acute or chronic care services. Armed with sound business and organizational planning skills, CTU nursing graduates will have the opportunity to model lifelong achievement, respectful caring relationships and leadership behaviors that provide the tools to recognize, understand the nature of and plan for change; and to develop, implement and evaluate new patient care and staffing strategies effectively.

### ADMISSIONS REQUIREMENTS

- Admission to this program requires an unencumbered license to practice as a Registered Nurse (RN) in the United States. Individuals without current license should contact the chair of nursing at [nursingchair@ctuonline.edu](mailto:nursingchair@ctuonline.edu)
- Graduated from a two year Associate Degree in Nursing (ADN) or a three year Diploma Registered Nurse (RN) Program
- International students must demonstrate proficiency in the English Language, as measured by a TOEFL score of 550 or above; 213 or higher on the computer based exam

### PROGRAM OUTCOMES

- Model leadership behaviors in the business and organizational planning areas of healthcare and nursing care specifically
- Practice visionary thinking while integrating new patient care demands, traditional and futuristic care practices and new technologies into
- quality patient care
- Lead and serve reflectively, while utilizing organizational, business and clinical expertise and professional standards for a guide
- Integrate the ethical use of technology and information in the decision making process to foster, support and restore human functioning to its optimum level, promote communication and to encourage collaboration
- Perform nursing skills proficiently and safely to promote and support the healing and understanding of the whole person (physiological, mental, spiritual), assuring ethical health outcomes, and meeting professional nursing standards
- Collaborate with nurse managers to revamp the nursing workforce and support professional nursing practice
- Create staffing strategies that effectively meet the complex needs of the organization and consumers
- Shape healthcare policy to meet the needs of diverse individuals and communities
- Facilitate nurses' participation in decreasing the cost and improving the quality of patient care
- Engage in designing and facilitating evidence-based practice and scholarly activities that promote the nursing profession

### PREPARATORY REQUIREMENTS

The following courses are required for success in the RN-BSN Program but do not count in the total program hours.

| Course No. | Course Name                | Hrs. |
|------------|----------------------------|------|
| PSYC100    | Introduction to Psychology | 4    |

100% ONLINE



# BSN PROGRAM REQUIREMENTS

## Required Courses

All students in the BSN program must complete all of the following courses:

| Course No.                                 | Course Name                                 | Hrs.      |
|--------------------------------------------|---------------------------------------------|-----------|
| <b>GENERAL EDUCATION (26 hrs)</b>          |                                             |           |
| ENG202                                     | Professional Writing and Composition        | 6         |
| MGM330                                     | Business Decision Making                    | 4         |
| PHIL210                                    | Ethics                                      | 4         |
| HIST150                                    | World History since 1500                    | 4         |
| NRSG400                                    | Transcultural Nursing                       | 4         |
| HCM387                                     | Management Principles in Healthcare         | 4         |
| <b>CORE REQUIREMENTS (64 hrs)</b>          |                                             |           |
| NRSG300                                    | Professional Nursing Practice               | 4         |
| NRSG302                                    | Health Assessment                           | 4         |
| NRSG303                                    | Community Nursing/Vulnerable Populations    | 4         |
| NRSG304                                    | Pathophysiology I                           | 4         |
| NRSG305                                    | Management of Critical Health Issues        | 4         |
| MGM335                                     | Organizational Behavior Principles          | 4         |
| NRSG409                                    | Pathophysiology II                          | 4         |
| PSYC336                                    | Abnormal Psychology                         | 4         |
| HCM427                                     | Human Resource Management in Health Care    | 6         |
| NRSG401                                    | Legal Nurse Consulting                      | 4         |
| HSS402                                     | Healthcare Research                         | 4         |
| NRSG403                                    | Public Health Science/Disaster Preparedness | 4         |
| NRSG404                                    | Forensic Nursing                            | 4         |
| NRSG481                                    | Nursing Capstone                            | 4         |
| HCM477                                     | Finance in Healthcare                       | 6         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                             | <b>90</b> |



# BACHELOR OF SCIENCE IN

## NURSING (BSN) (RN TO BSN COMPLETION)

The mission of Colorado Technical University's RN to BSN nursing program is to inspire lifelong nursing leadership that will improve the quality of healthcare for individuals and communities; revamp workforce management; provide resources and support for professional nursing practice; facilitate nurse participation in shaping and improving the cost and quality of patient care; and engage nursing graduates in scholarly activities that address wellness, health promotion and acute or chronic care services. Armed with sound business and organizational planning skills, CTU nursing graduates will have the opportunity to model lifelong achievement, respectful caring relationships and leadership behaviors that provide the tools to recognize, understand the nature of and plan for change; and to develop, implement and evaluate new patient care and staffing strategies effectively.

### ADMISSIONS REQUIREMENTS

- Admission to this program requires an unencumbered license to practice as a Registered Nurse (RN). Please contact Chair of Nursing for clarification
- Application to the Nursing Program
- A personal interview with the Nursing Admissions Committee
- Basic computer skills (Microsoft Word, internet searching, and email)
- Current CPR certification in basic life support
- International students must demonstrate proficiency in the English Language, as measured by a TOEFL score of 550 or above; 213 or higher on the computer based exam
- Students with no computer experience will take HIT080 Introduction to Computing for Healthcare Professionals as a prerequisite

### PROGRAM OUTCOMES

- Model leadership behaviors in the business and organizational planning areas of healthcare and nursing care specifically
- Practice visionary thinking while integrating new patient care demands, traditional and futuristic care practices and new technologies into quality patient care
- Lead and serve reflectively, while utilizing organizational, business and clinical expertise and professional standards for a guide
- Integrate the ethical use of technology and information in the decision making process to foster, support and restore human functioning to its optimum level, promote communication and to encourage collaboration
- Perform nursing skills proficiently and safely to promote and support the healing and understanding of the whole person (physiological, mental, spiritual), assuring ethical health outcomes, and meeting professional nursing standards
- Collaborate with nurse managers to revamp the nursing workforce and support professional nursing practice
- Create staffing strategies that effectively meet the complex needs of the organization and consumers
- Shape healthcare policy to meet the needs of individuals and communities without regard to race, creed, culture or gender
- Facilitate nurses' participation in decreasing the cost and improving the quality of patient care
- Engage in designing and facilitating evidence-based practice and scholarly activities that promote the nursing profession

### PREPARATORY REQUIREMENTS

The following courses are required for success in the RN-BSN Program but do not count in the total program hours.

| Course No. | Course Name                                            | Hrs. |
|------------|--------------------------------------------------------|------|
| PSYC100    | Introduction to Psychology                             | 4    |
| HIT080     | Introduction to Computing for Healthcare Professionals | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSN PROGRAM REQUIREMENTS

## Required Courses

RN students who have completed the required courses listed above may enroll in the 300 level courses as indicated below. The 400 level courses are senior level and must be completed in the final quarters of the program.

All students in the BSN program must complete all of the following courses:

| Course No.                                 | Course Name                                 | Hrs.      |
|--------------------------------------------|---------------------------------------------|-----------|
| <b>GENERAL EDUCATION (32 hrs)</b>          |                                             |           |
| HIT105                                     | IT for Healthcare Professionals             | 4         |
| ENGL200                                    | Professional Writing                        | 4         |
| MATH306                                    | Computer Assisted Statistics                | 4         |
| PHIL310                                    | Ethics                                      | 4         |
| INTD340                                    | Career Planning                             | 4         |
| HIST310                                    | World History and Culture II                | 4         |
| NRSG400                                    | Transcultural Nursing                       | 4         |
| BADM301                                    | Introduction to Business for Non-Majors     | 4         |
| <b>CORE REQUIREMENTS (60 hrs)</b>          |                                             |           |
| NRSG300                                    | Professional Nursing Practice               | 4         |
| NRSG302                                    | Health Assessment                           | 4         |
| NRSG303                                    | Community Nursing/Vulnerable Populations    | 4         |
| NRSG304                                    | Pathophysiology I                           | 4         |
| ENGL210                                    | Professional Speaking                       | 4         |
| BADM305                                    | Organizational Behavior                     | 4         |
| NRSG409                                    | Pathophysiology II                          | 4         |
| PSYC336                                    | Abnormal Psychology                         | 4         |
| HRMT210                                    | Introduction to Human Resource Management   | 4         |
| NRSG401                                    | Legal Nurse Consulting                      | 4         |
| HSS402                                     | Research                                    | 4         |
| NRSG305                                    | Management of Critical Health Issues        | 4         |
| NRSG403                                    | Public Health Science/Disaster Preparedness | 4         |
| NRSG404                                    | Forensic Nursing                            | 4         |
| NRSG481                                    | Nursing Capstone                            | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                             | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# BACHELOR OF SCIENCE IN RADIOLOGIC TECHNOLOGY (BSRT)

Radiology healthcare professionals work in a dynamic environment that is demonstrating an increasing demand for higher education within the profession. The BSRT degree is designed for the individual with an Associate's Degree in Radiography or completion of a comparable certificate program. This degree program is designed to help prepare radiology professionals who are interested in advancement into healthcare management positions using skills in finance, supervision and human resource management. The objective of this program is to provide trained healthcare workers with the appropriate general education, didactic theory and hands-on skills required for advancement into management within healthcare.

## ADMISSIONS REQUIREMENTS

The student seeking a BSRT must have an Associate's Degree in Radiography from an accredited institution and be employed in a healthcare setting. If a student graduated from a certificate program, course work will be evaluated on a course by course basis and the student must have successfully completed the ARRT examination. In all cases, the general education core required for CTU bachelor's degrees must be met. Applicants are encouraged to speak with an Admissions Advisor or Radiologic Technology Chair for more information.

## PROGRAM OUTCOMES

- Develop business management skills that support growth within the organization
- Demonstrate leadership in the health services organization with knowledge of forces shaping healthcare policy
- Assure the privacy, ethics, and challenges of securing confidential health information
- Demonstrate competence in applying models of communication, decision-making and counseling within management culture
- Analyze a health services department while recognizing a variety of factors affecting personnel in the workforce

## BSRT PROGRAM REQUIREMENTS

**Years 1 and 2** (earned through completion of an accredited Associate's Degree in Radiologic Technology or Certificate in Radiography plus additional appropriate coursework)

- General Education Component: approximately 32 quarter hours (see Note 1)
- Radiography core component (associate's or certificate level): approximately 60 quarter hours

**Total quarter hours (years 1 and 2): 92**

**Years 3 and 4** (earned at Colorado Technical University or through appropriate transfer credit plus minimum required residence coursework at CTU)

- General Education Component: approximately 32 quarter hours (see Note 1)
- Professional Core (see listing below): 20 quarter hours
- Healthcare Management and/or Clinical Courses (see listing below): 36 quarter hours

**Total quarter hours (years 3 and 4): 88**

# BSRT PROGRAM REQUIREMENTS

## Required Courses

All students in the BSRT program must complete all of the following courses in residence at CTU:

| Course No.                        | Course Name                                 | Hrs. |
|-----------------------------------|---------------------------------------------|------|
| <b>PROFESSIONAL CORE (20 hrs)</b> |                                             |      |
| HRMT210                           | Introduction to Human Resource Management   | 4    |
| HRMT430                           | Managing Diversity                          | 4    |
| HSS300                            | Healthcare Law and Regulations              | 4    |
| MEDA223                           | Pharmacology                                | 4    |
| BSRT450                           | Quality Improvement in Radiology - Capstone | 4    |

All students in the BSRT program must complete either the 9 Healthcare Management courses (total of 36 credits) or a combination of 8 Healthcare Management courses (32 credits) and the Radiography Clinical Courses (4 credits). All of this coursework must be completed in residence at CTU.

### HEALTHCARE MANAGEMENT (32/36 hrs)

|         |                                          |   |
|---------|------------------------------------------|---|
| HSA310  | Economics of Healthcare                  | 4 |
| HSA320  | Administration in Healthcare Services    | 4 |
| HSA350  | Healthcare Systems                       | 4 |
| HCM400  | Healthcare Management and Supervision    | 4 |
| HSA410  | Fiscal Management in Healthcare Services | 4 |
| HCM415  | Health Information Systems               | 4 |
| HSA481  | HSA Internship/Project 1                 | 4 |
| HSA482  | HSA Internship/Project 2                 | 4 |
| HRMT440 | Managing Organizational Change           | 4 |

### RADIOGRAPHY CLINICAL COURSES (4 hrs, if selected)

|        |                                            |   |
|--------|--------------------------------------------|---|
| MAM100 | Breast Anatomy, Physiology and Pathology   | 1 |
| MAM102 | Patient Care and Procedures in Mammography | 1 |
| MAM104 | Mammography Technique and Quality Control  | 1 |
| MAM106 | Mammography Equipment                      | 1 |

**TOTAL PROGRAM QUARTER CREDIT HOURS** 180

Note 1: General Education Requirements. The following minimum general education requirements must be met in order to graduate with a Colorado Technical University BSRT degree. All of these requirements may be met through appropriate transfer credit or by taking the appropriate courses at CTU.

| Course Category                      | Minimum Qtr Hrs | CTU Equivalent     |
|--------------------------------------|-----------------|--------------------|
| English Composition I and II         | 8               | ENGL111 / 112      |
| Technical Writing                    | 4               | ENGL200            |
| Speech                               | 4               | ENGL210            |
| History                              | 4               | HIST150            |
| Interdisciplinary                    | 4               | INTD111            |
| Psychology or Sociology              | 4               | PSYC100 or SOCL101 |
| College or Business Algebra          | 4               | MATH103 or MATH143 |
| Statistics                           | 4               | MATH306            |
| Science                              | 4               | SCI120             |
| Business                             | 4               | BADM100            |
| Ethics (healthcare)                  | 4               | HCM325             |
| Economics                            | 4               | ECO201             |
| Literature                           | 4               | LITR220            |
| Information Technology (healthcare)  | 4               | HIT105             |
| Spreadsheet Applications             | 4               | IT254              |
| <b>Total general education hours</b> |                 | <b>64</b>          |



# ASSOCIATE OF NURSING (ADN)

The Associate's Degree Nursing Program prepares students to become trustworthy, competent and caring members of the healthcare team. Our graduates should be equipped to practice nursing in a contemporary healthcare environment. Colorado Technical University empowers our students with quality education to provide the highest quality of clinical nursing care.

## PROGRAM OUTCOMES

- Demonstrates respect for organizational values by providing a safe and confidential environment for the patient and their family
- Acquires, organizes, interprets and communicates information while respecting the culture, values, dignity and life needs of the patient and their family
- Demonstrates respect for professional values by providing human centered care to individuals and specific populations
- Promotes the image of nursing as a profession and acts as an effective role model
- Demonstrates respect for professional practice by accepting accountability and responsibility for professional judgment and actions
- Practices within the scope of practice and conforms to the professional code of ethics by engaging effectively in ethical decision making
- Demonstrates the requisite knowledge, communication abilities, and technical skills to operationalize the process of critical thinking in the care of patients and their family
- Assumes ethical accountability for the planning, provision, and evaluation of care

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# ADN PROGRAM REQUIREMENTS

## Required Courses

All students in the ADN program must complete all of the following courses:

| Course No.                                 | Course Name                                 | Hrs.       |
|--------------------------------------------|---------------------------------------------|------------|
| <b>GENERAL EDUCATION (32 hrs)</b>          |                                             |            |
| BIO141                                     | Human Anatomy and Physiology I              | 4          |
| BIO142                                     | Human Anatomy and Physiology II             | 4          |
| ENGL111                                    | English Composition I                       | 4          |
| ENGL112                                    | English Composition II                      | 4          |
| HIT105                                     | IT for Healthcare Professionals             | 4          |
| INTD111                                    | Creating Academic and Professional Success  | 4          |
| MATH143                                    | Business Algebra                            | 4          |
| PSYC100                                    | Introduction to Psychology                  | 4          |
| <b>CORE REQUIREMENTS (68 hrs)</b>          |                                             |            |
| BIO200                                     | Applied Microbiology                        | 4          |
| NRSG151                                    | Foundations of Professional Practice        | 4          |
| NRSG152                                    | Fundamentals of Nursing I                   | 4          |
| NRSG153                                    | Fundamentals of Nursing II                  | 4          |
| NRSG154                                    | Care of the Adult in the Health Continuum   | 4          |
| NRSG155                                    | Pharmacology Basics                         | 4          |
| NRSG157                                    | Gerontological Nursing                      | 4          |
| NRSG158                                    | Gerontological Practicum                    | 4          |
| NRSG248                                    | Care of the Adult in the Acute Care Setting | 4          |
| NRSG249                                    | Acute Care Practicum                        | 4          |
| NRSG250                                    | Transcultural Nursing                       | 4          |
| NRSG251                                    | Care of the Childbearing Family             | 4          |
| NRSG252                                    | Care of the Child and Family                | 4          |
| NRSG254                                    | Psycho-social Disorders                     | 4          |
| NRSG255                                    | Sophomore Leadership Practicum              | 8          |
| NRSG257                                    | Child and Family Practicum                  | 4          |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                             | <b>100</b> |

The Colorado Technical University Associate's Degree in Nursing Program, at the Pueblo, Colorado campus is approved by the Colorado Board of Nursing.

# ASSOCIATE OF SCIENCE IN

## MEDICAL ASSISTING (ASMA)

This program is designed to prepare you to perform various technical and administrative skills as a member of a healthcare team in various settings. The student can develop skills in phlebotomy, electrocardiograms, medication administration, minor surgical techniques, emergency medical procedures, and office procedures.

### PROGRAM OUTCOMES

- Practice within the scope of the Medical Assistant role in healthcare settings (acute care, long-term care, physician clinics, and medical record departments)
- Function effectively as a healthcare team member
- Demonstrate proficiency in communication skills, computer skills, scheduling and receiving patients and preparing or maintaining medical records
- Demonstrate accuracy in billing, coding and medical transcription
- Exhibit proficiency in assisting physicians with examinations, taking vital signs and performing diagnostic tests while using infection control procedures
- Appropriately utilize knowledge gained from foundational English, math and humanities courses

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

## ASMA PROGRAM REQUIREMENTS

### Required Courses

All students in the ASMA program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (40 hrs)</b>          |                                            |           |
| BIO122                                     | Anatomy and Physiology I                   | 4         |
| HIST210                                    | World Culture and Values                   | 4         |
| HIT105                                     | IT for Healthcare Professionals            | 4         |
| ENGL111                                    | English Composition I                      | 4         |
| ENGL112                                    | English Composition II                     | 4         |
| INTD111                                    | Creating Academic and Professional Success | 4         |
| INTD340                                    | Career Development                         | 4         |
| HUMN200                                    | Art and Music Appreciation                 | 4         |
| MATH143                                    | Business Algebra                           | 4         |
| PSYC100                                    | Introduction to Psychology                 | 4         |
| <b>CORE REQUIREMENTS (52 hrs)</b>          |                                            |           |
| ACCT201                                    | Accounting I                               | 4         |
| BIO132                                     | Anatomy and Physiology II                  | 4         |
| HSS121                                     | Medical Terminology                        | 4         |
| HSS134                                     | Medical Law and Ethics                     | 4         |
| MEDA123                                    | Medical Office Management                  | 4         |
| MEDA133                                    | Insurance Billing and Coding               | 4         |
| MEDA211                                    | Clinical Skills I                          | 4         |
| MEDA212                                    | Medical Lab Procedures                     | 4         |
| MEDA221                                    | Clinical Skills II                         | 4         |
| MEDA222                                    | First Aid and Safety                       | 4         |
| MEDA223                                    | Pharmacology                               | 4         |
| MEDA231                                    | Medical Transcription                      | 4         |
| MEDA232                                    | Externship                                 | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>92</b> |

The Colorado Technical University Associate of Science in Medical Assisting Program, at the Sioux Falls, S.D. campus is accredited by the Commission on Accreditation of Allied Health Education Programs, [www.caahep.org](http://www.caahep.org).

Commission on Accreditation of Allied Health Education Programs:  
 35 East Wacker Drive, Suite 1970  
 Chicago, IL 60601-2208 (312) 553-9355  
 Association of Medical Assistants Endowment, AAMAE.

# ASSOCIATE OF SCIENCE IN

## MEDICAL BILLING AND CODING (ASMBC)

ME

Today's Healthcare system requires that each patient's information be maintained, collected and analyzed consistent with the highest level of confidentiality and security, particularly when this data is computerized. Hospitals, physicians, insurance companies and everyone handling patient information have to assure that policies and procedures are in place that provide for the highest level of protection of patient information. Because of the importance of this information, managers and clinicians alike are motivated to have persons who understand and are able to deal with these requirements. The skills to create, implement and maintain health information systems are learned. This program is designed to help professionals in the health field address the health information technology demands of the future.

### PROGRAM OUTCOMES

- Work with computers and networks
- Define medical terminology
- Code using CPT and ICD codes
- Process billing and reimbursement functions
- Develop security measures
- Discuss legal and regulatory requirements to include HIPAA requirements

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# ASMBC PROGRAM REQUIREMENTS

## Required Courses

All students in the ASMBC program must complete all of the following courses:

| Course No.                                 | Course Name                                           | Hrs.      |
|--------------------------------------------|-------------------------------------------------------|-----------|
| <b>GENERAL EDUCATION (32 hrs)</b>          |                                                       |           |
| HIT105                                     | IT for Healthcare Professional                        | 4         |
| ENGL111                                    | English Composition I                                 | 4         |
| ENGL112                                    | English Composition II                                | 4         |
| HUMN200                                    | Art and Music Appreciation                            | 4         |
| INTD111                                    | Creating Academic and Professional Success            | 4         |
| MATH143                                    | Business Algebra                                      | 4         |
| HIST150                                    | World History Since 1500                              | 4         |
| or                                         |                                                       |           |
| HIST210                                    | World History and Culture 1                           | 4         |
| BADM100                                    | Introduction to Business                              | 4         |
| <b>CORE REQUIREMENTS (60 hrs)</b>          |                                                       |           |
| BADM305                                    | Organization Behavior                                 | 4         |
| BIO141                                     | Human Anatomy and Physiology I                        | 4         |
| BIO142                                     | Human Anatomy and Physiology II                       | 4         |
| ENGL210                                    | Professional Speaking                                 | 4         |
| HIT100                                     | Health Services and Organization                      | 4         |
| HIT120                                     | Introduction to ICD9 Classification and Reimbursement | 4         |
| HIT130                                     | Introduction to CPT Coding/Billing                    | 4         |
| HIT140                                     | Healthcare Management                                 | 4         |
| HIT210                                     | Healthcare Economics                                  | 4         |
| HIT233                                     | Fundamentals of Health Tech Systems                   | 4         |
| HSS134                                     | Medical Law and Ethics                                | 4         |
| HIT250                                     | Principles of Quality Improvement                     | 4         |
| HIT295                                     | Health Internship/Practicum                           | 4         |
| HSS121                                     | Medical Terminology                                   | 4         |
| CSS150                                     | Introduction to Computer Security                     | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                       | <b>92</b> |

The Colorado Technical University Associate of Science in Medical Assisting Program, at the Sioux Falls, S.D. campus is accredited by the Commission on Accreditation of Allied Health Education Programs, [www.caahep.org](http://www.caahep.org).

Commission on Accreditation of Allied Health Education Programs:  
35 East Wacker Drive, Suite 1970  
Chicago, IL 60601-2208 (312) 553-9355  
Association of Medical Assistants Endowment, AAMAE.

# ASSOCIATE OF SCIENCE IN

## MEDICAL BILLING AND CODING (ASMBC) ONLINE

Today's healthcare system requires that each patient's information be maintained, collected and analyzed consistent with the highest level of confidentiality and security, particularly when this data is computerized. Hospitals, physicians, insurance companies and everyone handling patient information have to assure that policies and procedures are in place that provide for the highest level of protection of patient information. Because of the importance of this information, managers and clinicians alike are motivated to have persons who understand and are able to deal with these requirements. The skills to create, implement and maintain health information systems are learned. This program is designed to help professionals in the health field address the health information technology demands of the future.

### PROGRAM OUTCOMES

- Work with computers and networks
- Define medical terminology
- Code using CPT and ICD codes
- Process billing and reimbursement functions
- Develop security measures
- Discuss legal and regulatory requirements to include HIPAA requirements

# ASMBC PROGRAM REQUIREMENTS

## Required Courses

All students in the ASMBC program must complete all of the following courses:

| Course No.                                 | Course Name                                           | Hrs.      |
|--------------------------------------------|-------------------------------------------------------|-----------|
| <b>GENERAL EDUCATION (42 hrs)</b>          |                                                       |           |
| HIT105                                     | IT for Healthcare Professionals                       | 4         |
| ENG115                                     | English Composition                                   | 4         |
| ENG116                                     | English Composition II                                | 6         |
| HUM140                                     | Art Appreciation                                      | 4         |
| INTD111                                    | Creating Academic and Professional Success            | 4         |
| MAT105                                     | Business Math                                         | 4         |
| HIS150                                     | World History Since 1500                              | 4         |
| MGM110                                     | Principles of Business                                | 4         |
| PSY105                                     | Psychology                                            | 4         |
| IT254                                      | Spreadsheet Applications                              | 4         |
| <b>CORE REQUIREMENTS (48 hrs)</b>          |                                                       |           |
| BIO121                                     | Medical Terminology                                   | 4         |
| BIO141                                     | Human Anatomy and Physiology I                        | 4         |
| BIO142                                     | Human Anatomy and Physiology II                       | 4         |
| HIT100                                     | Health Services and Organization                      | 4         |
| HIT120                                     | Introduction to ICD9 Classification and Reimbursement | 4         |
| HIT130                                     | Introduction to CPT Coding/Billing                    | 4         |
| HIT140                                     | Healthcare Management                                 | 4         |
| HIT210                                     | Healthcare Economics                                  | 4         |
| HIT233                                     | Fundamentals of Health Tech Systems                   | 4         |
| HSS260                                     | Healthcare Legal Concepts                             | 4         |
| HIT295                                     | Health Internship/Practicum                           | 4         |
| CS150                                      | Introduction to Computer System Security              | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                       | <b>90</b> |



# ASSOCIATE OF SCIENCE IN

## SURGICAL TECHNOLOGY (ASST)

The mission of the program is to prepare competent entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains and to help satisfy the need for surgical technologists in local and regional communities. The Surgical Technology program involves learning surgical procedures, exercising critical thinking skills and effectively communicating in the operating room environment. The surgical technologist is an active member of the surgical team. By using technology in the operating room suite, the student can learn the practical skills to successfully work in today's fast-paced operating room.

### ADMISSIONS REQUIREMENTS

- Satisfactory completion of Hobett examination with score of 55 or greater

### PROGRAM OUTCOMES

- Earn an Associate of Science Degree in Surgical Technology (ST)
- Practice as an entry-level surgical technologist
- Provide high quality patient care pre, intra, and post surgery
- Participate as a competent team member working with surgeons, anesthesiologists, operating room nurses and other surgical personnel
- Develop competency as a scrub second assist surgical technologist and circulator
- Demonstrate expertise in maintaining a sterile field and assuring aseptic technique throughout the surgical procedure
- Engage in employment in operating, delivery, and emergency rooms at hospitals, medical offices, and clinics
- Exhibit caring and ethical behavior
- Communicate effectively and in a professional manner
- Utilize critical thinking skills
- Express enthusiasm and a sense of pride in team work
- Demonstrate the ability to apply theoretical knowledge and a surgical conscience
- Practice the role of patient advocate

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

# ASST PROGRAM REQUIREMENTS

## Required Courses

All students in the ASST program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (34 hrs)</b>          |                                            |           |
| HIT105                                     | IT for Healthcare Professionals            | 4         |
| ENGL111                                    | English Composition I                      | 4         |
| ENGL112                                    | English Composition II                     | 4         |
| INTD111                                    | Creating Academic and Professional Success | 4         |
| INTD140                                    | Customer Service                           | 2         |
| MATH103                                    | College Algebra                            | 4         |
| LITR220                                    | Values in World Literature                 | 4         |
| HIST150                                    | World History Since 1500                   | 4         |
| or                                         |                                            |           |
| HIST210                                    | World History and Culture 1                | 4         |
| PSYC100                                    | Introduction to Psychology                 | 4         |
| <b>CORE REQUIREMENTS (56 hrs)</b>          |                                            |           |
| HSS121                                     | Medical Terminology                        | 4         |
| BIO141                                     | Human Anatomy and Physiology I             | 4         |
| BIO142                                     | Human Anatomy and Physiology II            | 4         |
| HSS134                                     | Medical Law and Ethics                     | 4         |
| SUR102                                     | Introduction to Surgical Technology        | 4         |
| SUR105                                     | Surgical Pharmacology                      | 4         |
| SUR110                                     | Surgical Techniques                        | 4         |
| SUR120                                     | Microbiology and Infection Control         | 4         |
| SUR150                                     | Introduction to Pathophysiology            | 4         |
| SUR205                                     | Surgical Procedures I                      | 4         |
| SUR210                                     | Surgical Procedures II                     | 4         |
| SUR235                                     | Surgical Clinical Practicum I              | 4         |
| SUR245                                     | Surgical Clinical Practicum II             | 4         |
| SUR255                                     | Surgical Clinical Practicum III            | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>90</b> |

The Surgical Technology Programs of Colorado Technical University have been approved as NCCT proctor sites and can administer the national surgical technology certification examination. The candidates who successfully pass this exam will carry the credentials 'Tech in Surgery – Certified', TS-C (NCCT).





# ASSOCIATE OF APPLIED SCIENCE IN

## MEDICAL ASSISTING (AASMA)

This program is designed to prepare you to perform various technical and administrative skills as a member of a healthcare team in various settings. The student can develop skills in phlebotomy, electrocardiograms, medication administration, minor surgical techniques, emergency medical procedures, and office procedures.

### PROGRAM OUTCOMES

- Practice within the scope of the Medical Assistant role in healthcare settings (acute care, long-term care, physician clinics, and medical record departments)
- Function effectively as a healthcare team member
- Demonstrate proficiency in communication skills, computer skills, scheduling and receiving patients and preparing or maintaining medical records
- Demonstrate accuracy in billing, coding and medical transcription
- Exhibit proficiency in assisting physicians with examinations, taking vital signs and performing diagnostic tests while using infection control procedures
- Appropriately utilize knowledge gained from foundational English, math and humanities courses

### ADMISSIONS REQUIREMENTS

- A personal interview with the Chair of Medical Assisting
- Hobett score of 45 or higher in reading and math

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

# AASMA PROGRAM REQUIREMENTS

## Required Courses

All students in the AASMA program must complete all of the following courses:

| Course No.                                 | Course Name                      | Hrs.      |
|--------------------------------------------|----------------------------------|-----------|
| <b>GENERAL EDUCATION (38 hrs)</b>          |                                  |           |
| BIO122                                     | Anatomy & Physiology I           | 4         |
| HIST210                                    | World Culture & Values           | 4         |
| HIT105                                     | IT for Healthcare Professionals  | 4         |
| ENGL111                                    | English Composition I            | 4         |
| ENGL112                                    | English Composition II           | 4         |
| INTD111                                    | Creating Academic & Professional | 4         |
| INTD260                                    | Career Development               | 2         |
| LITR220                                    | Values in World Literature       | 4         |
| MATH143                                    | Business Algebra                 | 4         |
| PSYC100                                    | Introduction to Psychology       | 4         |
| <b>CORE REQUIREMENTS (52 hrs)</b>          |                                  |           |
| BIO132                                     | Anatomy and Physiology II        | 4         |
| HSS121                                     | Medical Terminology              | 4         |
| HSS134                                     | Medical Law and Ethics           | 4         |
| MEDA123                                    | Medical Office Management        | 4         |
| MEDA133                                    | Insurance Billing and Coding     | 4         |
| MEDA211                                    | Clinical Skills I                | 4         |
| MEDA212                                    | Medical Lab Procedures           | 4         |
| MEDA221                                    | Clinical Skills II               | 4         |
| MEDA222                                    | First Aid and Safety             | 4         |
| MEDA223                                    | Pharmacology                     | 4         |
| MEDA230                                    | Wellness                         | 4         |
| MEDA232                                    | Externship                       | 6         |
| MEDA241                                    | Clinical Review                  | 2         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                  | <b>90</b> |

The Associate of Applied Science in Medical Assisting Program at the Kansas City Campus is accredited by the Accrediting Bureau of Health Education Schools (ABHES): 777 Leesburg Pike, Suite 314, N. Falls Church, VA 22043 (703) 917-9503

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

CPR Certification  
(AMERICAN HEART ASSOCIATION-HEALTHCARE PROVIDER)

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# ASSOCIATE OF APPLIED SCIENCE IN

## RADIOLOGIC TECHNOLOGY (AASRT)

The field of Radiologic Technology is undergoing a remarkable transformation. This healthcare profession continues to be at the forefront in the diagnosis and treatment of injury and disease. The AASRT degree can provide you with the skills and confidence you need to enter the field of general radiography. This education also can form the foundation for further education and cross-training. Advanced opportunities include Nuclear Medicine, Ultrasound, Radiation Therapy, MRI, CT, breast, cardiac and abdominal imaging and neuro-interventional radiology.

### PROGRAM OUTCOMES

- Demonstrate expertise in producing x-rays for diagnostic purposes
- Administer non-radioactive materials for diagnostic procedures
- Prepare and position patients for specific procedures
- Explain various radiography procedures to patients
- Produce reliable radiographic findings on patients of all age groups
- Exhibit professional behavior under stressful emergency situations
- Conduct diagnostic testing under a variety of healthcare conditions
- Function as a contributing member of the healthcare team
- Demonstrate leadership in clinical radiology practice

### ADMISSIONS REQUIREMENTS

- Satisfactory completion of Hobett examination with score of 55 or greater

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

# AASRT PROGRAM REQUIREMENTS

## Required Courses

All students in the AASRT program must complete all of the following courses:

| Course No.                        | Course Name                                                                     | Hrs. |
|-----------------------------------|---------------------------------------------------------------------------------|------|
| <b>GENERAL EDUCATION (32 hrs)</b> |                                                                                 |      |
| HIT105                            | IT for Healthcare Professionals                                                 | 4    |
| ENGL111                           | English Composition I                                                           | 4    |
| ENGL112                           | English Composition II                                                          | 4    |
| INTD111                           | Creating Academic and Professional Success                                      | 4    |
| MATH143                           | Business Algebra                                                                | 4    |
| PSYC100                           | Introduction to Psychology                                                      | 4    |
| HSS134                            | Medical Law and Ethics                                                          | 4    |
| BADM100                           | Introduction to Business                                                        | 4    |
| <b>CORE REQUIREMENTS (70 hrs)</b> |                                                                                 |      |
| BIO141                            | Human Anatomy and Physiology I                                                  | 4    |
| BIO142                            | Human Anatomy and Physiology II                                                 | 4    |
| RADG101                           | Radiographic Procedures of the Appendicular Skeleton                            | 4    |
| RADG102                           | Radiographic Clinical Education I                                               | 4    |
| RADG103                           | Radiographic Image Production and Evaluation I                                  | 4    |
| RADG104                           | Radiographic Procedures of the Axial Skeleton                                   | 4    |
| RADG105                           | Radiographic Clinical Education II                                              | 4    |
| RADG106                           | Radiographic Image Production and Evaluation II                                 | 4    |
| RADG107                           | Radiographic Equipment Operation and Maintenance                                | 4    |
| RADG108                           | Radiographic Procedures of the Soft Tissues, Viscera and Other Systems          | 4    |
| RADG111                           | Radiobiology                                                                    | 2    |
| RADG112                           | Registry Review                                                                 | 4    |
| RADG115                           | Radiographic Procedures of the Cranium, Central Nervous and Circulatory Systems | 2    |
| RADG119                           | Radiographic Clinical Education III                                             | 4    |
| RADG121                           | Introduction to Radiologic Science and Patient Care                             | 4    |
| RADG122                           | Patient Care and Radiographic Sciences Clinical Lab                             | 4    |
| RADG123                           | Advanced Modalities                                                             | 2    |
| RADG211                           | Radiographic Clinical Education IV                                              | 4    |
| RADG212                           | Radiographic Clinical Education V                                               | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 102**

The Colorado Technical University Surgical Technology Program in Kansas City, Missouri, is also accredited by the Commission on Accreditation of Allied Health Education Programs, [www.caahep.org](http://www.caahep.org).

Commission on Accreditation of Allied Health Education Programs:  
35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208, (312) 553-9355

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

CPR Certification  
(AMERICAN HEART ASSOCIATION-HEALTHCARE PROVIDER)

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The Colorado Technical University Surgical Technology Program in Kansas City, Missouri, is also accredited by the Commission on Accreditation of Allied Health Education Programs, [www.caahep.org](http://www.caahep.org).

Commission on Accreditation of Allied Health Education Programs:  
35 East Wacker Drive, Suite 1970  
Chicago, IL 60601-2208  
(312) 553-9355



**Colorado Technical University™**

# ASSOCIATE OF APPLIED SCIENCE IN

## SURGICAL TECHNOLOGY (AASST)

The mission of the program is to prepare competent entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains and to help satisfy the need for surgical technologists in local and regional communities. The Surgical Technology program involves learning surgical procedures, exercising critical thinking skills and effectively communicating in the operating room environment. The surgical technologist is an active member of the surgical team. By using technology in the operating room suite, the student can learn the practical skills to successfully work in today's fast-paced operating room.

### PROGRAM OUTCOMES

- Earn an Associate of Applied Science Degree in Surgical Technology (ST)
- Practice as an entry-level surgical technologist
- Provide high quality patient care pre, intra, and post surgery
- Participate as a competent team member working with surgeons, anesthesiologists, operating room nurses and other surgical personnel
- Develop competency as a scrub second assist surgical technologist and circulator
- Demonstrate expertise in maintaining a sterile field and assuring aseptic technique throughout the surgical procedure
- Engage in employment in operating, delivery, and emergency rooms at hospitals, medical offices, and clinics
- Exhibit caring and ethical behavior
- Communicate effectively and in a professional manner
- Utilize critical thinking skills
- Express enthusiasm and a sense of pride in team work
- Demonstrate the ability to apply theoretical knowledge and a surgical conscience
- Practice the role of patient advocate

### ADMISSION REQUIREMENTS

- Satisfactory completion of Hobett examination with score of 55 or greater

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |



## AASST PROGRAM REQUIREMENTS

### Required Courses

All students in the AASST program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (34 hrs)</b>          |                                            |           |
| HIT105                                     | IT for Healthcare Professionals            | 4         |
| ENGL111                                    | English Composition I                      | 4         |
| ENGL112                                    | English Composition II                     | 4         |
| INTD111                                    | Creating Academic and Professional Success | 4         |
| INTD140                                    | Customer Service                           | 2         |
| MATH103                                    | College Algebra                            | 4         |
| LITR220                                    | Values in World Literature                 | 4         |
| HIST150                                    | World History Since 1500                   | 4         |
| or                                         |                                            |           |
| HIST210                                    | World History and Culture 1                | 4         |
| PSYC100                                    | Introduction to Psychology                 | 4         |
| <b>CORE REQUIREMENTS (56 hrs)</b>          |                                            |           |
| HSS121                                     | Medical Terminology                        | 4         |
| BIO141                                     | Human Anatomy and Physiology I             | 4         |
| BIO142                                     | Human Anatomy and Physiology II            | 4         |
| HSS134                                     | Medical Law and Ethics                     | 4         |
| SUR102                                     | Introduction to Surgical Technology        | 4         |
| SUR105                                     | Surgical Pharmacology                      | 4         |
| SUR110                                     | Surgical Techniques                        | 4         |
| SUR120                                     | Microbiology and Infection Control         | 4         |
| SUR150                                     | Introduction to Pathophysiology            | 4         |
| SUR205                                     | Surgical Procedures I                      | 4         |
| SUR210                                     | Surgical Procedures II                     | 4         |
| SUR235                                     | Surgical Clinical Practicum I              | 4         |
| SUR245                                     | Surgical Clinical Practicum II             | 4         |
| SUR255                                     | Surgical Clinical Practicum III            | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>90</b> |

The Surgical Technology Programs of Colorado Technical University have been approved as NCCT proctor sites and can administer the national surgical technology certification examination. The candidates who successfully pass this exam will carry the credentials Tech in Surgery – Certified, TS-C (NCCT).

The Colorado Technical University Surgical Technology Program in Kansas City, Missouri, is also accredited by the Commission on Accreditation of Allied Health Education Programs, [www.caahep.org](http://www.caahep.org).

Commission on Accreditation of Allied Health Education Programs:  
35 East Wacker Drive, Suite 1970, Chicago, IL 60601-2208, (312) 553-9355



# DIPLOMA IN

## PRACTICAL NURSING (PN)

This program is designed to prepare you to enter the field of nursing. You can learn basic patient care techniques, assessment skills, IV therapy, how to assist clients with life/ wellness needs and the study of disease pathologies. You will practice your skill in acute care, long-term care and community settings.

### PROGRAM OUTCOMES

- Practice within the role of the PN in Healthcare settings (hospitals, long-term care, physician clinics, community and home Healthcare)
- Provide safe, competent, efficient and effective nursing care for individuals and groups across the life span
- Promote rehabilitation and health promotion
- Practice within ethical and legal frameworks consistent with the Nurse Practice Act and other standards of nursing practice
- Function effectively as a team member of the nursing and Healthcare staff
- Demonstrate proficiency in medication knowledge, communication skills, therapeutic interventions and computer skills
- Demonstrate the ability to successfully pass the National Council Licensing Exam for Practical Nurses (NCLEX-PN exam)

### ADMISSIONS REQUIREMENTS

- Application to the Nursing Program
- A personal interview with the Nursing Admissions Committee
- Basic computer skills (Microsoft Word, Internet searching, and email)
- Hobett score of 55 or higher in reading and math
- Students with no computer experience will take HIT080 Introduction to Computing for HealthCare Professionals as a prerequisite. A computer skills competency test will be administered to prospective students to determine their level of proficiency and potential need for computer training

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

# PN PROGRAM REQUIREMENTS

## Required Courses

All students in the PN program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (8 hrs)

|         |                                            |
|---------|--------------------------------------------|
| ENGL111 | English Composition I                      |
| INTD111 | Creating Academic and Professional Success |

#### CORE REQUIREMENTS (71 hrs)

|        |                                                                 |   |
|--------|-----------------------------------------------------------------|---|
| BIO141 | Human Anatomy and Physiology I                                  | 4 |
| BIO142 | Human Anatomy and Physiology II                                 | 4 |
| PN100  | Personal and Vocational Concepts I                              | 1 |
| PN101  | Fundamentals of Nursing I                                       | 4 |
| PN102  | Fundamentals of Nursing II                                      | 4 |
| PN103  | Protective Function Throughout the Lifespan                     | 4 |
| PN104  | Medical Surgical Clinical I                                     | 3 |
| PN105  | Pharmacology for Practical Nurses                               | 4 |
| PN106  | Respiratory and Cardiovascular Function Throughout the Lifespan | 4 |
| PN107  | Medical Surgical Clinical II                                    | 3 |
| PN108  | Mental Health Nursing Throughout the Lifespan                   | 3 |
| PN109  | Mental Health Clinical                                          | 1 |
| PN110  | Regulatory Functions Throughout the Lifespan                    | 4 |
| PN111  | Musculoskeletal, Cognition and Sensory Throughout the Lifespan  | 4 |
| PN112  | Nutrition and Diet Therapy                                      | 2 |
| PN113  | Medical Surgical Nursing Clinical III                           | 4 |
| PN114  | IV Therapy for the Practical Nurse                              | 4 |
| PN115  | Maternal-Newborn Nursing                                        | 3 |
| PN116  | Maternal-Newborn Clinical                                       | 1 |
| PN117  | Digestion and Elimination Throughout the Lifespan               | 4 |
| PN118  | Medical-Surgical Clinical IV                                    | 2 |
| PN119  | Personal and Vocational Concepts II                             | 2 |
| PN120  | Leadership Clinical                                             | 1 |
| PN121  | NCLEX-PN Review                                                 | 1 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 79**

The Practical Nursing program at the North Kansas City campus is approved by the Missouri State Board of Nursing.

The Missouri State Board of Nursing to which the student applies for the initial Practical Nursing License will determine the eligibility to sit for the NCLEX-PN licensure exam. This will be done upon proof of successful completion of a qualified Practical Nursing Program.

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

IV Therapy Certification  
CPR Certification  
(AMERICAN HEART ASSOCIATION-HEALTHCARE PROVIDER)

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# DIPLOMA IN

## MEDICAL ASSISTING (MA)

This program is designed to prepare you to perform various technical and administrative skills as a member of a healthcare team in various settings. The student can develop skills in phlebotomy, electrocardiograms, medication administration, minor surgical techniques, emergency medical procedures, and office procedures.

### PROGRAM OUTCOMES

- Practice within the scope of the Medical Assistant role in healthcare settings (acute care, long-term care, physician clinics, and medical record departments)
- Function effectively as a healthcare team member
- Demonstrate proficiency in communication skills, computer skills, scheduling and receiving patients and preparing or maintaining medical records
- Demonstrate accuracy in billing, coding and medical transcription
- Exhibit proficiency in assisting physicians with examinations, taking vital signs and performing diagnostic tests while using infection control procedures

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

# MA PROGRAM REQUIREMENTS

## Required Courses

All students in the MA program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (12 hrs)

|         |                                          |   |
|---------|------------------------------------------|---|
| ENGL111 | English Composition I                    | 4 |
| INTD111 | Creating Academic & Professional Success | 4 |
| INTD260 | Career Development                       | 2 |

#### CORE REQUIREMENTS (56 hrs)

|         |                            |   |
|---------|----------------------------|---|
| BIO122  | Anatomy and Physiology I   | 4 |
| BIO132  | Anatomy and Physiology II  | 4 |
| HSS121  | Medical Terminology        | 4 |
| HSS134  | Medical Law and Ethics     | 4 |
| MEDA123 | Medical Office Management  | 4 |
| MEDA133 | Insurance Billing & Coding | 4 |
| MEDA211 | Clinical Skills I          | 4 |
| MEDA212 | Medical Lab Procedures     | 4 |
| MEDA221 | Clinical Skills II         | 4 |
| MEDA222 | First Aid and Safety       | 4 |
| MEDA223 | Pharmacology               | 4 |
| MEDA230 | Wellness                   | 4 |
| MEDA232 | Externship                 | 6 |
| MEDA241 | Clinical Review            | 2 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 66

Student's who successfully complete the Diploma in MA Program and want to obtain the Associate's Degree in Medical Assisting will need to successfully complete the following General Education courses (24 hrs):

- ENGL112 English Composition II
- HIST 210 World Cultures & Values
- HIT105 IT for Healthcare Professionals
- LITR 220 Values in World Literature
- MATH 143 Business Algebra
- PSYC 100 Intro to Psychology

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

CPR Certification  
(AMERICAN HEART ASSOCIATION-HEALTHCARE PROVIDER)

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College of

Information Systems  
and Technology





# MASTER OF

## e-LEARNING AND INSTRUCTIONAL TECHNOLOGY (MeIT)

This program has been designed to prepare classroom instructors, corporate trainers, and instructional technology / e-Learning managers / administrators for service in programs at all instructional levels. It has been specifically designed to integrate the disciplines of information technology, management, training, and pedagogy to establish an experience-driven program based on solid research, practice, and theoretical principles. Emphasis is placed on preparing leaders who can effectively integrate technology and e-learning into instructional and training curricula to meet societal, organizational, and learner needs.

### PROGRAM OUTCOMES

- Select, acquire, produce, utilize, and evaluate technology and e-learning methods, practices, equipment and materials in effective instructional or training programs
- Use a systematic approach for establishing, conducting, managing, evaluating, and researching effective instructional and / or training programs
- Apply e-learning and instructional technology theories, practices, materials, and delivery systems / platforms to integrate technology into the curriculum and classroom

### MeIT WITH A CONCENTRATION IN

#### ORGANIZATIONAL TRAINING AND DEVELOPMENT (MeIT-OTD)

This concentration is designed for corporate trainers and others involved in organizational training in the for-profit and non-profit sectors.

### MeIT-OTD PROGRAM OUTCOMES

- Additional outcomes depend upon courses selected for electives.

### MeIT WITH A CONCENTRATION IN

#### TECHNOLOGY FOR LEARNING AND COMMUNICATIONS IN K-16 SCHOOLS (MeIT-TLC)

This concentration is designed for teachers in public and private schools at the K-16 levels who want to enhance student learning better through the effective integration of modern learning technologies.

### MeIT-TLC PROGRAM OUTCOMES

- Additional outcomes depend upon courses selected for electives. Two recommended elective courses for this concentration along with their outcomes are:
  - MGMT635: Learn and apply methods and procedures to acquire public and private sector grants to establish and improve effective technology-based and e-learning-based instructional and training programs
  - MGMT650: Utilize and conduct practical and empirical research for use in establishing, maintaining, evaluating, and improving effective instructional and training programs

## PREPARATORY REQUIREMENTS

The Technology for Learning and Communications in K-16 Schools concentration is designed for educators who have graduated from a regionally accredited (bachelor's degree) teacher education program AND hold, and/or qualify for, a valid teaching certificate (verified or verifiable) from any state in the United States OR proof of previous certification as and eligibility for a teaching certificate in a state in the United States. No additional requirements, other than those published for pursuing a CTU Master's degree, are required.

## MeIT PROGRAM REQUIREMENTS

### Required Courses

All students in the MeIT program must complete all of the following courses:

| Course No.                            | Course Name                                             | Hrs. |
|---------------------------------------|---------------------------------------------------------|------|
| <b>MeIT CORE PROGRAM REQUIREMENTS</b> |                                                         |      |
| IT600                                 | Information Technology Management                       | 4    |
| IT610                                 | Relational Database Management Systems                  | 4    |
| IT640                                 | Networking and Telecommunications                       | 4    |
| MGMT600                               | Applied Managerial Decision Making                      | 4    |
| TLC600                                | Systems Approach to Instructional Design                | 4    |
| TLC605                                | Instructional Technology Delivery Systems and Platforms | 4    |
| TLC610                                | Basic Learning Materials Production                     | 4    |
| TLC690                                | Issues, Problems, and Research in Learning Technology   | 4    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 48

## MeIT-OTD PROGRAM REQUIREMENTS

### Required Courses

All students in the MeIT-OTD program must complete all of the following courses:

| Course No.                                 | Course Name                                   | Hrs. |
|--------------------------------------------|-----------------------------------------------|------|
| <b>MeIT-OTD CONCENTRATION REQUIREMENTS</b> |                                               |      |
| PM600                                      | Project Management Processes in Organizations | 4    |
| TLC620                                     | Organizational Training and Development       | 4    |
| Electives                                  | Choose two courses from approved list         | 8    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 48

## MeIT-TLC PROGRAM REQUIREMENTS

### Required Courses

All students in the MeIT-TLC program must complete all of the following courses:

| Course No.                                 | Course Name                           | Hrs. |
|--------------------------------------------|---------------------------------------|------|
| <b>MeIT-TLC CONCENTRATION REQUIREMENTS</b> |                                       |      |
| INTD607                                    | Creative Leadership                   | 4    |
| TLC625                                     | Online Learning: Theory and Practice  | 4    |
| Electives                                  | Choose two courses from approved list | 8    |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 48

### CONCENTRATION ELECTIVES

|         |                                               |   |
|---------|-----------------------------------------------|---|
| INTD607 | Creative Leadership                           | 4 |
| MGMT604 | Organizational Behavior                       | 4 |
| MGMT635 | Grants and Contracts                          | 4 |
| MGMT650 | Applied Research Design and Methods           | 4 |
| PM600   | Project Management Processes in Organizations | 4 |
| TLC620  | Organizational Training and Development       | 4 |
| TLC625  | Online Learning: Theory and Practice          | 4 |
| TLC635  | Assessment and Evaluation                     | 4 |

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Instructional Technology and Design (IT600, TLC600, TLC605)  
Learning Materials Production (IT600, TLC600, TLC610)  
Organizational Training (IT600, TLC600 or TLC610, TLC620)

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# MASTER OF SCIENCE IN MANAGEMENT

## WITH A CONCENTRATION IN INFORMATION SYSTEMS SECURITY (MSM-ISS)

An almost continuous stream of security-related incidents is affecting millions of computer systems and networks throughout the world. Organizations are constantly experiencing these attacks and security incidents; they constitute a risk to their organizational mission. The loss or corruption of information systems can significantly impact the organization and result in a substantial loss of revenue. To address these threats, organizations, both private and governmental, are investing considerable funds to adopt security measures to make their organizations safe.

Course content includes a solid core of project management curriculum plus courses in information systems security. This program is designed to provide the student with the information system security skills necessary to manage and protect the vital technology assets of today's organizations. The MSM-ISS is designed to prepare technical leaders in security management to combat threats in today's environment through an understanding of security management, network security principles, and certification and accreditation requirements.

### PROGRAM OUTCOMES

- Plan projects effectively and successfully, taking into consideration the quadruple constraints of time, cost, resources, and specifications
- Develop from the basic project plan a work-breakdown structure to the lowest granularity permitted by cost
- Determine and calculate project risks according to classical risk analysis
- Plan and manage contractual purchasing issues, including, procurement and supply, outsourcing, and just-in-time
- Evaluate and present project objectives, requirements, scope, and budgeting effectively to upper management
- Define technical requirements for the implementation of an effective security infrastructure
- Identify and describe the impact of implementing security components at all OSI layers
- Develop effective enterprise level security policies, standards and procedures
- Identify and develop necessary enterprise/government systems certification and accreditation procedures and best commercial practices

### PREPARATORY REQUIREMENTS

IT501, Foundations in Information Technology, may be required to ensure an adequate foundation for undertaking the Master of Science in Management with a concentration in ISS. This course may be skipped with sufficient undergraduate preparation or life experience.



# MSM-ISS PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-ISS program must complete all of the following courses:

| Course No.                                 | Course Name                                       | Hrs.      |
|--------------------------------------------|---------------------------------------------------|-----------|
| <b>MSM-ISS PROGRAM REQUIREMENTS</b>        |                                                   |           |
| CS651                                      | Computer Systems Security Foundations             | 4         |
| CS653                                      | Network Security                                  | 4         |
| CS654                                      | Security Management                               | 4         |
| CS661                                      | Software Information Assurance                    | 4         |
| CS662                                      | System Security Certification and Accreditation   | 4         |
| PM600                                      | Project Management Processes in Organizations     | 4         |
| PM610                                      | Project Planning, Execution and Closure           | 4         |
| PM620                                      | Schedule and Cost Control Techniques              | 4         |
| PM630                                      | Contracting and Procurement in Project Management | 4         |
| PM660                                      | Project Management Capstone                       | 4         |
| INTD607                                    | Creative Leadership                               | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                   | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Information Systems Security (CS651)  
Information Systems Security Management (CS651, CS654)  
(ISC)2 CISSP/SSCP Exam Prep (CS651,CS661)  
Security Certification and Accreditation (CS662)  
Project Management (PM600, PM610, PM620, PM630)

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### REGISTERED BY:



Project Management Institute, Registered Education Provider  
CTU is a recognized provider with the Project Management Institute (PMI®) Educational Provider Program (PMI R.E.P.).

Colorado Technical University's Master of Business Administration with a concentration in Project Management, Master of Science in Management with a concentration in IT, Project Management, Bachelor of Science in Project Management and the professional certificates in project management prepare students to take PMI's Project Management Professional® certification.  
[www.pmi.org](http://www.pmi.org)



# MASTER OF SCIENCE IN MANAGEMENT

WITH A CONCENTRATION IN INFORMATION TECHNOLOGY MANAGEMENT (MSM-ITM) ONLINE

Explosive demand for professionals who can integrate and manage a company's information and technology tools has created an emerging new field in information technology. In the next decade, the demand is expected to double. To help meet the need for this competitive new breed of management professional, Colorado Technical University has introduced this exciting new information technology concentration within the Master of Science in Management degree program. Course content includes a solid core of project management curriculum plus courses in computing platforms and network architecture designs. Software systems, both application and development, will be covered with emphasis on relational database and client/server technology. Information technology graduates will be prepared to design, build, integrate and manage the information technology systems and programs associated with today's organizations.

## PROGRAM OUTCOMES

- Plan projects effectively and successfully, taking into consideration the quadruple constraints of time, cost, resources, and specifications
- Develop from the basic project plan a work-breakdown structure to the lowest granularity permitted by cost
- Determine and calculate project risks according to classical risk analysis
- Plan and manage contractual purchasing issues, including, procurement and supply, outsourcing, and just-in-time
- Evaluate and present project objectives, requirements, scope, and budgeting effectively to upper management
- Apply analytical and critical thinking skills necessary to design, build, integrate and manage the information technology systems and programs associated with today's organizations
- Design, develop and manage a database system
- Comprehend the concepts of telecommunications and networking systems design, development and management
- Work effectively as problem-solving team members
- Conduct, use, and evaluate professional applied research

# MSM-ITM PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-ITM program must complete all of the following courses:

Course No. Course Name

### MSM-ITM PROGRAM REQUIREMENTS

|        |                                                   |   |
|--------|---------------------------------------------------|---|
| IT610  | Relational Database Management Systems            | 4 |
| IT612  | Database Analysis, Design and Implementation      | 4 |
| IT640  | Networking and Telecommunications                 | 4 |
| IT642  | Network Administration                            | 4 |
| IT660  | Information Technology Systems Development        | 4 |
| IT662  | Information Technology Systems Implementation     | 4 |
| MPM650 | Project Management Processes in Organizations     | 5 |
| MPM655 | Project Planning, Execution and Closure           | 5 |
| MPM660 | Schedule and Cost Control Techniques              | 5 |
| MPM665 | Contracting and Procurement in Project Management | 5 |

TOTAL PROGRAM QUARTER CREDIT HOURS:

Hrs.

44

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Systems Analysis and Integration (IT660, IT662)  
Networking and Telecommunications (IT640, IT642)  
Database Management (IT610, IT612)  
Project Management (MPM650, MPM655, MPM660, MPM665)

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[www.pmi.org](http://www.pmi.org)



Colorado Technical University™

# MASTER OF SCIENCE IN MANAGEMENT

WITH A CONCENTRATION IN INFORMATION TECHNOLOGY / PROJECT MANAGEMENT (MSM-IT/PM)

Explosive demand for professionals who can integrate and manage a company's information and technology tools has created an emerging new field in information technology. In the next decade, the demand is expected to double. To help meet the need for this competitive new breed of management professional, Colorado Technical University has introduced this exciting new information technology concentration within the Master of Science in Management degree program. Course content includes a solid core of project management curriculum plus courses in computing platforms and network architecture designs. Software systems, both application and development, will be covered with emphasis on relational database and client/server technology. Information technology graduates will be prepared to design, build, integrate and manage the information technology systems and programs associated with today's organizations.

## PROGRAM OUTCOMES

- Plan projects effectively and successfully, taking into consideration the quadruple constraints of time, cost, resources, and specifications
- Develop from the basic project plan a work-breakdown structure to the lowest granularity permitted by cost
- Determine and calculate project risks according to classical risk analysis
- Plan and manage contractual purchasing issues, including, procurement and supply, outsourcing, and just-in-time
- Evaluate and present project objectives, requirements, scope, and budgeting effectively to upper management
- Apply analytical and critical thinking skills necessary to design, build, integrate and manage the information technology systems and programs associated with today's organizations
- Design, develop and manage a database system
- Comprehend the concepts of telecommunications and networking systems design, development and management
- Work effectively as problem-solving team members
- Conduct, use, and evaluate professional applied research

## PREPARATORY REQUIREMENTS

IT501, Foundations in Information Technology, may be required to ensure an adequate foundation for undertaking the Master of Science in Management with a concentration in IT/PM. This course may be skipped with sufficient undergraduate preparation or life experience.

# MSM-IT/PM PROGRAM REQUIREMENTS

## Required Courses

All students in the MSM-IT/PM program must complete all of the following courses:

| Course No.                                 | Course Name                                       | Hrs.      |
|--------------------------------------------|---------------------------------------------------|-----------|
| <b>MSM-IT/PM PROGRAM REQUIREMENTS</b>      |                                                   |           |
| IT610                                      | Relational Database Management Systems            | 4         |
| IT612                                      | Database Analysis, Design and Implementation      | 4         |
| IT640                                      | Networking and Telecommunications                 | 4         |
| IT642                                      | Network Administration                            | 4         |
| IT660                                      | Information Technology Systems Development        | 4         |
| IT662                                      | Information Technology Systems Implementation     | 4         |
| PM600                                      | Project Management Processes in Organizations     | 4         |
| PM610                                      | Project Planning, Execution and Closure           | 4         |
| PM620                                      | Schedule and Cost Control Techniques              | 4         |
| PM630                                      | Contracting and Procurement in Project Management | 4         |
| PM660                                      | Project Management Capstone                       | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                   | <b>44</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Systems Analysis and Integration (IT660, IT662)  
Networking and Telecommunications (IT640, IT642)  
Database Management (IT610, IT612)  
Project Management (PM600, PM610, PM620, PM630)

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### REGISTERED BY:



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[www.pmi.org](http://www.pmi.org)



**Colorado Technical University™**



# BACHELOR OF SCIENCE IN ADVERTISING AND DIGITAL MEDIA DESIGN (BSADMD)

The power of advertising, marketing and digital media permeates nearly every area of our daily lives from consumer recognition to product loyalty and beyond. Creative businesses seek marketing professionals that can manage media campaigns and design requests from concept to completion. The ability to create memorable images and manage projects effectively and memorably can lead towards a rewarding future in the Creative industry.

## PROGRAM OUTCOMES

- Explore the advertising, digital design and marketing industries
- Demonstrate the use of a variety of marketing related skills
- Convert customer requests into clear specifications and proposals; then use the appropriate graphic design processes to meet client expectations
- Explore the basics of 3D computer graphics
- Select appropriate techniques and technologies for both print and web media
- Create and refine individual professional quality resume and portfolio
- Establish budget, project management, and legal guidelines for customer projects and manage them from conception to completion
- Exhibit professionalism through accuracy, attention to detail, teamwork skills, meeting deadlines, and effectively responding to clients needs

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                         | Hrs. |
|------------|-------------------------------------|------|
| ENGL080    | English Composition Preparation     | 4    |
| IT105      | Information and Technology Literacy | 4    |
| MATH060    | Pre-Algebra                         | 4    |
| MATH080    | Elementary Algebra                  | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

## BSADMD PROGRAM REQUIREMENTS

### Required Courses

**All students in the BSADMD program must complete all of the following courses:**

| Course No.                        | Course Name                                     | Hrs. |
|-----------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b> |                                                 |      |
| IT235                             | Database Applications with Access               | 4    |
| IT254                             | Spreadsheet Applications                        | 4    |
| ENGL111                           | English Composition I                           | 4    |
| ENGL112                           | English Composition II                          | 4    |
| ENGL200                           | Professional Writing                            | 4    |
| ENGL210                           | Professional Speaking                           | 4    |
| PHIL310                           | Ethics                                          | 4    |
| VC150                             | Theory and History of Design                    | 4    |
| VC120                             | Design Fundamentals                             | 4    |
| INTD111                           | Creating Academic and Professional Success      | 4    |
| SCI120                            | The Impact of Science and Technology on Society | 4    |
| MATH143                           | Business Algebra                                | 4    |
| FINC200                           | Applied Finance and Managerial Accounting       | 4    |
| MKTG210                           | Introduction to Marketing                       | 4    |
| BADM100                           | Introduction to Business                        | 4    |
| ECON201                           | Macroeconomics                                  | 4    |

**COMPUTING / INFORMATION TECHNOLOGY (16 hrs)**

|         |                                    |   |
|---------|------------------------------------|---|
| EBUS208 | Web Site/Portfolio Development     | 4 |
| EBUS218 | Multimedia for the Web             | 4 |
| EBUS325 | Web Design                         | 4 |
| VC301   | Foundation in 3D Computer Graphics | 4 |

**BUSINESS AND PROJECT MANAGEMENT (8 hrs)**

|         |                                                |   |
|---------|------------------------------------------------|---|
| BADM475 | Small Business Management and Entrepreneurship | 4 |
| PM210   | Introduction to Project Management             | 4 |

**MARKETING (20 hrs)**

|         |                          |   |
|---------|--------------------------|---|
| MKTG310 | Sales Management         | 4 |
| MKTG320 | Consumer Behavior        | 4 |
| MKTG330 | Marketing Research       | 4 |
| MKTG410 | International Marketing  | 4 |
| MKTG420 | Product Service Planning | 4 |

**VISUAL COMMUNICATIONS REQUIREMENTS (64 hrs)**

|       |                                       |   |
|-------|---------------------------------------|---|
| VC110 | Drawing I                             | 4 |
| VC125 | Visual Thinking and Layout Techniques | 4 |
| VC130 | Typography I                          | 4 |
| VC210 | Drawing II                            | 4 |
| VC221 | Advertising Principles                | 4 |
| VC225 | Computer Illustration I               | 4 |
| VC230 | Typography II                         | 4 |
| VC242 | Digital Imaging and Photography I     | 4 |
| VC270 | Desktop Publishing I                  | 4 |
| VC290 | Portfolio Development                 | 4 |
| VC310 | Corporate Identity Development        | 4 |
| VC322 | Production Standards                  | 4 |
| VC325 | Computer Illustration II              | 4 |
| VC340 | Branding and Packaging                | 4 |
| VC370 | Desktop Publishing II                 | 4 |
| VC375 | Digital Video Editing                 | 4 |

**INTERNSHIP or CAPSTONE (4 hrs)**

|       |            |   |
|-------|------------|---|
| VC496 | Internship | 4 |
| or    |            |   |
| VC497 | Capstone   | 4 |

**ELECTIVES (8 hrs) See list below.**

|                                              |   |
|----------------------------------------------|---|
| Electives—Choose a minimum of 8 credit hours | 8 |
|----------------------------------------------|---|

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 184

**Electives - 8 hours from the following list or others with dean/ chair approval**

|                                                                |                                    |   |
|----------------------------------------------------------------|------------------------------------|---|
| CS104                                                          | Problem Solving Concepts with C++  | 4 |
| EBUS228                                                        | Advanced Web Publishing            | 4 |
| EBUS420                                                        | Web-Based Database Applications    | 4 |
| IT190                                                          | Introduction to IT                 | 4 |
| VC243                                                          | Digital Imaging and Photography II | 4 |
| VC371                                                          | Desktop Publishing III             | 4 |
| VC415                                                          | Advanced Graphic Design            | 4 |
| VC430                                                          | Promotional Design                 | 4 |
| VC450                                                          | Corporate Design Strategies        | 4 |
| VC465                                                          | Editorial Design                   | 4 |
| Any VC, IT, CS, MKTG or BADM courses with dean/ chair approval |                                    |   |

**CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM:  
(NO ADDITIONAL TUITION COST)**

Fundamentals of Computer Illustration (VC120, VC210, VC225)  
 Advanced Computer Illustration (VC225, VC325)  
 Drawing (VC110, VC210)  
 Design Principles (VC125, VC120, VC150)  
 Typography (VC130, VC230)  
 Professional Communication (ENGL200, ENGL210)  
 Web Page Development (EBUS208, EBUS218)  
 Web Page Development (Advanced) (EBUS228 elective,)  
 Advanced Desktop Publishing (VC270, VC370, VC371 elective, VC465)  
 Desktop Publishing (VC270, VC370)  
 Digital Imaging Techniques (VC242, VC243 elective, VC375)  
 Advertising and Marketing Principles (BADM100, MKTG210, VC221)  
 Advanced Marketing Techniques (BADM475, MKTG410, MKTG420)

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# BACHELOR OF SCIENCE IN

## DIGITAL MEDIA DESIGN(BSDMD)

Businesses depend on creative concepts and innovative media solutions to carry their messages, make sales and entertain their customers. Graduates who are skilled in solving marketing and communication challenges with a wide range of creative digital solutions can have a rewarding future. Advertising agencies, design firms, public relations firms, video and film production companies, computer animation houses, printing companies, and in-house agencies are among the organizations that seek designers, artists and production managers with bachelor's degrees.

### PROGRAM OUTCOMES

- Implement business, advertising, and marketing strategies used in the graphic design industry
- Convert customer requests into clear proposals and specifications; then use the appropriate graphic design processes to meet client needs
- Utilize budgeting, scheduling and project management skills from project conception to completion
- Explore and implement a variety of print and web technologies
- Select appropriate techniques and technologies for both print and web media
- Demonstrate advanced digital image editing and manipulation techniques
- Create and refine individual graphic design resume and portfolio
- Explore the basics of 3D computer graphics
- Exhibit professionalism through accuracy, attention to detail, teamwork skills, meeting deadlines, and effectively interface with clients

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                         | Hrs. |
|------------|-------------------------------------|------|
| ENGL080    | English Composition Preparation     | 4    |
| IT105      | Information and Technology Literacy | 4    |
| MATH060    | Pre-Algebra                         | 4    |
| MATH080    | Elementary Algebra                  | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### BSDMD PROGRAM REQUIREMENTS

#### Required Courses

**All students in the BSDMD program must complete all of the following courses:**

| Course No.                        | Course Name                                     | Hrs. |
|-----------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b> |                                                 |      |
| IT235                             | Database Applications with Access               | 4    |
| IT254                             | Spreadsheet Applications                        | 4    |
| ENGL111                           | English Composition I                           | 4    |
| ENGL112                           | English Composition II                          | 4    |
| ENGL200                           | Professional Writing                            | 4    |
| ENGL210                           | Professional Speaking                           | 4    |
| PHIL310                           | Ethics                                          | 4    |
| VC150                             | Theory and History of Design                    | 4    |
| VC120                             | Design Fundamentals                             | 4    |
| INTD111                           | Creating Academic and Professional Success      | 4    |
| SCI120                            | The Impact of Science and Technology on Society | 4    |
| MATH143                           | Business Algebra                                | 4    |
| FINC200                           | Applied Finance and Managerial Accounting       | 4    |
| MKTG210                           | Introduction to Marketing                       | 4    |
| BADM100                           | Introduction to Business                        | 4    |
| ECON201                           | Macroeconomics                                  | 4    |

**COMPUTING / INFORMATION TECHNOLOGY (24 hrs)**

|         |                                    |   |
|---------|------------------------------------|---|
| EBUS208 | Web Site/Portfolio Development     | 4 |
| EBUS218 | Multimedia for the Web             | 4 |
| EBUS325 | Web Design                         | 4 |
| VC301   | Foundation in 3D Computer Graphics | 4 |

**Select 8 hours from one of the pairs below:**

|          |                                      |   |
|----------|--------------------------------------|---|
| CS104    | Problem Solving Concepts with C++    | 4 |
| EBUS228  | Advanced Web Publishing              | 4 |
| or       |                                      |   |
| EBUS308  | Introduction to e-Business           | 4 |
| Elective | Select a technology related elective | 4 |

**PROJECT MANAGEMENT (4 hrs)**

|       |                                    |   |
|-------|------------------------------------|---|
| PM210 | Introduction to Project Management | 4 |
|-------|------------------------------------|---|

**DIGITAL MEDIA REQUIREMENTS (76 hrs)**

|       |                                       |   |
|-------|---------------------------------------|---|
| VC110 | Drawing I                             | 4 |
| VC125 | Visual Thinking and Layout Techniques | 4 |
| VC130 | Typography I                          | 4 |
| VC210 | Drawing II                            | 4 |
| VC221 | Advertising Principles                | 4 |
| VC225 | Computer Illustration I               | 4 |
| VC230 | Typography II                         | 4 |
| VC242 | Digital Imaging and Photography I     | 4 |
| VC243 | Digital Imaging and Photography II    | 4 |
| VC270 | Desktop Publishing I                  | 4 |
| VC290 | Portfolio Development                 | 4 |
| VC310 | Corporate Identity Development        | 4 |
| VC322 | Production Standards                  | 4 |
| VC325 | Computer Illustration II              | 4 |
| VC340 | Branding and Packaging                | 4 |
| VC370 | Desktop Publishing II                 | 4 |
| VC371 | Desktop Publishing III                | 4 |
| VC375 | Digital Video Editing                 | 4 |
| VC415 | Advanced Graphic Design               | 4 |

**INTERNSHIP or CAPSTONE (4 hrs)**

|       |            |   |
|-------|------------|---|
| VC496 | Internship | 4 |
| or    |            |   |
| VC497 | Capstone   | 4 |

**ELECTIVES (12 hrs) See list below.**

|                                               |    |
|-----------------------------------------------|----|
| Electives—Choose a minimum of 12 credit hours | 12 |
|-----------------------------------------------|----|

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 184

**Electives - 12 hours from the following list or others with dean/ chair approval**

|                                                                |                                                |   |
|----------------------------------------------------------------|------------------------------------------------|---|
| BADM475                                                        | Small Business Management and Entrepreneurship | 4 |
| EBUS420                                                        | Web-Based Database Applications                | 4 |
| IT190                                                          | Introduction to IT                             | 4 |
| VC430                                                          | Promotional Design                             | 4 |
| VC450                                                          | Corporate Design Strategies                    | 4 |
| VC465                                                          | Editorial Design                               | 4 |
| Any VC, IT, CS, MKTG or BADM courses with dean/ chair approval |                                                | 4 |

**CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)**

|                                                                   |   |
|-------------------------------------------------------------------|---|
| Fundamentals of Computer Illustration (VC120, VC210, VC225)       | 4 |
| Advanced Computer Illustration (VC225, VC325)                     | 4 |
| Drawing (VC110, VC210)                                            | 4 |
| Design Principles (VC125, VC120, VC150)                           | 4 |
| Typography (VC130, VC230)                                         | 4 |
| Professional Communication (ENGL200, ENGL210)                     | 4 |
| Web Page Development (EBUS208, EBUS218)                           | 4 |
| Web Page Development (Advanced) (EBUS228)                         | 4 |
| Desktop Publishing (VC270, VC370)                                 | 4 |
| Advanced Desktop Publishing (VC270, VC370, VC371, VC465 elective) | 4 |
| Digital Imaging Techniques (VC242, VC243, VC375)                  | 4 |
| Advertising and Marketing Principles (BADM100, MKTG210, VC221)    | 4 |

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# BACHELOR OF SCIENCE IN

## ENTERPRISE INFORMATION MANAGEMENT (BSEIM)

The ability to integrate people, process, and technology is becoming increasingly important for an organization to be effective, efficient, and competitive in a global business environment. Having the ability to understand and assess technology solutions, solve business problems, and manage complex projects are critical elements in accomplishing an organization's vision, objectives and strategies.

This program is designed to provide the foundation for those individuals who will become the new generation of business leaders. The program integrates business concepts, technology solutions, and project management skills. Graduates of the program will have had the opportunity to develop effective communications skills, improved insight into business operations, a variety of problem solving approaches, and the ability to effectively manage resources and projects. They should understand the impact of market and customer requirements. The program includes a major project where students are required to demonstrate the synthesis of skills they have acquired.

### PROGRAM OUTCOMES

- Develop an understanding of financial, capital, budgeting, and cost management functions and their impact to business processes and operations
- Apply the fundamentals of leading and managing local, remote, and offshore resources and organizational functions and their relationship in a business setting
- Demonstrate software and project management best practices throughout the System Development Life Cycle (SDLC)
- Use state-of-the-practice techniques to develop a system that meets given quality specifications and includes a functioning business application
- Apply state-of-the-practice techniques to design and develop a software system that solves a business-oriented problem

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### BSEIM PROGRAM REQUIREMENTS

#### Required Courses

All students in the BSEIM program must complete all of the following courses:

| Course No.                        | Course Name                      | Hrs. |
|-----------------------------------|----------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b> |                                  |      |
| CS250                             | Fundamentals of Database Systems | 4    |
| IT254                             | Spreadsheet Applications         | 4    |
| ENGL111                           | English Composition I            | 4    |



|         |                                                 |
|---------|-------------------------------------------------|
| ENGL112 | English Composition II                          |
| ENGL200 | Professional Writing                            |
| ENGL210 | Professional Speaking                           |
| LITR220 | Values in World Literature                      |
| PHIL310 | Ethics                                          |
| INTD111 | Creating Academic and Professional Success      |
| SCI120  | The Impact of Science and Technology on Society |
| MATH103 | College Algebra                                 |
| MATH306 | Computer Assisted Statistics                    |
| BADM100 | Introduction to Business                        |
| ECON201 | Macroeconomics                                  |
| HIST150 | World History Since 1500                        |
| or      |                                                 |
| HIST310 | World History and Culture II                    |
| PSYC100 | Introduction to Psychology                      |
| or      |                                                 |
| SOCL101 | Introduction to Sociology                       |

#### **BUSINESS (16 hours)**

|         |                                           |
|---------|-------------------------------------------|
| ACCT201 | Accounting I                              |
| BADM305 | Organizational Behavior                   |
| HRMT210 | Introduction to Human Resource Management |
| MKTG301 | Introduction to Marketing                 |

#### **PROJECT MANAGEMENT (12 hours)**

|        |                                              |
|--------|----------------------------------------------|
| PM210  | Introduction to Project Management           |
| PM220  | Project Management Tools                     |
| SWE441 | Human Elements in Projects and Organizations |

#### **COMPUTING and INFORMATION TECHNOLOGY (52 hours)**

|        |                                      |
|--------|--------------------------------------|
| CS104  | Problem Solving Concepts with C++    |
| CE242  | Computer Architecture                |
| CS246  | Structured Query Language            |
| CS346  | User Interface Design                |
| CSS150 | Introduction to Computer Security    |
| IT200  | Introduction to Networking           |
| IT300  | Computer Networks and Communications |
| IT400  | Information Technology Architectures |

#### **PROGRAMMING SEQUENCE - PICK ONE SET OF 3 COURSES:**

|       |                              |
|-------|------------------------------|
| CS115 | Programming with C++         |
| CS215 | Intermediate C++ Programming |
| CS230 | Data Structures              |
| or    |                              |
| IT115 | Java Programming             |

|   |                          |                               |   |
|---|--------------------------|-------------------------------|---|
| 4 | IT215                    | Intermediate Java Programming | 4 |
| 4 | IT315                    | Advanced Java                 | 4 |
| 4 | <b>CAPSTONE SEQUENCE</b> |                               |   |
| 4 | IT481                    | IT Capstone I                 | 4 |
| 4 | IT482                    | IT Capstone II                | 4 |

#### **MATHEMATICS (8 hours)**

|   |         |                      |   |
|---|---------|----------------------|---|
| 4 | CS265   | Algorithms           | 4 |
| 4 | MATH200 | Discrete Mathematics | 4 |

#### **SOFTWARE ENGINEERING (12 hours)**

|   |        |                              |   |
|---|--------|------------------------------|---|
| 4 | CS366  | Software Engineering Methods | 4 |
| 4 | CS376  | Object-Oriented Methods      | 4 |
| 4 | SWE440 | Software Project Management  | 4 |

#### **ELECTIVES (16 hours)**

|   |                                                                 |  |    |
|---|-----------------------------------------------------------------|--|----|
| 4 | Open elective (any course may be used)                          |  | 4  |
| 4 | Business, Project Management or Technical electives (3 courses) |  | 12 |

#### **TOTAL PROGRAM QUARTER CREDIT HOURS:**

180

#### **CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)**

Business Fundamentals (BADM100, HRMT210, MKTG210, Elective IT190)  
C++ Programming (CS115, CS215, CS230)  
Client Java Programming (Either IT115 and IT215 or CS245)  
Computer Network Telecommunications (IT200, IT300)  
Computer Systems Architecture (CE242, IT400)  
CompTIA Network+TM Fundamentals (IT200)  
Management Essentials (BADM100, BADM305, HRMT210)  
Object-Oriented Methods (CS376)  
Professional Communication (ENGL200, ENGL210)  
Software Engineering Process (CS366, CS376)  
Software Engineering Application (CS481, CS482)

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# BACHELOR OF SCIENCE IN INFORMATION SYSTEMS MANAGEMENT (BSISM)

INFO

Most organizations have invested significantly in computer hardware and software systems. Today, the need is for professionals who can align and manage technology in harmony with human resources. The BSISM degree can provide the foundation for a career as a network engineer, network operations analyst, certified systems engineer, systems administrator, IT manager, business analyst, systems analyst, IT project leader or sales account representative.

## PROGRAM OUTCOMES

- Plan, implement, maintain, and manage computing and information systems
- Demonstrate an understanding of current computer networks and protocols of data communications
- Explain database concepts, discuss the capabilities of modern database systems, and apply those concepts in the design, implementation, and querying of a database to support a business
- Apply the skills necessary to manage people and to use technology to support business goals through team projects
- Apply the tools and techniques of project management

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# BSISM PROGRAM REQUIREMENTS

## Required Courses

All students in the BSISM program must complete all of the following courses:

| Course No.                                         | Course Name                                                      | Hrs. |
|----------------------------------------------------|------------------------------------------------------------------|------|
| <b>GENERAL EDUCATION (68 hrs)</b>                  |                                                                  |      |
| IT105                                              | Information and Technology Literacy                              | 4    |
| IT235                                              | Database Applications with Access                                | 4    |
| IT254                                              | Spreadsheet Applications                                         | 4    |
| ENGL111                                            | English Composition I                                            | 4    |
| ENGL112                                            | English Composition II                                           | 4    |
| ENGL200                                            | Professional Writing                                             | 4    |
| ENGL210                                            | Professional Speaking                                            | 4    |
| PHIL310                                            | Ethics                                                           | 4    |
| HIST150                                            | World History Since 1500                                         | 4    |
| or                                                 |                                                                  |      |
| HIST210                                            | World History and Culture 1                                      | 4    |
| LITR220                                            | Values in World Literature                                       | 4    |
| INTD111                                            | Creating Academic and Professional Success                       | 4    |
| SCI120                                             | The Impact of Science and Technology on Society                  | 4    |
| MATH143                                            | Business Algebra                                                 | 4    |
| MATH306                                            | Computer Assisted Statistics                                     | 4    |
| ECON201                                            | Macroeconomics                                                   | 4    |
| BADM100                                            | Introduction to Business                                         | 4    |
| PSYC100                                            | Introduction to Psychology                                       | 4    |
| or                                                 |                                                                  |      |
| SOCL101                                            | Introduction to Sociology                                        | 4    |
| <b>MATHEMATICS (4 hrs)</b>                         |                                                                  |      |
| MATH476                                            | Quantitative Decision Making                                     | 4    |
| <b>COMPUTING / INFORMATION TECHNOLOGY (64 hrs)</b> |                                                                  |      |
| CS104                                              | Problem Solving Concepts with C++                                | 4    |
| CS146                                              | Introduction to UNIX                                             | 4    |
| CS246                                              | Structured Query Language                                        | 4    |
| CSS150                                             | Introduction to Computer Security                                | 4    |
| EBUS208                                            | Web Site/Portfolio Development                                   | 4    |
| EBUS228                                            | Advanced Web Publishing                                          | 4    |
| EBUS420                                            | Web-Based Database Applications                                  | 4    |
| IT145                                              | Introduction to Operating Systems and Client/Server Environments | 4    |
| IT180                                              | Introduction to Computer Technology                              | 4    |
| IT200                                              | Introduction to Networking                                       | 4    |
| IT190                                              | Introduction to IT                                               | 4    |
| IT225                                              | IT Support Systems                                               | 4    |

|       |                                                 |   |
|-------|-------------------------------------------------|---|
| IT254 | Spreadsheet Applications                        | 4 |
| IT300 | Computer Networks and Communications            | 4 |
| IT340 | Client/Server System and Network Administration | 4 |
| IT400 | Information Technology Architectures            | 4 |

### BUSINESS (12 hrs)

|         |                         |   |
|---------|-------------------------|---|
| ACCT201 | Accounting I            | 4 |
| BADM305 | Organizational Behavior | 4 |
| BADM410 | Business Law I          | 4 |

### PROJECT MANAGEMENT (8 hrs)

|       |                                            |   |
|-------|--------------------------------------------|---|
| PM210 | Introduction to Project Management         | 4 |
| PM320 | Project Scheduling and Resource Allocation | 4 |

### ELECTIVES (16 hrs)

|                                          |    |
|------------------------------------------|----|
| Choose from CS/CSS/IT/Management courses | 16 |
|------------------------------------------|----|

### CAPSTONE COURSE SEQUENCE (8 hrs)

|       |                 |   |
|-------|-----------------|---|
| IT485 | ISM Capstone I  | 4 |
| IT486 | ISM Capstone II | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS:** 180

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

CompTIA A+TM Fundamentals (IT180)  
 CompTIA Network+ TM (IT200)  
 Computer Network Telecommunications (IT200, IT300)  
 Help Desk Support (IT225)  
 Professional Communication (ENGL200, ENGL210)  
 UNIX Network Administration (IT200, IT340)  
 UNIX Programming (CS146, elective CS345)  
 Web Page Development (EBUS208, elective EBUS218)  
 Web Page Development (Advanced) (EBUS228)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (BSIT)

Successful organizations use technology to find solutions to all kinds of business challenges. Individuals who understand how to use technology to contribute to productivity and the bottom line are in top demand. According to the U.S. Bureau of Labor Statistics, Office of Employment Predictions, by 2010 the number of computer and information technology management positions that require a bachelor's degree is expected to increase by 50 percent.

## PROGRAM OUTCOMES

- Define and explain current computer networks, protocols, and the role of network management software
- Define and explain the fundamentals of computer system security requirements
- Implement the goals and techniques of software engineering through the development of a complex application
- Apply database concepts and capabilities through the creation, organization, and maintenance of modern database systems
- Solve complex problems through the ability to program in at least one high level programming language

## PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

## BSIT PROGRAM REQUIREMENTS

### Required Courses

All students in the BSIT program must complete all of the following courses:

This program consists of two parts; one is the set of courses required for all students enrolled in the program. The other part consists of sets of courses from which students may select based on their interests and courses available on their campus.

| Course No.                                         | Course Name                                     | Hrs. |
|----------------------------------------------------|-------------------------------------------------|------|
| <b>GENERAL EDUCATION (64 hrs)</b>                  |                                                 |      |
| CS250                                              | Fundamentals of Database Systems                | 4    |
| IT254                                              | Spreadsheet Applications                        | 4    |
| ENGL111                                            | English Composition I                           | 4    |
| ENGL112                                            | English Composition II                          | 4    |
| ENGL200                                            | Professional Writing                            | 4    |
| ENGL210                                            | Professional Speaking                           | 4    |
| PHIL310                                            | Ethics                                          | 4    |
| HIST250                                            | World Cultures and Values                       | 4    |
| or                                                 |                                                 |      |
| HIST310                                            | World History and Culture II                    | 4    |
| LITR220                                            | Values in World Literature                      | 4    |
| INTD111                                            | Creating Academic and Professional Success      | 4    |
| SCI120                                             | The Impact of Science and Technology on Society | 4    |
| MATH103                                            | College Algebra                                 | 4    |
| MATH306                                            | Computer Assisted Statistics                    | 4    |
| ECON201                                            | Macroeconomics                                  | 4    |
| BADM100                                            | Introduction to Business                        | 4    |
| PSYC100                                            | Introduction to Psychology                      | 4    |
| or                                                 |                                                 |      |
| SOCL101                                            | Introduction to Sociology                       | 4    |
| <b>MATHEMATICS (4 hrs)</b>                         |                                                 |      |
| MATH200                                            | Discrete Mathematics                            | 4    |
| <b>BUSINESS (4 hrs)</b>                            |                                                 |      |
| EBUS308                                            | Introduction to e-Business                      | 4    |
| <b>PROJECT MANAGEMENT (8 hrs)</b>                  |                                                 |      |
| PM210                                              | Introduction to Project Management              | 4    |
| PM320                                              | Project Scheduling and Resource Allocation      | 4    |
| <b>COMPUTING / INFORMATION TECHNOLOGY (52 hrs)</b> |                                                 |      |
| CS104                                              | Problem Solving Concepts with C++               | 4    |
| CS146                                              | Introduction to UNIX                            | 4    |
| CS246                                              | Structured Query Language                       | 4    |
| CS376                                              | Object-Oriented Methods                         | 4    |
| CSS150                                             | Introduction to Computer Security               | 4    |



|         |                                                                  |   |
|---------|------------------------------------------------------------------|---|
| EBUS208 | Web Site/Portfolio Development                                   | 4 |
| IT145   | Introduction to Operating Systems and Client/Server Environments | 4 |
| IT200   | Introduction to Networking                                       | 4 |
| IT300   | Computer Networks and Communications                             | 4 |
| IT340   | Client/Server System and Network Administration                  | 4 |
| IT400   | Information Technology Architectures                             | 4 |
| IT481   | IT Capstone I                                                    | 4 |
| IT482   | IT Capstone II                                                   | 4 |

#### SELECTED ELECTIVE COURSES:

All students in the BSIT program must complete the specified number of hours by selecting courses in each of the following categories:

#### OBJECT-ORIENTED PROGRAMMING ELECTIVES (12 hrs) 12

Choose 12 credits of one language from OBJECT-ORIENTED PROGRAMMING LANGUAGE course list

#### PROFESSIONAL TRACK ELECTIVES (between 20 and 24 hrs) 24

Choose a minimum of 20 credits from two of the PROFESSIONAL TRACK(s) listed below. Note, some tracks have two courses and some tracks three. If less than 24 hours are selected then the 4 additional hours will be from the next category - Electives. (Other tracks may be allowed with approval by your Dean/Chair)

#### ELECTIVES (between 12 and 16 hrs)

Choose a minimum of 12 credit hours from CS/CSS/IT/EBUS list 12  
(Other courses may be allowed with approval)

#### TOTAL PROGRAM QUARTER CREDIT HOURS: 180

#### OBJECT-ORIENTED PROGRAMMING ELECTIVES (Select one language)

|         |                                                                   |   |
|---------|-------------------------------------------------------------------|---|
| EBUS115 | Visual Basic Programming                                          | 4 |
| EBUS215 | Intermediate Visual Basic Programming                             | 4 |
| IT410   | Web Page-Based Database Application Programming with Visual Basic | 4 |
| or      |                                                                   |   |
| IT115   | Java Programming                                                  | 4 |
| IT215   | Intermediate Java Programming                                     | 4 |
| IT315   | Advanced Java                                                     | 4 |
| or      |                                                                   |   |
| CS115   | Programming with C++                                              | 4 |
| CS215   | Intermediate C++ Programming                                      | 4 |
| CS230   | Data Structures                                                   | 4 |

#### PROFESSIONAL TRACK ELECTIVES (Select from two professional tracks from the following or see your Dean/Chair for approval of additional tracks)

|        |                                                   |   |
|--------|---------------------------------------------------|---|
| ITM304 | Active Directory Services                         | 4 |
| ITM308 | Planning and Maintaining a Network Infrastructure | 4 |
| ITM309 | Network Infrastructure Design                     | 4 |
| or     |                                                   |   |
| ITM302 | Server Operating Systems                          | 4 |
| ITM306 | Network Infrastructure Administration             | 4 |
| ITM314 | Operating System Security                         | 4 |
| or     |                                                   |   |
| CSS200 | Principles of Network Security                    | 4 |
| CSS250 | Security Risk Management                          | 4 |
| CSS300 | Vulnerability Assessment and Management           | 4 |
| or     |                                                   |   |

|              |                                   |   |
|--------------|-----------------------------------|---|
| CS381        | Software Requirements Engineering | 4 |
| CS382        | Software Design                   | 4 |
| CS383        | Software Testing                  | 4 |
| or           |                                   |   |
| EBUS218      | Multimedia for the Web            | 4 |
| EBUS228      | Advanced Web Publishing           | 4 |
| Plus one of: |                                   |   |
| EBUS325      | Web Design                        | 4 |
| or           |                                   |   |
| EBUS432      | E-Commerce                        | 4 |

#### CS/EBUS/IT/ITM ELECTIVES

|         |                                                |   |
|---------|------------------------------------------------|---|
| CS245   | Programming Language: Java for C++ Programmers | 4 |
| CS345   | UNIX Systems Programming                       | 4 |
| CS352   | Advanced Database Systems                      | 4 |
| CS366   | Software Engineering Methods                   | 4 |
| CS381   | Software Requirements Engineering              | 4 |
| CS382   | Software Design                                | 4 |
| CS383   | Software Testing                               | 4 |
| EBUS218 | Multimedia for the Web                         | 4 |
| FINC200 | Applied Finance and Managerial Accounting      | 4 |
| IT180   | Introduction to Computer Technology            | 4 |
| IT225   | IT Support Systems                             | 4 |
| IT441   | IT Strategic Planning                          | 4 |
| IT460   | Managing Information Systems                   | 4 |
| ITMXXX  | ITM courses as available                       | 4 |
| PMXXX   | Project Management courses as available        | 4 |

#### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

C++ Programming (Electives CS115, CS215, CS230)  
Cisco CCNA™ Preparation (IT200, elective ITM321)  
Client Java Programming (Electives — either IT115 and IT215 or elective CS245)  
Computer Network Telecommunications (IT200, IT300)  
CompTIA A+™ Fundamentals (Elective IT180)  
CompTIA Network+™ Fundamentals (IT200)  
CompTIA Security+™ Fundamentals (CSS150, CSS200)  
Object-Oriented Methods (CS376)  
Professional Communication (ENGL200, ENGL210)  
Server Java Programming (IT315)  
Software Engineering Application (IT481, IT482)  
Software Engineering Process (CS376, Elective CS366)  
UNIX Network Administration (IT200, IT340)  
UNIX Programming (CS146, elective CS345)  
Visual Basic Programming (EBUS115, EBUS215)  
Web Page Development (EBUS208, elective EBUS218)

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# BACHELOR OF SCIENCE IN

## INFORMATION TECHNOLOGY (BSIT) ONLINE

Successful organizations use technology to find solutions to all kinds of business challenges. Individuals who understand how to use technology to contribute to productivity and the bottom line are in top demand. According to the U.S. Bureau of Labor Statistics, Office of Employment Predictions, by 2010 the number of computer and information technology management positions that require a bachelor's degree is expected to increase by 50 percent.

### PROGRAM OUTCOMES

- Define and explain current computer networks, protocols, and the role of network management software
- Define and explain the fundamentals of computer system security requirements
- Implement the goals and techniques of software engineering through the development of a complex application
- Apply database concepts and capabilities through the creation, organization, and maintenance of modern database systems
- Solve complex problems through the ability to program in at least one high level programming language

# BSIT PROGRAM REQUIREMENTS

## Required Courses

All students in the BSIT program must complete all of the following courses:

This program consists of two parts; one is the set of courses required for all students enrolled in the program. The other part consists of sets of courses (concentrations) from which students may select based on their interests and courses available.

| Course No.                        | Course Name                                    | Hrs. |
|-----------------------------------|------------------------------------------------|------|
| <b>GENERAL EDUCATION (68 hrs)</b> |                                                |      |
| MGM110                            | Principles of Business                         | 4    |
| CS250                             | Fundamentals of Database Systems               | 4    |
| ECO201                            | Macroeconomics                                 | 4    |
| ENG115                            | English Composition                            | 4    |
| ENG116                            | English Composition II                         | 6    |
| ENG202                            | Professional Writing and Composition           | 6    |
| HIS150                            | World History since 1500                       | 4    |
| HUM140                            | Art Appreciation                               | 4    |
| INTD111                           | Creating Academic and Professional Success     | 4    |
| IT254                             | Spreadsheet Applications                       | 4    |
| MAT150                            | College Level Algebra                          | 4    |
| MATH306                           | Computer Assisted Statistics                   | 4    |
| MGM105                            | Professional Communication                     | 4    |
| PHL210                            | Ethics                                         | 4    |
| SCI105                            | Environmental Science                          | 4    |
| SOC205                            | Sociology                                      | 4    |
| <b>CORE REQUIREMENTS (88 hrs)</b> |                                                |      |
| CS123                             | Problem Solving Concepts with Programming      | 4    |
| CS124                             | UNIX Fundamentals                              | 4    |
| CS150                             | Introduction to Computer System Security       | 4    |
| CS352                             | Advanced Database Systems                      | 4    |
| CS362                             | Structured Query Language for Data Management  | 4    |
| CS475                             | Object-Oriented Methods                        | 4    |
| IT208                             | Web Portfolio Publishing                       | 4    |
| IT170                             | Introduction to Object-Oriented Programming I  | 2    |
| IT171                             | Introduction to Object-Oriented Programming II | 2    |
| IT218                             | Multimedia for the Web                         | 4    |
| IT122                             | Fundamentals of Operating Systems              | 3    |
| IT242                             | Operating Systems and Practical Networking     | 3    |
| IT362                             | Network and Systems Administration             | 3    |
| IT270                             | Intermediate Object-Oriented Programming I     | 2    |
| IT271                             | Intermediate Object-Oriented Programming II    | 2    |
| IT382                             | Systems Administration                         | 3    |
| IT301                             | Computer Networks and Communications           | 4    |
| IT370                             | Advanced Object-Oriented Programming I         | 2    |
| IT371                             | Advanced Object-Oriented Programming II        | 2    |
| IT405                             | Information Technology Architectures           | 4    |
| IT441                             | IT Strategic Planning                          | 4    |

|        |                                    |   |
|--------|------------------------------------|---|
| IT460  | Managing Information Systems       | 4 |
| IT491  | IT Capstone I                      | 2 |
| IT492  | IT Capstone II                     | 2 |
| IT493  | IT Capstone III                    | 2 |
| IT494  | IT Capstone IV                     | 2 |
| MAT200 | Discrete Mathematics               | 4 |
| MPM424 | Introduction to Project Management | 4 |

### BUSINESS COURSES (12 hrs)

|        |                                        |   |
|--------|----------------------------------------|---|
| MGM310 | e-Business                             | 4 |
| MPM344 | Project Risk Management                | 4 |
| MPM426 | Project Scheduling and Cost Management | 4 |

**Concentration Requirements (12 hrs) Choose one of the following concentrations:**

### SOFTWARE SYSTEMS ENGINEERING CONCENTRATION (12 hrs)

|       |                                   |   |
|-------|-----------------------------------|---|
| CS455 | Software Requirements Engineering | 4 |
| CS457 | Software Design                   | 4 |
| CS459 | Software Testing                  | 4 |

### SECURITY CONCENTRATION (12 hrs)

|       |                       |   |
|-------|-----------------------|---|
| IT454 | Security Management   | 4 |
| IT456 | Security Architecture | 4 |
| IT458 | Disaster Recovery     | 4 |

### NETWORK MANAGEMENT CONCENTRATION (12 hrs)

|       |                                                                |   |
|-------|----------------------------------------------------------------|---|
| IT326 | Network Infrastructure Administration                          | 4 |
| IT327 | Implementing Managing and Maintaining a Network Infrastructure | 4 |
| IT329 | Network Infrastructure Design                                  | 4 |

### TOTAL PROGRAM QUARTER CREDIT HOURS

180

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Client Java Programming (IT170, IT171, IT270, IT271)  
 CompTIA Network+™ Fundamentals (IT242, IT382)  
 Computer Network Telecommunications (IT242, IT382, IT301)  
 Object-Oriented Methods (CS475)  
 Professional Communication (ENG202, MGM105)  
 Software Engineering Application (IT491, IT492, IT493, IT494)  
 UNIX Network Administration (IT242, IT362, IT382)  
 Web Page Development (IT208, IT218)

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**Colorado Technical University™**

# ASSOCIATE OF SCIENCE IN

## DIGITAL MEDIA DESIGN (ASDMD)

Innovative people that can inform, persuade and entertain customers can be key players in creative organizations. Advertising agencies, design firms, video production companies, printers, newspapers, magazines, and in-house agencies all seek artists and designers who understand business practices, work well in team and individual environments and are skilled in industry standard software. If you are creative, motivated and driven, this degree is for you.

The ASDMD satisfies the course requirements for the first two years of the Bachelor of Science in Digital Media Design (BSDMD) or Bachelor of Science in Advertising and Digital Media Design (BSADMD) degree programs.

### PROGRAM OUTCOMES

- Demonstrate an appreciation of management, production, and designer roles in business environments
- Develop and apply basic employment related skills; including organizational skills, time management skills and communication skills
- Demonstrate proficiency with graphic design software
- Demonstrate the use of design, drawing, thumb nail, and storyboarding concepts
- Apply graphic design processes and techniques to projects
- Use basic design techniques to build web and print media projects
- Explore digital image creation/manipulation techniques
- Critique various designs and layouts through critical thinking
- Utilize the various techniques of pre-press, printing and publishing
- Create individual graphic design resume and portfolio

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                         | Hrs. |
|------------|-------------------------------------|------|
| ENGL080    | English Composition Preparation     | 4    |
| IT105      | Information and Technology Literacy | 4    |
| MATH060    | Pre-Algebra                         | 4    |
| MATH080    | Elementary Algebra                  | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

# ASDMD PROGRAM REQUIREMENTS

## Required Courses

All students in the ASDMD program must complete all of the following courses:

| Course No.                                                                     | Course Name                                | Hrs.      |
|--------------------------------------------------------------------------------|--------------------------------------------|-----------|
| <b>GENERAL EDUCATION (32 hrs)</b>                                              |                                            |           |
| EBUS208                                                                        | Web Site/Portfolio Development             | 4         |
| ENGL111                                                                        | English Composition I                      | 4         |
| ENGL112                                                                        | English Composition II                     | 4         |
| MATH143                                                                        | Business Algebra                           | 4         |
| INTD111                                                                        | Creating Academic and Professional Success | 4         |
| VC150                                                                          | Theory and History of Design               | 4         |
| ECON201                                                                        | Macroeconomics                             | 4         |
| BADM100                                                                        | Introduction to Business                   | 4         |
| <b>DIGITAL MEDIA (52 hrs)</b>                                                  |                                            |           |
| VC110                                                                          | Drawing I                                  | 4         |
| VC120                                                                          | Design Fundamentals                        | 4         |
| VC125                                                                          | Visual Thinking and Layout Techniques      | 4         |
| VC130                                                                          | Typography I                               | 4         |
| VC210                                                                          | Drawing II                                 | 4         |
| VC221                                                                          | Advertising Principles                     | 4         |
| VC225                                                                          | Computer Illustration I                    | 4         |
| VC230                                                                          | Typography II                              | 4         |
| VC242                                                                          | Digital Imaging and Photography I          | 4         |
| VC270                                                                          | Desktop Publishing I                       | 4         |
| VC290                                                                          | Portfolio Development                      | 4         |
| VC322                                                                          | Production Standards                       | 4         |
| or                                                                             |                                            |           |
| VC325                                                                          | Computer Illustration II                   | 4         |
| VC370                                                                          | Desktop Publishing II                      | 4         |
| <b>INTERNSHIP / CAPSTONE (4 hrs)</b>                                           |                                            |           |
| VC296                                                                          | Internship                                 | 4         |
| or                                                                             |                                            |           |
| VC297                                                                          | Capstone                                   | 4         |
| <b>ELECTIVE – Select from VC, IT, CS, Marketing, Business, and Web (4 hrs)</b> |                                            |           |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b>                                     |                                            | <b>92</b> |

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Fundamentals of Computer Illustration (VC120, VC210, VC225)  
Advanced Computer Illustration (VC225, elective VC325)  
Drawing (VC110, VC210)  
Design Principles (VC125, VC120, VC150)  
Typography (VC130, VC230)  
Web Page Development (EBUS208, elective EBUS218)  
Desktop Publishing (VC270, VC370)  
Fundamentals of Digital Imaging (VC242, VC243 elective)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# ASSOCIATE OF SCIENCE IN

## INFORMATION TECHNOLOGY (ASIT)

Successful organizations use technology to find solutions to all kinds of business challenges. Individuals who understand how to work with information and technology to support a company's operational goals are in demand in all types of businesses and industries.

The ASIT program satisfies the course requirements for the first two years of the Bachelor of Science in Information Technology (BSIT) or Bachelor of Science in Information Systems Management (BSISM) degree programs.

### PROGRAM OUTCOMES

- Demonstrate an understanding of current computer networks, protocols of data communications, and the role of network management software
- Explain database concepts, discuss the capabilities of modern database systems, and apply those concepts in the design, implementation, and querying of a database to support a business
- Write programs in at least one high level programming language using programming fundamentals

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.



# ASIT PROGRAM REQUIREMENTS

## Required Courses

All students in the ASIT program must complete all of the following courses:

This program consists of two parts; one is the set of courses required for all students enrolled in the program. The other part consists of sets of courses from which students may select based on their interests and courses available on their campus.

| Course No.                        | Course Name                                | Hrs. |
|-----------------------------------|--------------------------------------------|------|
| <b>GENERAL EDUCATION (36 hrs)</b> |                                            |      |
| IT254                             | Spreadsheet Applications                   | 4    |
| ENGL111                           | English Composition I                      | 4    |
| ENGL112                           | English Composition II                     | 4    |
| ENGL200                           | Professional Writing                       | 4    |
| LITR220                           | Values in World Literature                 | 4    |
| INTD111                           | Creating Academic and Professional Success | 4    |
| MATH103                           | College Algebra                            | 4    |
| ECON201                           | Macroeconomics                             | 4    |
| BADM100                           | Introduction to Business                   | 4    |

### MATHEMATICS (4 hrs)

|         |                      |   |
|---------|----------------------|---|
| MATH200 | Discrete Mathematics | 4 |
|---------|----------------------|---|

### COMPUTING / INFORMATION TECHNOLOGY (32 hrs)

|         |                                                                  |   |
|---------|------------------------------------------------------------------|---|
| CS104   | Problem Solving Concepts with C++                                | 4 |
| CS146   | Introduction to UNIX                                             | 4 |
| CS246   | Structured Query Language                                        | 4 |
| CS250   | Fundamentals of Database Systems                                 | 4 |
| CSS150  | Introduction to Computer Security                                | 4 |
| IT145   | Introduction to Operating Systems and Client/Server Environments | 4 |
| IT200   | Introduction to Networking                                       | 4 |
| EBUS208 | Web Site/Portfolio Development                                   | 4 |

### Selected Elective Courses

All students in the ASIT program must complete the specified number of hours by selecting courses in each of the following categories:

### OBJECT-ORIENTED PROGRAMMING ELECTIVE (8 hrs)

Choose 1 option (8 credits) from the following

|         |                          |   |
|---------|--------------------------|---|
| EBUS115 | Visual Basic Programming | 4 |
|---------|--------------------------|---|

|                                                    |                                                                   |   |
|----------------------------------------------------|-------------------------------------------------------------------|---|
| EBUS215                                            | Intermediate Visual Basic Programming                             | 4 |
| or                                                 |                                                                   |   |
| IT115                                              | Java Programming                                                  | 4 |
| IT215                                              | Intermediate Java Programming                                     | 4 |
| or                                                 |                                                                   |   |
| CS115                                              | Programming with C++                                              | 4 |
| CS215                                              | Intermediate C++ Programming                                      | 4 |
| <b>COMPUTING / INFORMATION TECHNOLOGY (12 hrs)</b> |                                                                   |   |
| Choose three courses from the following:           |                                                                   |   |
| IT180                                              | Introduction to Computer Technology                               | 4 |
| IT300                                              | Computer Networks and Communications                              | 4 |
| IT340                                              | Client/Server System and Network Administration                   | 4 |
| IT400                                              | Information Technology Architectures                              | 4 |
| IT410                                              | Web Page-Based Database Application Programming with Visual Basic | 4 |
| IT315                                              | Advanced Java                                                     | 4 |
| EBUS308                                            | Introduction to e-Business                                        | 4 |
| CS230                                              | Data Structures                                                   | 4 |
| CS376                                              | Object-Oriented Methods                                           | 4 |
| PM210                                              | Introduction to Project Management                                | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 92**

### CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

- Client Java Programming (IT115 and IT215)
- Computer Network Telecommunications (IT200, elective IT300)
- CompTIA A+ TM Fundamentals (elective IT180)
- C++ Programming (CS115, CS215, elective CS230)
- Object-Oriented Methods (elective CS376)
- Server Java Programming (elective IT315)
- UNIX Network Administration (IT200, elective IT340)
- Visual Basic Programming (EBUS115, EBUS215)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# ASSOCIATE OF SCIENCE IN INFORMATION TECHNOLOGY (ASIT) ONLINE

Successful organizations use technology to find solutions to all kinds of business challenges. Individuals who understand how to work with information and technology to support a company's operational goals are in demand in all types of businesses and industries.

The ASIT program satisfies the course requirements for the first two years of the Bachelor of Science in Information Technology (BSIT) or Bachelor of Science in Information Systems Management (BSISM) degree programs.

## PROGRAM OUTCOMES

- Demonstrate an understanding of current computer networks, protocols of data communications, and the role of network management software
- Explain database concepts, discuss the capabilities of modern database systems, and apply those concepts in the design, implementation, and querying of a database to support a business
- Write programs in at least one high level programming language using programming fundamentals

# ASIT PROGRAM REQUIREMENTS

## Required Courses

All students in the ASIT program must complete all of the following courses:

### Course No. Course Name

#### GENERAL EDUCATION (40 hours)

|         |                                            |   |
|---------|--------------------------------------------|---|
| MGM110  | Principles of Business                     | 4 |
| ENG116  | English Composition II                     | 6 |
| ENG202  | Professional Writing and Composition       | 6 |
| HIS150  | World History Since 1500                   | 4 |
| HUM140  | Art Appreciation                           | 4 |
| INTD111 | Creating Academic and Professional Success | 4 |
| IT254   | Spreadsheet Applications                   | 4 |
| MAT150  | College Level Algebra                      | 4 |
| SOC205  | Sociology                                  | 4 |

#### CORE REQUIREMENTS (52 hours)

|        |                                                |   |
|--------|------------------------------------------------|---|
| CS123  | Problem Solving Concepts with Programming      | 4 |
| CS124  | UNIX Fundamentals                              | 4 |
| CS150  | Introduction to Computer System Security       | 4 |
| CS250  | Fundamentals of Database Systems               | 4 |
| CS352  | Advanced Database Systems                      | 4 |
| CS362  | Structured Query Language for Data Management  | 4 |
| IT208  | Web Portfolio Publishing                       | 4 |
| IT170  | Introduction to Object-Oriented Programming I  | 2 |
| IT171  | Introduction to Object-Oriented Programming II | 2 |
| IT122  | Fundamentals of Operating Systems              | 3 |
| IT242  | Operating Systems and Practical Networking     | 3 |
| IT362  | Network and Systems Administration             | 3 |
| IT270  | Intermediate Object-Oriented Programming I     | 2 |
| IT271  | Intermediate Object-Oriented Programming II    | 2 |
| IT382  | Systems Administration                         | 3 |
| MAT200 | Discrete Mathematics                           | 4 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 92**

## CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM: (NO ADDITIONAL TUITION COST)

Client Java Programming (IT170, IT171, IT270, IT271)  
CompTIA Network+™ Fundamentals (IT242, IT382)  
UNIX Network Administration (IT242, IT362, IT382)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here, however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**ACC201 Accounting I**

This course introduces fundamental accounting concepts and explores the accounting environment. Covers the basic structure of accounting, how to maintain accounts, use account balances to prepare financial statements, complete the accounting cycle, and introduces the concept of internal accounting controls.

Credit: 4

**ACC202 Accounting II**

This course covers accounting for balance sheet items for partnerships and corporate entities. In addition, students will be exposed to accounting for the capital structure, inventory, long-term liabilities, payroll, investments and international operations of a firm.

Prerequisite: ACC201

Credit: 4

**ACC203 Accounting III**

This course completes the fundamentals of financial accounting and introduces managerial / cost accounting through job costing and process costing applications. Topics covered include the analysis of financial statement information, the contribution margin approach to decision-making, and the budgeting process.

Prerequisite: ACC202

Credit: 4

**ACC205 Financial Accounting Concepts**

The course introduces students to financial accounting. Student will learn the fundamentals of the accounting cycle.

Credit: 6

**ACC210 Computerized Accounting**

The course provides an introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger package. Students will utilize an integrated general ledger software package, including accounts receivable, accounts payable, inventories, and payroll systems.

Prerequisite: ACC201, ACC202

Credit: 4

**ACC211 Computerized Accounting Lab**

The lab provides instruction in utilizing the accounting software to maintain accounting records and processing common business applications with primary emphasis on a general ledger package. Students will utilize

an integrated general ledger software package, including accounts receivable, accounts payable, inventories, and payroll systems.

Prerequisite: ACC210

Credit: 2

**ACC214 Fundamentals of Accounting I**

This course provides an introduction to basic financial accounting with emphasis on the accounting principles and procedures, preparing general ledger entries, reconciling balances, and understanding basic accounting terminology.

Credit: 6

**ACC244 Fundamentals of Accounting II**

This course provides an introduction to the basic financial statements with emphasis on the accounting principles and procedures relating to liabilities and owners' equity.

Credit: 6

**ACC306 Accounting I**

(new number will be ACC201)

Introduces accounting concepts and explores the accounting environment. Covers the basic structure of accounting, how to maintain accounts, use account balances to prepare financial statements, and complete the accounting cycle. Also introduces the concept of internal control and how to account for assets.

Credit: 4

**ACC307 Accounting II**

(new number will be ACC202)

A continuation of Accounting I covering accounting for assets, current liabilities, and payroll. Students will be introduced to the principles of accounting for partnership and various corporate transactions, including those involving changes in capital structure, long-term liabilities, investments, and international operations.

Prerequisite: ACC306

Credit: 4

**ACC308 Accounting III**

(new number will be ACC203)

Completes the principles of accounting from Accounting II and introduces managerial / cost accounting, the analysis of financial information and the contribution margin approach to decision-making and budgeting.

Prerequisite: ACC307

Credit: 4

**ACC310 Accounting for Non-Accounting Majors**

This accounting course is designed for non-accounting majors. Students learn the basic structure of accounting, how to maintain accounts, use account balances to prepare financial statements, complete the accounting cycle, and begin to learn about internal control and accounting for assets. Students will explore accounting examples from their major area of study.

Credit: 4

**ACCT320 Forensic Accounting**

In this course the student will gain an understanding of forensic accounting and the differences between financial statement auditors, anti-fraud professionals, and forensic accounting professionals. The course covers the various types of forensic accounting engagements: damage claims, economic damages related to work-place issues, matrimonial investigations and assets and business valuations. The student will develop an understanding of fraud prevention, deterrence, detection, investigation, and remediation.

Prerequisite: ACC202 or ACCT202

Credit: 4

**ACCT330 Financial Statement Fraud**

In this course the student will gain an understanding of the major areas of financial statement fraud, fraud risk assessment, and fraud examination procedures. The course will cover procedures available to proactively search for financial statement fraud, as well as methods by which financial statement fraud is concealed. Students will gain an understanding of working paper development and documentation necessary during an investigation.

Prerequisite: ACC202 or ACCT202, FIN220 or FINC220

Credit: 4

**ACC341 Financial Accounting**

This course covers the concepts and standards underlying the preparation and analysis of external reports. Students will review the elements, structure, interrelationships of financial statements and the tools necessary to understand and interpret them.

Credit: 4

**ACC345 Intermediate Accounting I**

Covers the basic financial statements with emphasis on the accounting principles and procedures relating to current and long-term assets.

Prerequisite: ACC308

Credit: 4

**ACC346 Intermediate Accounting II**

Covers the basic financial statements with emphasis on the accounting principles and procedures relating to liabilities and owners' equity. Also covers the aspects of revenue and expense recognition.

Prerequisite: ACC345

Credit: 4

**ACC350 Managerial Accounting**

This course provides students with an understanding of the role of accounting information in support of decision-making and planning. Students learn accounting methods for planning and controlling operations through budgets, responsibility centers, and cost management.

Prerequisite: MGM330

Credit: 4

**ACC355 Advanced Accounting**

Covers special accounting problems related to the preparation of combined and consolidated financial statements for accounting entities with branch offices and subsidiaries, both domestic and foreign. Also covers accounting for partnerships.

Prerequisite: ACC346

Credit: 4

**ACCT360 Forensic Accounting in a Digital Environment**

In this course the student will gain an understanding of the various types of digital evidence that can be used in an investigation, and the special requirements for digital evidence collection and preservation for forensic investigations. The student will be introduced to various software packages available for data extraction and analysis and for case management.

Credit: 4

**ACC365 Auditing**

An introduction to the primary work of the certified public accountant. Covers examination of financial statements for the purpose of rendering an opinion on the fairness with which they present an entity's financial position and the result of its operations.

Prerequisite: ACC346

Credit: 4

**ACC445 Cost Accounting**

Focuses on the principles of accounting for costs in manufacturing enterprises, basic records and procedures, cost reports and interpretation, overhead costs, variable budgets and by-products costs. Covers standard cost

procedures and differential cost analysis.

Prerequisite: ACC308

Credit: 6

#### **ACC455 Tax Accounting I**

Introduces the principles of individual income tax and tax planning strategies. Emphasizes the use of theoretical as well as practical approaches to learn the tax law associated with individual income tax and different forms of business. Develops analytical, research and communication skills.

Prerequisite: ACC308

Credit: 6

#### **ACC456 Tax Accounting II**

Studies the taxation of corporations, partnerships, estates and trusts. Emphasizes unique organizations such as S-corporations. Addresses the role of tax planning as it relates to the form of the entity.

Prerequisite: ACC455

Credit: 6

#### **ACC460 Accounting Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to formulate decisions within a business entity and analyze the financial implications of those decisions. Individual and team participation are imperative for this course.

Prerequisite: ACC342

Credit: 4

#### **ACCT470 Forensic and Litigation Advisory Services**

This course is designed to provide a capstone experience in forensic accounting by providing an understanding that forensic accounting is the application of accounting principles, theories, and discipline to facts or hypotheses at issue in a legal dispute. Students will gain an understanding of criminal, civil, and administrative engagements and the types of forensic and litigation advisory services provided by forensic accountants.

Prerequisite: ACC320 or ACCT320

Credit: 4

#### **ACC480 Contemporary Accounting Issues**

This course addresses issues of current interest in accounting. Course content will vary as determined by the evolution of the discipline.

Prerequisite: ACC342

Credit: 4

#### **ACC614 Applied Managerial Accounting**

Focuses on using available accounting information to help managers of the firm make

relevant decisions. Examines how the financial information developed for external users forms the basis for the managerial accounting system. Explores costing systems, cost behavior analysis, responsibility accounting and volume-profit relationships.

Credit: 4

#### **ACC618 Taxation and Business Decisions**

Examines the fundamental principles and complexities that underlie all tax strategies. Covers the relationship between taxes and the accounting function. Explores the taxation of different types of business entities and the individuals involved with the entities. Emphasizes the impact of tax considerations in business decisions such as compensation, mergers, acquisitions, and divestitures.

Prerequisite: ACC614

Credit: 5

#### **ACC624 Advanced Cost Accounting**

Examines strategic cost management theories and applications required in management planning and control. Topics include cost allocation, product costing, activity-based costing, operation control and other cost control systems.

Prerequisite: ACC614

Credit: 5

#### **ACC628 Financial Reporting**

A comprehensive examination of financial and accounting reporting standards, requirements and techniques for business entities, not-for-profit organizations and governmental entities. Covers financial reporting relating to maintenance, expansion, combination, restructurings and liquidation of business corporations. Research projects and case studies constitute an important part of this course.

Prerequisite: ACC614, MGM625

Credit: 5

#### **ACC634 Accounting Information Systems**

Examines advanced concepts, skills and applications of accounting information systems. Special emphasis is on the impact of database systems and advanced technology in accounting systems.

Prerequisite: ACC614

Credit: 5

#### **ACC642 Advanced Auditing and Management Control**

This course covers advanced auditing procedures and standards, as well as management control systems. Audit objectives, cycles, review, documentation,

theory, and professional code of practice are covered. Other topics include risk assessment techniques, management control systems, and organization for control.

Prerequisite: ACC614, ACC628

Credit: 6

#### **ACC644 Management Control and Auditing**

During this course, the student will examine management auditing and control systems utilized in business organizations. The course also addresses the use of accounting information in formulating managerial policies, and in measuring and evaluating performance. Topics include business risk and risk assessment techniques, management control systems, financial results, control systems, and organization for control.

Credit: 4

#### **ACCT099 Special Topics in Accounting**

This course addresses issues of current interest in accounting. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.

Prerequisite: Approval

Credit: 4

#### **ACCT199 Special Topics in Accounting**

This course addresses issues of current interest in accounting. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

#### **ACCT201 Accounting I**

This course introduces fundamental accounting concepts and explores the accounting environment. Covers the basic structure of accounting, how to maintain accounts, use account balances to prepare financial statements, complete the accounting cycle, and introduces the concept of internal accounting controls.

Prerequisite: Approval

Credit: 4

#### **ACCT202 Accounting II**

This course covers accounting for balance sheet items for partnerships and corporate entities. In addition, students will be exposed to accounting for the capital structure, inventory, long-term liabilities, payroll, investments and international operations of a firm.

Prerequisite: ACCT201

Credit: 4

#### **ACCT203 Accounting III**

This course completes the fundamentals of financial accounting and introduces managerial/cost accounting through job costing and process costing applications. Topics covered include the analysis of financial statement information, the contribution margin approach to decision-making, and the budgeting process.

Prerequisite: ACCT202

Credit: 4

#### **ACCT210 Computerized Accounting**

The course provides an introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger package. Students will utilize an integrated general ledger software package, including accounts receivable, accounts payable, inventories, and payroll systems.

Prerequisite: ACCT201, ACCT202

Credit: 4

#### **ACCT215 Introduction to Taxation**

This class is specifically designed for students in the Associates of Science in Accounting degree program. It introduces the student to fundamental issues regarding the taxation of individuals and businesses. Other tax issues such as payroll and property taxes are also examined.

Credit: 4

#### **ACCT299 Special Topics in Accounting**

This course addresses issues of current interest in accounting. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

#### **ACCT341 Intermediate Accounting I**

This course provides an in-depth analysis, assessment, and implications of the information found in corporate financial statements, as well as a history and applications of underlying accounting principles and procedures.

Prerequisite: ACCT203, IT254

Credit: 4

#### **ACCT342 Intermediate Accounting II**

This course focuses on the financing and investing activities of the business enterprise, as well as special accounting topics, i.e. earnings per share, pensions, employee compensation, error corrections, and income taxes.

Prerequisite: ACCT341

Credit: 4



**ACCT351 Cost Accounting**

This course focuses on accounting for costs in a manufacturing environment. Various techniques for estimating and accounting for costs are employed. Students will be involved in the budgeting and cost allocation processes. Prerequisite: ACCT203  
Credit: 4

**ACCT361 Tax Accounting I**

This course introduces the principles of individual income tax based on the U.S. Internal Revenue Code and supporting authority. Students will acquire a theoretical as well as practical understanding of the tax law as applied to individual U.S. taxpayers. Prerequisite: ACCT203  
Credit: 4

**ACCT362 Tax Accounting II**

This course provides an overview of the principles of taxation for various business entities based on the U.S. Internal Revenue Code and supporting authority. Students will acquire a theoretical as well as practical understanding of the tax law as applied to U.S. business entities. Prerequisite: ACCT361  
Credit: 4

**ACCT399 Special Topics in Accounting**

This course addresses issues of current interest in accounting. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

**ACCT421 Advanced Accounting**

This course provides a study of special accounting problems related to the preparation of combined and consolidated financial statements for business entities with branch offices and subsidiaries, both domestic and foreign. Accounting for partnerships, governmental, and non-profit organizations is also covered. Prerequisite: ACCT342  
Credit: 4

**ACCT441 Auditing**

This course is an introduction to the primary work of the certified public accountant. It covers examination of financial statements for the purpose of rendering an opinion on the fairness with which they present an entity's financial position and the result of its operations. Prerequisite: ACCT342  
Credit: 4

**ACCT443 Auditing Lab**

This lab represents a simulation of audit planning and implementation. Students will plan for and then audit various balance sheet and income statement accounts. The lab will conclude with the preparation of audited financial statements including audit opinion and appropriate footnotes. Credit: 1

**ACCT475 Internship**

This is an internship course which provides the student with the opportunity to work in the accounting field under the supervision of an accounting professional. The student will synthesize the experience by completing assignments designed to complement the internship experience. Prerequisite: Approval  
Credit: 4

**ACCT460 Accounting Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to formulate decisions within a business entity and analyze the financial implications of those decisions. Individual and team participation are imperative for this course. Prerequisite: ACCT342  
Credit: 4

**ACCT480 Contemporary Accounting Issues**

This course addresses issues of current interest in accounting. Course content will vary as determined by the evolution of the discipline. Prerequisite: ACCT342 or Approval  
Credit: 4

**ACCT495 Advanced Research and Study**

During this course, the student will be mentored during an independent, in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair. Prerequisite: Approval  
Credit: 1-6

**ACCT499 Special Topics in Accounting**

This course addresses issues of current interest in accounting. The content of the course will vary as determined by student interest and evolution of the discipline. A current syllabus from the Mentor will give further information. Prerequisite: Approval  
Credit: 1-6

**ACCT614 Applied Managerial Accounting**

The purpose of the course is to develop an understanding of how relevant economic information is captured through the organization's accounting system and then analyzed so that it may be used to make informed managerial decisions. In essence, the course provides the student with a set of skills that will enhance his/her ability to make managerial decisions, which in turn creates value for the enterprise. Students will explore costing systems, cost behavior analysis, responsibility accounting and cost-volume-profit relationships and use a variety of different methods to analyze business issues. Prerequisite: MGMT507A or Approval  
Credit: 4

**ACCT618 Taxation and Business Decisions**

The course covers the relationship between managerial decision-making and taxes. Students will explore the taxation of different types of business entities and the individuals involved with the entities. Emphasizes the impact of tax considerations in business decisions such as compensation, mergers, acquisitions, and divestitures. Prerequisite: ACCT362 or Approval  
Credit: 4

**ACCT624 Advanced Cost Accounting**

The course examines strategic cost management theories and applications used in management planning and control. Topics include cost allocation, product costing, activity-based costing, and operation control. Cost behaviors and projections, as well as various budgeting techniques, are also covered. Prerequisite: ACCT614 or Approval  
Credit: 4

**ACCT628 Financial Reporting**

A comprehensive examination of financial statements and accounting reporting standards. Students will gain an understanding of the information provided in corporate annual reports and how to evaluate the financial performance of an entity. Prerequisite: FINC615, ACCT342 or Approval  
Credit: 4

**ACCT634 Accounting Information Systems**

The student will examine advanced concepts, skills, and applications of accounting information systems. The course provides an examination of database systems, security methods, and advanced technology in accounting systems. Prerequisite: ACCT614, ACCT628 or Approval  
Credit: 4

**ACCT638 Advanced Auditing**

The student will cover advanced topics on auditing procedures and standards. Topics include audit objectives and planning, transaction cycles, audit review and documentation, and the preparation of the final audit report. Additionally, the student will become familiar with audit theory and professional code of practice. Prerequisite: ACCT614, ACCT628, ACCT445 or Approval  
Credit: 4

**ACCT644 Management Control and Auditing**

During this course, the student will examine management auditing and control systems utilized in business organizations. The course also addresses the use of accounting information in formulating managerial policies, and in measuring and evaluating performance. Topics include business risk and risk assessment techniques, management control systems, financial results, control systems, and organization for control. Prerequisite: ACCT624, ACCT638 or Approval  
Credit: 4

**ACCT648 Forensic Accounting**

This course is a comprehensive exploration of forensic accounting as a proactive approach to preventing, detecting, and investigating accounting disputes or irregularities. Prerequisite: ACCT638, ACCT644 or Approval  
Credit: 4

**ACCT660 Accounting Capstone**

This capstone course requires the student to apply the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by business leaders. Students will assess accounting problems and develop courses of actions to address those problems. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus is on crafting an effective policy and implementing a strategy. All assignments and activities will be discussed during the first class session. Individual and team participation are imperative for this course. Prerequisite: ACCT634 or Approval  
Credit: 4

**ACCT699 Special Topics in Accounting**

This course addresses issues of current interest in accounting. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **AML320 Financial Institutions**

This course provides an explanation of how the banking industry operates, both within the U.S. and internationally, the history of the U.S. monetary system, and an overview of Federal laws, regulations and statutes as they relate to financial institutions. Topics covered include the Financial Crimes Enforcement Network (FinCEN), the Sarbanes-Oxley Act; the Bank Secrecy Act (BSA) and the USA PATRIOT Act governing banks and other financial institutions. Developing an acute comprehension and application of these sources is vital to conducting financial investigations. Upon completion of this course, students will have developed a detailed understanding of the U.S. banking system and the laws and regulations governing the banking industry.  
Credit: 4

### **AML330 Money Laundering Detection and Reporting**

This course will extend the student's knowledge of the regulatory and legal framework in place to combat money-laundering, and provide the student with the necessary tools to identify and effectively investigate the wide array of money laundering methods being employed throughout the world. Students will develop a detailed understanding of the three levels of laundering money: placement, layering and integration. Types or methods of money laundering include drug trafficking, human smuggling, trade-based, terrorist financing, charities used as funding mechanisms, use of off-shore shell companies, wire transfers, informal value transfer systems (IVTS) such as Hawalas, Black Market Peso Exchange (BMPE) and the most recent threat in money laundering – stored value gift cards.  
Credit: 4

### **AML350 Terrorist Financing**

This course will cover methods used to finance activities employed by terrorist organizations to carry out their mission. Common methods of financing terrorism will be identified, providing investigators with the necessary framework to effectively track terrorist financing.  
Credit: 4

### **AML360 Legal Elements of Fraud**

This course provides an overview of the legal frameworks for addressing fraud, as well as special topics in evidence and expert witnesses as they pertain to fraud cases. Students will learn to identify different types of fraud, legal concepts relevant to fraud and the rules of evidence specific to fraud investigations.  
Credit: 4

### **AML365 Fraud Prevention and Examination**

This course provides an in-depth study of the investigative techniques specific to fraud investigations, and methods for prevention and detection of fraud. Students will learn investigative procedures appropriate for fraud investigations, how to prepare appropriate reports, and practices that serve to reduce and prevent fraud and corruption in the workplace.  
Credit: 4

### **AML370 Financial Investigation**

This course provides students with the foundational knowledge of how to conduct forensic financial investigations. Students will learn how to analyze patterns of suspicious activity and report their findings based on strict analysis of financial transactions observed during the course of their investigation. Methods used in gathering source information, analysis of financial documentation, use of law enforcement contacts, and other investigative tools such as data mining and the use of Internet resources and software interdiction systems, will be examined, enabling students to produce meaningful and substantive Suspicious Activity Reports (SARs) used in reporting suspicious financial activity to FinCEN.  
Credit: 4

### **AS101-102 Foundations of the Air Force**

This survey course briefly covers topics relating to the Air Force and defense. It focuses on the structure and missions of Air Force organizations, officership and professionalism. It is also a good introduction into the use of communication skills.  
Credit: 3

### **AS111-112 Leadership Laboratory**

This course (to be taken in conjunction with AS101 and 102) is a weekly laboratory that touches on the topics of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies.  
Credit: 0

### **AS201-202 The Evolution of Aerospace Studies**

This survey course is concerned with the beginnings of manned flight and the development of aerospace power in the United States, including the employment of air power in WWI, WWII, Korea, Vietnam, the Gulf War and the peaceful employment of U.S. air power in civic actions, scientific missions and support of space exploration.  
Credit: 3

### **AS211-212 Leadership Laboratory**

This course (to be taken in conjunction with AS201 and 202) provides you with the opportunity to demonstrate fundamental management skills and prepares you for Field Training.  
Credit: 0

### **AS301-302 Leadership Studies**

This course is a study in the anatomy of leadership, the need for quality and management leadership, the role of discipline in leadership situations and the variables affecting leadership. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts. Deal with actual problems and complete projects associated with planning and managing the Leadership Laboratory.  
Credit: 9

### **AS311-312 Leadership Laboratory**

This course (taken in conjunction with AS301 and 302) provides you the opportunity to develop your fundamental management skills while planning and conducting cadet activities.  
Credit: 0

### **AS401-402 National Security Studies and Preparation for Active Duty**

Learn about the role of the professional military leader in a democratic society; societal attitudes toward the armed forces; the requisites for maintaining adequate national defense structure; the impact of technological and international developments on strategic preparedness and the overall policy-making process; and military law. In addition, you will study topics that will prepare you for your first active-duty assignment as an officer in the Air Force.  
Credit: 9

### **AS411-412 Leadership Laboratory**

This course (taken in conjunction with AS401 and 402) provides you with the opportunity to use your leadership skills in planning and conducting cadet activities. It prepares you for commissioning and entry into the active-duty Air Force.  
Credit: 0

### **BADM099 Special Topics in Business Administration**

This course addresses issues of current interest in business administration. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.  
Credit: 4

### **BADM100 Introduction to Business**

This course provides a survey of the field of business management, marketing, finance and accounting. The variety, nature and interrelationship of problems of business operation are explored.  
Credit: 4  
Replaces: BADM201

### **BADM150 Contemporary Business Trends**

This course introduces the student to emerging factors and trends in business. It covers how current business equilibriums are upset by these trends and factors. Emphasis is on how to adapt or respond to these from a strategic and tactical perspective.  
Prerequisite: BADM100  
Credit: 4

### **BADM210 Introduction to International Business**

This survey course in global business will introduce students to all areas of international business and the environment within which business transactions take place. Topics related to global business operations and planning, such as investment issues, technology impact, competition, cultural diversity, and legal issues are covered.  
Prerequisite: BADM100  
Credit: 4

### **BADM220 International Business Communication**

This course is designed to enhance students' knowledge of cultures, traditions, and value systems as they apply in international, multinational, and global business settings. Students explore topics such as language and other forms of communication, traditions, values, norms, cultural diversity, cultural influences on communication and the negotiation process, and ways to improve communications with people whose first language is something other than English.  
Credit: 4

### **BADM299 Special Topics in Business Administration**

This course addresses issues of current interest in Business Administration. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **BADM301 Introduction to Business for Non-Majors**

This course provides a managerial framework of services for managers and students with

an interest in the human services sector. Specific course topics include: an overview of the types of information critical to decision making, accounting and financial statements, law, and the strategic role of information technology services.  
Credit: 4

#### **BADM305 Organizational Behavior**

The course addresses some tools and insights necessary to understand and analyze the characteristics of human beings and organizational situations. It further explores both organizational structure and human variables within that structure to contribute to the long-term survival of an enterprise, and includes team building.  
Prerequisite: BADM100  
Credit: 4

#### **BADM350 International Business**

During this course the student studies the international business environment as it relates to global competitiveness. The course explores strategy, organizations, operations, finance, marketing and coping with different economic systems. Further study will focus on the differences between foreign and domestic environments and the impact of these differences on managing in an international business setting are examined.  
Prerequisite: BADM100  
Credit: 4

#### **BADM355 Legal Operations in International Business**

This course provides a review of the legal operations in global business environments. Students review topics such as comparative analysis of the legal principles, issues, conventions, and competitive influences affecting activities conducted by U.S. businesses in global business environments and by foreign enterprises when operating within the United States. This course also provides an overview of the structure and organization of foreign legal systems, international trade agreements, associations, and regulatory agencies. Students also review international dispute resolution mechanisms as applied by the international Court of Justice, the European Union, and various arbitral organizations.  
Prerequisite: BADM100  
Credit: 4

#### **BADM360 Operations Management**

This course focuses on solving the problems associated with the planning and control of production/manufacturing and service

operations. It explores forecasting, planning products, processes, technologies and facilities, demand and inventory in the production systems, control for productivity, quality and reliability.  
Prerequisite: BADM100, MATH143  
Credit: 4

#### **BADM370 Quality Management**

During this course the student investigates the emerging principles of quality and its implementation. It explores the processes and values for implementing quality, self managed work teams, principles of quality and the importance of including quality as a business strategy. Additionally, it covers how to examine and improve work processes in the organization.  
Credit: 4

#### **BADM399 Special Topics in Business Administration**

This course addresses issues of current interest in business administration. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **BADM405 Human Factors Analysis**

This course emphasizes the human-machine design interface, considers both operator and maintenance functions and covers some of the methods/tools used in human engineering design. Where the human is involved, system design must consider the following factors: anthropometric, human sensory and physiological.  
Prerequisite: BADM305  
Credit: 4

#### **BADM410 Business Law I**

This course provides an understanding of the principles underlying the legal environment of business. It examines the current legal rules and regulations affecting businesses and discusses the new developments and trends that will greatly affect future transactions. It also outlines the legal aspects of intellectual property especially as it relates to e-business.  
Prerequisite: BADM100  
Credit: 4

#### **BADM415 Quality and Six Sigma**

This course provides the concepts, theories and techniques for applying six sigma as an integral part of a quality program. Emphasis is on the choosing the right methodology, tool and technique for a particular business situation.  
Prerequisite: BADM100  
Credit: 4

#### **BADM420 Business Law II**

During this course, the student will study the legal aspects of commercial transactions. The course provides an overview of the following concepts: the Uniform Commercial Code, commercial paper, securities regulations, bailments, the Law of Agency, business structure and the liability of corporate officers. Additionally, it examines investment banking and securities underwriting in detail; and studies the role, responsibilities and liability of the accounting firm, investment banker, legal firm and corporate officers involved in the registration process of a public offering.  
Prerequisite: BADM410  
Credit: 4

#### **BADM430 Entrepreneurial Leadership**

This course provides a systems approach to developing the successful organization of the future. Students will examine how to lead others, stimulate purposeful innovation, build culture and manage change. Change models and methodologies are discussed within an environment of rapidly changing technology. An emphasis is placed on understanding the management issues involved in implementing organizational changes. Students develop an understanding of the knowledge and skills necessary to maximize their productivity and effectiveness as change leaders.  
Prerequisite: BADM100  
Credit: 4

#### **BADM440 Research Design Methods and Applications**

This course provides the student with the basics of research needed to successfully complete business capstone courses. It covers the full cycle of research starting with a qualitative examination of an organizational phenomenon and then addressing how to measure it via survey, experiments, or other designs. It concludes with issues of verification and implementation based on the outcome of the quantitative phase. It also includes the topic of scale development, reliability, validity, confirmatory factor analysis, and issues of survey development and implementation.  
Prerequisite: MATH306  
Credit: 4

#### **BADM460 Business Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by business leaders.

Students will assess general business problems and develop courses of actions to address those problems. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus is on crafting an effective policy and implementing a strategy. Individual and team participation are imperative for this course.  
Prerequisite: Completion of all concentration business courses  
Credit: 4

#### **BADM465 International Business Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by businesses in today's national, international and global environment. Students will assess global business problems and develop courses of actions to address those problems. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus is on crafting an effective policy and implementing a strategy. Individual and team participation are imperative for this course.  
Prerequisite: Completion of all concentration business courses  
Credit: 4

#### **BADM475 Small Business Management and Entrepreneurship**

During this course the student will explore the fundamentals of business organization, operation and management. The course deals with the characteristics and activities of the business executive, managerial relationships, accountability and the entrepreneur. It requires the student to conduct application and synthesis of other material in order to create a business plan.  
Prerequisite: ECON202, FINC400, HRMT210, MKTG210  
Credit: 4

#### **BADM480 Business Strategy and Policy**

This is a capstone course for seniors designed to facilitate integration of the knowledge gained in other courses. The course focuses on the total enterprise. It emphasizes identifying external opportunities and determining the value-creating potential of a firm's resources, capabilities and core competencies to achieve a strategic competitive advantage.  
Prerequisite: Approval  
Credit: 4



### **BADM485 Senior Project**

This course provides a forum for Senior status students to refine and enhance their organizational, research, writing and presentation skills. The instructor approved topic is chosen by the students because of its real-world relevance, application and connection to the students' major area of study, interest and workplace relevance. Students will be working under the guidance of a skilled faculty member. Prerequisite: Approval  
Credit: 1-6

### **BADM495 Advanced Research and Study**

This is an independent in-depth research project course. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved. Prerequisite: Approval  
Credit: 1-6

### **BADM499 Special Topics in Business Administration**

This course addresses issues of current interest in management. Course contents will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **BIO099 Special Topics in Biology**

This course addresses issues of current interest in biology. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements. Credit: 4

### **BIO100 Introduction to Biology & Biological Chemistry: An Overview**

This course focuses on the principles of biology and of general chemistry as the latter applies to or functions in biological systems. Emphasis is placed on understanding the basic biological and biochemical processes that describe (human) life. Credit: 4

### **BIO121 Medical Terminology**

This course is designed for students in the allied health curriculum who need to know the language of Healthcare. The purpose of the course is to help the student to succeed in a chosen Healthcare career by familiarizing them with how medical words are formed and by providing a systematic learning structure. Students will need to learn various parts of a term including prefixes, roots, suffixes and combining forms as used in the study of the human body. Credit: 4

### **BIO122 Anatomy and Physiology I**

This course introduces the student to the study of the human organism in health and disease. Learning will be organized into units, which will include the major body systems, as well as drug and alcohol abuse. Credit: 4

### **BIO132 Anatomy and Physiology II**

This course is a continuation of BIO122. The emphasis will be on prevention, etiology, signs and symptoms, diagnostic and treatment practices, and prognosis of disease. Prerequisite: BIO122  
Credit: 4

### **BIO141 Human Anatomy & Physiology I**

This course focuses on the structure, function and interrelationship of the organs and systems of the human body. Emphasis is placed on the integumentary, musculoskeletal and nervous systems. Credit: 4

### **BIO142 Human Anatomy & Physiology II**

This course focuses on the structure, function and interrelationship of the organs and systems in the human body. Emphasis is placed on the endocrine, cardiovascular, immune, respiratory, digestive, urinary and reproductive systems. Credit: 4

### **BIO199 Special Topics in Biology**

This course addresses issues of current interest in biology. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **BIO200 Applied Microbiology**

This course focuses on the basic principles of microbiology, particularly on the principles of cellular function. Students will then learn to apply these principles in the study of the specific therapies for the treatment of bacterial, parasitic, and viral infectious diseases. Students will also learn the causes and complications of antibiotic resistant strains and their role in compromising patient safety. Credit: 4

### **BIO225 Biology**

This survey course presents the fundamental concepts of biology. Special emphasis is given to current biological issues. Credit: 4

### **BSRT450 Quality Management in Radiology Capstone**

During this course the student investigates the emerging principles of quality management and its implementation into the area of diagnostic imaging. Students will explore the processes and values for implementing quality, self-managed work teams, principles of quality, and the importance of quality management in a healthcare business strategy. Students will be mentored in real-world projects that integrate program content to solve problems in healthcare. Prerequisite: Approval  
Credit 4

### **CE242 Computer Architecture**

This course studies computer organization and design. Topics include digital logic and digital systems, machine level representation of data, memory system organization and architecture, computer interfacing and multiprocessing. Prerequisite: CS104 or Approval  
Credit: 4

### **CE412 Advanced Computer Architecture**

This course covers advanced hardware design techniques and control strategies employed in modern computer systems. Topics include advanced memory design, instruction sets, benchmarking, pipelining, advanced network architectures, and high performance computing. Prerequisite: EE312, EE352  
Credit: 4

### **CE495 Advanced Research and Study in Computer Engineering**

This course provides the opportunity for independent, in-depth research and/or study in an area of student interest. Credits are assigned based on the complexity and depth of the project, which must be approved by the department chair. Prerequisite: Approval  
Credit: 1-6

### **CE499 Special Topics in Computer Engineering**

This course addresses issues of current interest in computer systems. Course content varies as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **CE605 Modern Computer Architecture**

This course examines the nature of modern large scale computing and its impact on the design of computer systems. Topics include basic function building blocks of computer design, benchmarks and performance metrics, instruction set architectures, hardware/software

parallelism, pipelining, RISC processors, memory hierarchy, and emerging technologies. Prerequisite: CE242  
Credit: 4

### **CE660 Modern Computer Design**

This course explores the issues, methods, tools and processes in the design of modern computer systems. Students will research and integrate information, identify and apply models, consider experimental design and evaluate design alternatives in a "just-in-time" approach to design. Prerequisite: CE605  
Credit: 4

### **CE699 Special Topics in Computer Engineering**

This course addresses issues of current interest in computer systems. Course content varies as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **CHE105 Introduction to Chemistry**

This course provides an introduction to the fundamental concepts of inorganic chemistry, including atomic and molecular structure, bonding types, reactions, equations and stoichiometry (a mathematical approach to solving problems involving chemical phenomena). Prerequisite: MATH103  
Credit: 5

### **CHE499 Special Topics in Chemistry**

This course addresses issues of current interest in chemistry. Course content varies as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **CJFI360 Introduction to Criminalistics**

This course examines the theories and concepts of criminalistics through the application of scientific methods that are necessary to effectively examine, analyze, and reconstruct a major crime scene. Specifically, the course will address legal issues that are related to search and seizure of physical evidence; crime scene documentation techniques including (a) information gathering to enable report writing, (b) photographic composition concepts, and (c) crime scene measurement and diagramming; latent print processing and enhancement; and basic crime scene reconstruction methods. Included will be lab exercises that complement text and lecture. Prerequisite: CJUS460  
Credit: 4

**CJFI410 Advanced Crime Scene Forensics**

Throughout this course, the student will examine the skills and procedures employed by crime scene technicians utilized in processing crime scenes. The class will emphasize special chemical enhancement, alternate light source discoveries, and cast/molding recovery procedures for fingerprints, bloodstain/blood spatter artifacts, tool, tire, and shoe impressions. Lab exercises will be included that compliment text and lecture. Prerequisite: CJFI360

Credit: 4

**CJFI420 Forensic Photography and Crime Scene Documentation**

The course is designed to provide the student with the basic concepts of crime scene photography and documentation techniques for homicide scenes, autopsies, and suicides, other dead-body scenes, assaults, burglaries, injuries, sex offenses, arson, and accidents. Lectures will address the use of Polaroids, videotaping, copy stand photography, blood stain documentation, tool mark analysis and court presentations. The digital camera format is also part of the curriculum. Basic techniques of photography and camera operation, application of films, lighting techniques including low light and electronic flash will be part of the discussion and the laboratory component of the course. Laboratory exercises will be conducted to reinforce class lectures and demonstrations. Prerequisite: CJUS360

Credit: 4

**CJFI430 Medico-Legal Death Investigations**

This course will provide a foundation for understanding death scene analysis. The manner, mechanism, and cause of death are explored, as well as postmortem changes. The course emphasis will be on investigation of sudden or unexpected deaths, homicides, suicides, accidental deaths, and trauma; this will include SIDS and child abuse cases. Prerequisite: CJUS360

Credit: 4

**CJFI440 Bones, Bugs and Teeth – the Recovery of Human Remains**

This course provides students with a series of lectures and field exercises when permissible, using various methods of recovery of human remains. The emphasis will be on scattered surface remains and the detection of clandestine graves. The techniques presented will include scene documentation, basic forensic anthropology, odontology, and entomology as they apply to recovery techniques that are utilized as an aid in identification and criminal prosecution. Prerequisite: CJFI360

Credit: 4

**CJFI450 Dactylography – Fingerprint Identification and Classification**

This class is intended to be an introduction to the biological development of fingerprints and the identification of the various fingerprint patterns. Lecture and laboratory practicums will include the Henry and NCIC classification systems, obtaining prints with Live Scan and ink, AFIS overview and basic comparison techniques. Prerequisite: CJFI360

Credit: 4

**CJHS300 Human Service Practice in the Criminal Justice Setting**

This course introduces the student to the work of helping professionals in the context of the criminal justice system along with identifying the theory base and skills involved in Human Services. Prerequisite: CJUS141

Credit: 4

**CJHS310 Alcohol Use and Abuse**

This course surveys the use, abuse, and addictive nature of ethyl alcohol, and the symptomology and treatment of alcoholism. The student will gain a basic knowledge of alcohol use and abuse, alcoholism, and the broad range of current approaches to prevention and treatment. Prerequisite: CJUS360

Credit: 4

**CJHS315 Child Abuse**

This course provides an in-depth study of child abuse in the context of the criminal justice and social welfare systems. Students will learn to identify the risk factors, signs and symptoms of child abuse as well as the legal requirements for intervention in child abuse cases. Students will use case studies to analyze the problems in child abuse investigations and the treatment methods and services available to abused children. Prerequisite: CJUS300

Credit: 4

**CJHS336 Ethics for the CD Counselor**

This course explores the ethical and legal issues as they relate to the practice of counseling and client/counselor relationships. The student will gain a foundational understanding of the ethical standards for counselors, client rights and legal implications, and what defines quality client care. Prerequisite: CJUS360

Credit: 4

**CJHS410 Foundations of Individual Counseling**

This course serves as an introduction to a variety of counseling theories, therapeutic approaches and counseling skills. The student will gain a basic knowledge of the theoretical foundations of counseling and basic counseling skills. Prerequisite: CJHS336, PSYC100

Credit: 4

**CJHS420 Foundations of Group Counseling**

Foundations of Group Counseling provides an introduction to the dynamics of group counseling theories, therapeutic approaches and facilitative skills. The student will gain a basic knowledge and experience with the theoretical foundations of group counseling and group counseling skills. Prerequisite: CJHS336, PSYC100

Credit: 4

**CJUS099 Special Topics in Criminal Justice**

This course addresses issues of current interest in criminal justice. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements. Prerequisite: CJUS141

Credit: 4

**CJUS141 Introduction to Criminal Justice**

This course surveys the agencies that comprise the criminal justice system, which are primarily law enforcement, the courts and corrections. The student will learn the processes of these components and their relationship to one another, as well as the roles of related agencies. Prerequisite: CJUS141

Credit: 4

**CJUS199 Special Topics in Criminal Justice**

This course addresses issues of current interest in criminal justice. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval

Credit: 1-6

**CJUS201 Law Enforcement Operations and Report Writing**

This course introduces the student to the roles of law enforcement and police processes. It also examines organizational structure, supervision and administration of law enforcement agencies, their day-to-day field operations, leadership, policies, procedures, communication, information and performance evaluation processes. Special emphasis is placed on writing skills such as report writing. Prerequisite: CJUS141

Credit: 4

**CJUS250 Homeland Security**

This course introduces the changing dynamics of homeland security at both the national and state levels to the student. It explores the various dynamics of providing security in different settings. The history and future of terrorism are also examined in a global context. Prerequisite: CJUS141

Credit: 4

**CJUS252 Homeland Security**

This course introduces the changing dynamics of homeland security at both the national and state levels to the student. It explores the various dynamics of providing security in different settings. The history and future of terrorism are also examined in a global context. The student will develop a plan to address a proposed terrorist attack. Prerequisite: CJUS141

Credit: 6

**CJUS263 Community Corrections**

In this course the student will conduct a comprehensive examination of the adult corrections process, and the history, sentencing alternatives, and future direction of correction modalities. It also explores community corrections and the various methods used outside traditional correctional institutions. Prerequisite: CJUS141

Credit: 4

**CJUS277 Security Management**

This course provides an overview of principles and issues in business and organizational security management. Students can examine the challenges embodied in various aspects of security, such as personnel, facility, and information. Principles of loss prevention and the protection of assets are also covered. Prerequisite: CJUS141

Credit: 6

**CJUS299 Special Topics in Criminal Justice**

This course addresses issues of current interest in criminal justice. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval

Credit: 1-6

**CJUS300 Victimology**

This course addresses victimology as an emerging area of study in the field of criminal justice, and surveys society's emotionally and politically complex issues as they relate to victims of crime. Victimology is an objective and scientific approach to the study of victims of various forms of crime, from battered women to homicide, with special emphasis on



victims of domestic violence, sexual assault and child abuse.

Prerequisite: CJUS141

Credit: 4

### **CJUS302 Victimology**

This course addresses victimology as an emerging area of study in the field of criminal justice, and surveys society's emotionally and politically complex issues as they relate to victims of crime. Victimology is an objective and scientific approach to the study of victims of various forms of crime, from battered women to homicide, with special emphasis on victims of domestic violence, sexual assault and child abuse. Along with the history and purpose of victimology, students will discuss the psychological and sociological issues related to crime victims.

Prerequisite: CJUS141

Credit: 6

### **CJUS342 Juvenile Delinquency**

During this course the student will survey the area of juvenile delinquency through the study of the theories of juvenile misconduct, the juvenile court system and methods of rehabilitation.

Prerequisite: CJUS141

Credit: 4

### **CJUS343 Criminology**

Criminology surveys the motivations of the criminal mind using both sociological and cognitive restructuring theories. It presents an overview of the meaning of crime, crime statistics, theories of causation, criminal thinking and major offense areas, and describes methods for changing criminal behavior.

Prerequisite: CJUS141, SOCL101

Credit: 4

### **CJUS344 Juvenile Delinquency**

During this course the student will survey the area of juvenile delinquency through the study of the theories of juvenile misconduct, the juvenile court system and methods of rehabilitation. Students will also explore the issues related to the transfer of juveniles to adult court and the stages of juvenile court proceedings.

Prerequisite: CJUS141

Credit: 6

### **CJUS365 Criminal Law**

This course is a study of the general principles of criminal law. Specifically it includes both the policy and procedure of criminal law, giving students the ability to apply the essential elements of general criminal law principles to specific substantive crimes.

Prerequisite: CJUS141

Credit: 4

### **CJUS367 Criminal Law**

This course is a study of the general principles of criminal law. Specifically it includes both the policy and procedure of criminal law, giving students the ability to apply the essential elements of general criminal law principles to specific substantive crimes. Students will identify the elements of criminal liability along with the historical development and framework of criminal law.

Prerequisite: CJUS141

Credit: 6

### **CJUS375 Criminal Procedure**

In this course the student will be provided an in-depth study of the criminal court system and Constitutional law. The defendant's Constitutional rights are explored through case law study. Additionally, the course includes the basic underlying concepts of search and seizure, self incrimination, the right to counsel, the exclusionary rule, privacy, probable cause, reasonableness, and the rights guaranteed by the Fourth, Fifth, Sixth and Eighth Amendments.

Prerequisite: CJUS365

Credit: 4

### **CJUS399 Special Topics in Criminal Justice**

This course addresses issues of current interest in criminal justice. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

### **CJUS440 The Laws of Evidence**

In this course, the student will be provided a thorough examination of the laws of evidence for criminal justice professionals. Topics include circumstantial and opinion evidence, hearsay, character evidence, relevancy and materiality, privileged communications, expert witness testimony, objections to and exclusion of evidence, and chain of custody.

Prerequisite: CJUS375

Credit: 4

### **CJUS448 Criminal Investigation**

This course examines the skills needed to become a criminal investigator and the procedures criminal investigators use to manage a criminal investigation and prepare a case for court. It also introduces interview and interrogation techniques.

Prerequisite: CJUS440

Credit: 4

### **CJUS450 Forensic Criminology**

This course is designed to help the student to develop an appreciation and understanding

of crime scene analysis and management. The course examines how to document, collect, preserve and process physical evidence correctly, analyze it thoroughly, and understand its relevance to the case with special emphasis on forensic science application and physical evidence recognition and collection.

Prerequisite: CJUS448

Credit: 4

### **CJUS460 Interview and Interrogation**

This course is designed to provide students with a knowledge base of general issues regarding effective techniques which apply to both accusatory and non-accusatory intake/interviews/interrogations. The course includes information on the legal aspects of interrogations and the admissibility of confessions. In addition to methods of achieving successful outcomes, topics include physiological and psychological aspects of interviews and interrogations, detecting deception, non-verbal behavior, and persuasion. Students will train via recorded practicums of mock interviews and interrogations in an interrogation room setting.

Prerequisite: CJUS440

Credit: 4

### **CJUS475 Internship**

An internship in criminal justice provides the student with the opportunity to work in the criminal justice field under the supervision of a criminal justice professional. The student will synthesize the experience by completing weekly logs and assignments designed to complement the internship experience.

Prerequisite: Approval

Credit: 4

### **CJUS480 Criminal Justice Capstone**

The Criminal Justice Capstone facilitates the integration of the knowledge gained throughout the criminal justice program. The course focuses on the application of skills through case study, interviewing, application of law and report writing.

Prerequisite: Approval

Credit: 4

### **CJUS481 Criminal Justice Capstone**

A capstone course that facilitates the integration of the knowledge gained in other courses. The course focuses on the application of skills through case study, applications of law and report writing.

Prerequisite: Approval

Credit: 5

### **CJUS482 Criminal Justice Capstone**

A capstone course that facilitates the integration of the knowledge gained in other courses. The course focuses on the application of skills through case study, applications of law and report writing.

Prerequisite: Approval

Credit: 5

### **CJUS495 Advanced Research and Study in Criminal Justice**

This course requires an independent in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair.

Prerequisite: Approval

Credit: 1-6

### **CJUS499 Special Topics in Criminal Justice**

During this course the student will address issues of current interest in criminal justice. Course content will vary as determined by student interest and evolution of the discipline.

Credit: 1-6

### **CJUS610 Crime Lab/Evidence Management**

The student will cover key issues related to the professional management of the crime lab in the administrative, political and operational environment. Ethical, quality and personnel issues are also examined.

Credit: 4

### **CJUS620 Court Services Management**

This course will cover the use of effective tools for case management and process analysis in the judicial system. It includes court performance standards and explores the roles and purposes of courts, the internal and external environments in which they operate, and management theory as applied to courts.

Credit: 4

### **CJUS630 Law Enforcement Management**

Law Enforcement Management combines law enforcement theory and practice to create a proactive approach for successful management of personnel, resources and services to the community. The student will be involved in an in-depth study of management in law enforcement, including operating principles, communication and the future of law enforcement.

Credit: 4

### **CJUS640 Corrections Management**

This course provides a comprehensive coverage of correctional administration. It focuses on problem solving with real-life applications of issues for correctional administrators.

Additionally, it includes the historical perspective of correctional administration, the management of offenders, the prison setting, the correctional staff and an overview of the future in correctional administration.  
Credit: 4

#### **CJUS650 Terrorism and Homeland Security Management**

This course covers security management including risk assessment, planning and program administration, and also explores the intergovernmental system relationships in homeland security. The course will provide the student with an interdisciplinary approach in defining terrorism in analysis of counterterrorism strategies for planned responses.  
Credit: 4

#### **CJUS651 Terrorism and Homeland Security Management**

This course covers security management including risk assessment, planning and program administration, and also explores the intergovernmental system relationships in homeland security. The course will provide the student with an interdisciplinary approach in defining terrorism in analysis of counterterrorism strategies for planned responses.  
Credit: 4

#### **CJUS699 Special Topics in Criminal Justice**

This course addresses issues of current interest in criminal justice. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **CS099 Special Topics in Computer Science**

This course addresses issues of current interest in Computer Science. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.  
Credit: 4

#### **CS104 Problem Solving Concepts with C++**

This course covers the fundamental problem solving approaches that lead to solutions suitable for implementation with a computer programming language. Solutions will be implemented using the essential elements of a modern programming language. Students will also be introduced to the techniques of designing and documenting a problem solution.  
Prerequisite: IT080, MATH080 or Approval  
Credit: 4

#### **CS115 Programming with C++**

Students are introduced to the C++ programming language in this course. The course includes the basic concepts of both the structured programming and object-oriented programming models. Emphasis is on applying sound software engineering principles. Basic declarations and statements, control structures, data and program design, arrays, text strings, pointers, abstraction, classes and objects are covered. Students are required to complete several programs.  
Prerequisite: CS104, MATH103 or MATH143  
Credit: 4

#### **CS123 Problem Solving Concepts with Programming**

The course covers the fundamental problem solving approaches that lead to solutions suitable for implementation with a programming language. It introduces the basic concepts of object-oriented programming. It includes control structures, data and program design, objects and classes.  
Credit: 4

#### **CS124 UNIX Fundamentals**

In this course, students explore end user interaction with the UNIX operating system. This course examines the basic features of the UNIX operating system, UNIX commands, the UNIX file system, the UNIX shells, and shell programming.  
Prerequisite: CS123 or CS104  
Credit: 4

#### **CS146 Introduction to UNIX**

This course introduces the UNIX operating system and examines its basic features. Students learn common UNIX commands, the UNIX file system, UNIX editors, and the UNIX shells and are introduced to shell script programming. The course requires the preparation of several exercises using the UNIX environment.  
Prerequisite: CS104 or CS123 or Approval  
Credit: 4

#### **CS150 Introduction to Computer System Security**

This course provides the foundation for the study of computer system security. The course centers around the ten domains comprising the Information Security Common Body of Knowledge. Topics include access control systems, telecommunications and network security, cryptography, operations security and business continuity and disaster recovery planning. Students will be exposed to security

management practices as well as security architecture and models, security laws, investigations and ethics.  
Credit: 4

#### **CS199 Special Topics in Computer Science**

This course addresses issues of current interest in computer science. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **CS215 Intermediate C++ Programming**

This course builds upon the fundamental topics covered in CS115. The focus is on the more powerful features of C++ including I/O formatting, file I/O, overloading, inheritance, polymorphism, templates and exceptions. A major emphasis is on object-oriented program design, construction and test. Students are required to complete numerous programs using these advanced features.  
Prerequisite: CS115  
Credit: 4

#### **CS230 Data Structures**

In this course a student learns the principles behind both simple and advanced data structures. Study includes data types, arrays, stacks, queues, lists and trees. Students demonstrate understanding of these principles through the completion of several programs.  
Prerequisite: CS215  
Credit: 4

#### **CS245 Programming Languages: Java for C++ Programmers**

This course introduces the students to the Java Programming Language System. The course is designed for experienced C++ and OO programmers. The Java programming language is compared and contrasted to the C++ programming language. Features only found in Java are examined in some detail. Major topics include OO programming using Java, Java GUI applications and applets, using the AWT/Swing packages; Java Servlets and JSPs are addressed given time. The course requires the completion of numerous Java programs.  
Prerequisite: CS230, CS376  
Credit: 4

#### **CS246 Structured Query Language**

This course gives complete coverage of the SQL database programming language and studies the concepts involved in the relational database model. Storage, retrieval and manipulation of data are emphasized

using SQL (Structured Query Language), DDL (Data Definition Language) and DML (Data Manipulation Language). Students will complete several database projects using SQL.  
Prerequisite: IT235 or CS250  
Credit: 4

#### **CS250 Fundamentals of Database Systems**

This course introduces database design, and implementation and database management systems. Topics covered in this course include conceptual and logical database designs for several businesses, implementing these designs using a database management system and developing business applications that access these databases.  
Prerequisite: CS104 or CS123  
Credit: 4

#### **CS265 Algorithms**

Students are introduced to the basic concepts of algorithm design analysis, including searching and sorting, hashing and information retrieval. Average and asymptotic behaviors are discussed. Complexity issues are explored.  
Prerequisite: CS230, MATH200  
Credit: 4

#### **CS299 Special Topics in Computer Science**

This course addresses issues of current interest in computer science. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **CS320 Computer Graphics**

This course covers the basic concepts in 2D and 3D computer graphics. It includes an examination of the 3D graphics pipeline to include 3D modeling, geometric transforms, shading, texturing, and rendering. Animation and Shaders are introduced. Students are required to develop several OpenGL based graphics programs.  
Prerequisite: CS230  
Credit: 4

#### **CS323 Problem Solving with Programming**

The course covers the fundamental problem-solving approaches that lead to solutions suitable for implementation with a programming language. It introduces the basic concepts of object-oriented programming, both as stand-alone programs and as applets. It includes control structures, data and program design, objects and classes.  
Credit: 6

### CS324 UNIX

In this course, students explore end user interaction with the UNIX operating system. This course examines the basic features of the UNIX operating system, UNIX commands, the UNIX file system, the UNIX shells, and shell programming.

Credit: 4

### CS325 Advanced C++ Programming

This course extends and integrates the C++ programming language knowledge presented in previous courses. The emphasis is on language feature interactions and practical programming techniques. Coverage includes the advanced applications of classes, inheritance, polymorphism, friendship, operator overloading, generic types, exceptions and issues of efficiency and reliability. Students demonstrate their understanding and skills through the completion of several challenging programs.

Prerequisite: CS230

Credit: 4

### CS340 Operating Systems

In this course, analysis of the design of modern operating systems is emphasized. The topics covered include basic capabilities of multi-program operating systems, virtual memory, resource allocation and management, concurrent processes and threads, protection, file systems, batch and interactive subsystems. Completion of the course requires the student to perform several lab exercises that investigate and exercise key operating system features.

Prerequisite: CE242

Credit: 4

### CS345 UNIX Systems Programming

The student is introduced to the basic concepts of UNIX programming, including pipes, filters, concurrency and management of processes and resources. The design and implementation of UNIX Perl programs are discussed. Several programming projects are required.

Prerequisite: CS146

Credit: 4

### CS346 User Interface Design

Developing usable software products is vital in today's competitive marketplace. This course provides in-depth coverage of the computer human interface, user interface design, user profiling, prototyping and usability testing.

Note: this class does not require programming skills.

Prerequisite: CS104

Credit: 4

### CS352 Advanced Database Systems

This course continues the study of database design and implementation, emphasizing data warehousing, online analytical processing and distributed databases.

Prerequisite: CS246 or CS362, CS250

Credit: 4

### CS360 Windows® Programming

The purpose of this course is to provide an introduction to the development of applications in a Windowing environment. The topics covered include an introduction to a Windows programming language such as C# and the Windows environment, implementation of GUI interface elements, some 2D graphics, along with event handling, I/O, and assembly of windows-based applications. Students are required to prepare several windows-based programs.

Prerequisite: CS215

Credit: 4

### CS362 Structured Query Language for Data Management

This course gives complete coverage of SQL, with an emphasis on storage, retrieval and manipulation of data.

Prerequisite: CS250 or IT235

Credit: 4

### CS366 Software Engineering Methods

Software Engineering Methods introduces students to the basic concepts of software engineering including lifecycles, methodologies, techniques, and tools. This course provides an overview of requirements engineering, software design, implementation, testing, and the maintenance of software development products.

Prerequisite: CS215 or IT215 or EBUS215 or IT271

Credit: 4

### CS376 Object-Oriented Methods

Object-oriented Methods introduces the student to the basic concepts of object-oriented analysis and design. Use-case modeling, class modeling and state modeling using common notations are covered. Completion of several exercises and a group project are required.

Prerequisite: CS215 or IT215 or EBUS215 or IT271

Credit: 4

### CS381 Software Requirements Engineering

Software Requirements Engineering introduces students to requirements elicitation, software analysis, and the specification of software requirements. The additional topics covered during this course include requirements traceability, software quality, and use-case

scenario development.

Prerequisite: CS376 or CS366 or CS467 or CS475

Credit: 4

### CS382 Software Design

Software Design defines and describes the behavior of the software system. In this course, students learn to select and apply a design method and use a modeling notation to clearly communicate and document a software solution. A variety of design processes, methods, tool, and types of software designs are explored throughout the course.

Prerequisite: CS376 or CS366 or CS467 or CS475

Credit: 4

### CS383 Software Testing

Software Testing provides an overview of a variety of testing practices and methods. It gives students the opportunity to apply the theory as they perform software tests. This course explores a variety of tests, including unit testing, usability testing, operational testing, integration testing, and system testing.

Prerequisite: CS376 or CS366 or CS467 or CS475

Credit: 4

### CS399 Special Topics in Computer Science

This course addresses issues of current interest in computer science. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

### CS455 Software Requirements Engineering

Software Requirements Engineering introduces students to requirements elicitation, identification, definition, and documentation. Students will explore and practice elicitation techniques, define functional and non-functional requirements, write use-case scenarios, explore user interface alternatives, learn how to analyze and model the requirements, and develop a requirements traceability matrix that spans the software development lifecycle.

Prerequisite: CS467 or CS475 or CS366 or CS376

Credit: 4

### CS457 Software Design

Software design defines and describes the behavior of the software system. In this course, students learn to select and apply a design method and use a modeling notation to clearly communicate and document a software solution. A variety of design processes, methods, tools, and types of software designs are explored throughout the course. Requirements are incorporated in the design

and traced to ensure completeness, correctness and consistency via the requirements traceability matrix. Students apply the theory by developing a software design specification.

Prerequisite: CS455 or CS381

Credit: 4

### CS459 Software Testing

Software Testing provides an overview of a variety of testing practices and methods, then gives students the opportunity to apply the theory as they perform software tests. This course focuses on the types of tests that are conducted during the software development lifecycle, such as unit testing, usability testing, operational testing, integration testing, stress testing, regression testing, and system testing. Students develop a test procedure, a test plan, conduct system and usability testing, and write a test report that documents the results.

Prerequisite: CS457 or CS382

Credit: 4

### CS467 Software Engineering Methods

This course introduces basic concepts of software engineering including life cycles, methodologies, techniques and tools. Requirements engineering, design, and implementation including testing and maintenance are discussed.

Prerequisite: IT350

Credit: 6

### CS475 Object-Oriented Methods

This course introduces the basic concepts of object-oriented analysis and design. Use case modeling, class modeling and state modeling using common notation are covered. Completion of several exercises and a group project are required.

Prerequisite: IT271 or EBUS215 or CS215 or IT215

Credit: 4

### CS481 Software Engineering Capstone I

Software Engineering Capstone I is the first course in a two-course sequence that involves the development of a software product. Working in teams, students design and develop a software system based on user requirements. This course reinforces the principles of requirements engineering and software design. It includes the analysis and design of a software product.

Prerequisite: CS376, ENGL200, ENGL210

Credit: 4

### CS482 Software Engineering Capstone II

Software Engineering Capstone II continues the software product development that began



in CS481. Working in teams, students use their requirement and design specifications to develop and test a software product. This course requires the development and test of a software product.  
Prerequisite: CS481  
Credit: 4

#### **CS495 Advanced Research and Study in Computer Science**

This course gives the student an opportunity to conduct an independent in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair.  
Prerequisite: Approval  
Credit: 1-6

#### **CS499 Special Topics in Computer Science**

This course addresses issues of current interest in computer science. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **CS500 Computer Science Foundation Topics**

This course provides foundational knowledge in computer science. The topics include operating systems, computer networking, database systems, object-oriented design, and software engineering principles. It addresses basic information, preparing students for participation in the MSCS graduate program.  
Credit: 4

#### **CS630 Modern Operating Systems**

Modern Operating Systems builds on the knowledge of multitasking operating systems to present the emerging technologies of current operating systems. Problems of timing, synchronization, communication and distribution are presented with current approaches to solving these problems. Distributed and network operating systems goals, and the client/server and remote procedure call models are presented. Examples of microkernel O/Ss, file servers and file systems are discussed.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS635 Computer Networking**

This course surveys both the foundational concepts and current state of the practice in computer networking. The lower four layers of the OSI Reference Model are investigated along with a comprehensive treatment of the

TCP/IP protocol suite. Network issues, such as addressing and routing, and transport issues, such as connections and reliability, are discussed. Major network applications are also surveyed, including examination of their use in current practice.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS640 Software Project Management**

This course presents the principles and concepts associated with software project management. The topics include project planning, risk management, estimation, cost modeling, scheduling, control, resource management and project management.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS641 Software Requirements Engineering**

Software Requirements Engineering focuses on the elicitation, analysis, and specification of software requirements. Topics include requirements traceability, requirements management, software validation and verification, use-case scenario development, software quality, configuration management and quality control.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS644 Computer Systems Architecture**

Computer Systems Architecture reviews the architectural paradigms for various types of software systems, including distributed and heterogeneous systems. The course includes an in-depth examination of how software quality is supported in the system architecture. It examines several architectural evaluation methods to analyze the merits of candidate architectures.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS649 Software Design**

Software design provides the knowledge to transition from smaller programming efforts to large software development projects. It addresses a variety of design processes, principles, notations and design methods.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS651 Computer Systems Security Foundations**

This course introduces the overall foundations required for the understanding of, and further study in, information systems security. It reviews the history of security and computer systems security in particular to develop a set

of models to guide the approach to realizing computer systems security. An overview of current security technologies is presented. A project is required.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS652 Operating Systems Security**

Operating Systems Security provides an in-depth analysis of the security components at the operating system level. The focus is on the development of a security policy and the basic elements that provide identification and authentication, access control and security auditing. In addition to general concepts, both the UNIX/Linux and Windows operating systems are studied. Students participate in hands-on lab assignments to reinforce the material as well as to gain familiarity with a number of available operating system security products and tools (both freeware and commercially available).  
Prerequisite: CS630, CS651  
Credit: 4

#### **CS653 Network Security**

Students are provided with a brief overview of the basic elements of networking concepts, topologies and protocols necessary to understand network security issues. An in-depth analysis of privacy, integrity, availability and non-repudiation within a network environment is included. Mechanisms for secure authentication, confidentiality and access control are discussed. The course includes concepts applied to electronic commerce scenarios (e-commerce). A project is required.  
Prerequisite: CS651 or CS654  
Credit: 4

#### **CS654 Security Management**

This course covers a variety of issues relating to the management of information systems security. The topics covered include development of policies, standards and procedures, risk analysis methodologies, contingency planning and disaster recovery. Additional topics covered include legal and ethical issues, incident reporting, security auditing, computer crime, and security awareness and training. Implementation issues, potential conflicts and tradeoffs are also discussed. A project is required.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS660 Database Systems**

This course explores the current state of the practice in database systems and provides a foundation for future study. Topics include the database life cycle, database models, relational algebra, SQL and an overview of the analysis, design, and implementation of relational databases. Concepts and issues in transaction processing, concurrency, security, data warehouses and data marts, distributed databases and web-based database systems are discussed.  
Prerequisite: CS500 or Approval  
Credit: 4

#### **CS661 Software Information Assurance**

Attacks on enterprise level systems can be focused on many targets. Some of the targets, such as WEB servers are at the perimeter of the network. Others occur at the applications running on various operating systems. This course examines vulnerabilities caused by both scripting errors or poor scripting techniques on WEB based applications. Further, vulnerabilities created in custom developed applications written in high level programming languages are examined. SQL problems and architecture design flaws in relational database systems that contribute to vulnerabilities are also analyzed. The need for security driven life cycle development models and security standards for programming and scripting languages are presented.  
Prerequisite: CS651  
Credit: 4

#### **CS662 System Security Certification and Accreditation**

A system that performs mission-sensitive operations requires access to sensitive resources. The owners of these resources require a measure of the risk assumed in allowing access in the intended manner as well as an assessment of how well the system implements its requirements. The DOD was first in evolving strategies and methods to formally address these tasks, most recently by the DITSCAP and its civilian counterpart, NIACAP. This course addresses each of these topics and standards and how they may lead to a higher level of assurance systems development.  
Prerequisite: CS651 or CS654  
Credit: 4

#### **CS671 Software Systems Engineering Process**

This course presents the current research and application of the principles of the software process and process improvement. The in-

depth analysis of the basic principles behind software process improvement provides a framework for further investigation. The concepts of software development, configuration management, quality assurance, metrics and risk management are explored. Prerequisite: CS500 or Approval  
Credit: 4

#### **CS672 Systems Engineering Methods**

Software Engineering Methods provides an overview of the techniques and approaches used in systems engineering. The topics include the models, evaluation methods, decision-making processes, system quality, system design, integration, logistics, maintenance and the system disposal. Prerequisite: CS500 or Approval  
Credit: 4

#### **CS675 System Integration and Test**

This course provides a basic understanding of system testing and integration processes. The course topics include test coverage, test procedures and a variety of software project test activities. Prerequisite: CS500 or Approval  
Credit: 4

#### **CS681 Database Design**

This course provides an in-depth study of the conceptual, logical and physical design of relational databases, data warehouses and data marts. Specific techniques for requirements elicitation, entity-relationship modeling and normalization are presented. Other topics include the integration of database design into the organization's software system development model and database design using object-oriented and object-relational data models. Completion of a significant design project is required. Prerequisite: CS660  
Credit: 4

#### **CS682 Database Administration**

This course explores activities and responsibilities of a database administrator (DBA). Topics include physical database design, transaction management, query processing, concurrency control, back-up and recovery, performance monitoring and tuning, and security. Techniques and implementation strategies used by open-source or commercial database management systems are studied. Prerequisite: CS660  
Credit: 4

#### **CS697 Advanced Research and Study in Computer Science**

This course is an opportunity to do independent, in-depth research and/or study of an area of student interest. Enrollment in this course requires a research or study plan. It may be used as a master's elective in computer science. Prerequisite: Approval  
Credit: 1-6

#### **CS698 Computer Science Capstone**

The Capstone course demonstrates mastery of the MSCS program content by completing an in-depth applied project that focuses on a major technical problem, an issue that confronts the student's own organization or is in a desired area of study. The course provides students with the opportunity to do an in-depth analysis and study in a selected area of interest; prepare a formal technical report of the in-depth research; and deliver a formal technical oral presentation to a technical audience. Prerequisite: Approval  
Credit: 4

#### **CS699 Special Topics in Computer Science**

This course addresses issues of current interest in computer science. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

#### **CS800 Software Processes, Methods and Environments**

This course helps set a foundation for the understanding and development of complex, software intensive systems that are at the heart of today's business economy. Students will critically evaluate improvement processes such as the Capability Maturity Model and the Malcom Baldrige method of Total Quality Management, as well as the trends in the software development methods, tools and methodologies that support these processes. We will also discuss how the software lifecycle relates to business process improvements and where many of these initiatives fail. Students will perform relevant research into current best practices and in turn analyze their own company's processes, creating a development plan for improvement. Credit: 5

#### **CS801 Research and Writing I**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to

demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem. Credit: 3

#### **CS802 Qualitative Analysis**

This course presents topics on a variety of qualitative analysis methods and techniques. The methods include structured interviews, surveys, action research, and case studies. Perspectives include ethnography, grounded theory, soft systems methodology, and deductive reasoning. Credit: 5

#### **CS805 Experimental Design/Analysis**

This course introduces experimental design and analysis of data. Topics include independent and dependent variables, how to collect data, hypothesis testing and other forms of data analysis. You will be expected to design and conduct an experiment, collect and analyze data, and then write a technical report on your effort. Credit: 5

#### **CS806 Research and Writing II**

This course is the second in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem. Credit: 3

#### **CS810 Simulation & Modeling Techniques**

Complex computing applications are launched system wide only after simulation, modeling and testing have been conducted and the results analyzed. This course addresses fundamental issues in developing those processes and prepares students for their own project simulation or model. Students will be able to describe differences in various methods of central tendency, effectively use ANOVA and GLM for data analysis and demonstrate how different testing variables can affect simulations or models. Credit: 5

#### **CS811 Research and Writing III**

This course is the third in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem. Credit: 3

#### **CS812 Quantitative Analysis**

You will learn fundamental concepts of parametric and non-parametric statistics and develop a thorough understanding of the primary theorems of statistics. This course covers measures of central tendency, various forms of probability, ANOVA, and GLM. Exploration of multivariate statistics will be practiced via large datasets in live research projects. Particular attention is given to scale and survey development. Credit: 5

#### **CS815 Foundations in Computer Science**

This course provides an overview and introduction to the remaining technical courses in the program. By offering a high-level view of where each of the more detailed courses fit, students can better understand various sub-disciplines within Computer Science and how the disciplines relate to one another. Students will also be able to discuss the state of the practice for each sub-discipline and better



narrow their area of expertise or specialty for the remainder of the degree program.  
Credit: 5

#### **CS816 Research and Writing IV**

This is the fourth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.  
Credit: 3

#### **CS817 Foundations of Enterprise Information Systems**

This course provides an overview and introduction to the breadth of research in enterprise information systems. The purpose of this overview is: 1) to ensure that you are familiar with the entire discipline, and 2) to help you establish where your interests fit into the discipline.  
Credit: 5

#### **CS820 Usability and Interaction**

This course investigates what qualities of a software product make it usable. Emphasis is placed on how one includes usability concerns throughout the software lifecycle, how one designs for usability, how to determine experimentally the usability of a product, and the importance of early usability testing on a simple prototype. Students will be expected to design and conduct usability experiments and then analyze data in order to refine product design.  
Credit: 5

#### **CS821 Research and Writing V**

This course is the fifth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery

of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.  
Credit: 3

#### **CS822 Systems Analysis and Design**

This course covers the analysis and design of systems to support business processes. It evaluates alternative research methods on requirements gathering techniques.  
Credit: 5

#### **CS825 Advanced Topics in Database Systems**

Computer Science is dynamic; Moore's Law tells us that today's standard could very well be obsolete in 18 months. This course addresses the top three issues of current database theory and practice, identifying current trends and near future changes in the field. As such, the course content will vary according to the evolution of the discipline. Students will research major literature sources that address issues and trends, compare and contrast centralized database systems with distributed databases and identify principles behind data warehousing and data mining.  
Credit: 5

#### **CS826 Research and Writing VI**

This course is the sixth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.  
Credit: 3

#### **CS827 Enterprise Information Systems Governance**

This course presents an overview of the major structures found in a typical enterprise. Several organizational models such as COBIT and ITIL are studied. The course also explores governance, policy and control within the enterprise. Students learn to evaluate current research on enterprise information systems governance.  
Credit: 5

#### **CS830 Advanced Topics in Computer Science**

This is the second of two advanced topics classes, this one dealing with current trends in the computer industry. Topics will be mutually determined by the instructors and students as a group. Students will discuss the current state of the practice, research major literature sources, identify what are considered "best practices" within a particular field and assess how well an organization follows those practices.  
Credit: 5

#### **CS831 Research and Writing VII**

This course is the seventh in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.  
Credit: 3

#### **CS832 Business Alignment and Strategic Information Systems**

This course presents techniques and methods for building a strategic plan for an enterprise. This includes identifying potential strategies and evaluating their alignment with business goals and vision and approaches to bring IT into alignment with business goals. The discussions cover how to set a benchmark and its proper use; what are reasonable metrics for a business to use and their proper use; and environmental scanning. Students evaluate current research on IT strategy and business alignment.  
Credit: 5

#### **CS835 Directed Readings**

This course pinpoints the direction of research for the student's final project (with approval of faculty). The student will determine his/her topic of research, identifying major literature sources for that topic and determining major contributors in industry, academia and/or research, ultimately leading a discussion of the topic with knowledgeable peers. Students will then present an overview of the topic area to peers who are not specialists, discussing the current state of the practice and future trends. This course may substitute for any course in the DCS programs.  
Credit: 5

#### **CS836 Research and Writing VIII**

This course is the eighth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.  
Credit: 3

#### **CS837 Requirements Engineering**

This course presents the state of the practice for requirements engineering. Topics such as requirements elicitation, documentation, verification and validation are included. Important aspects of quality such as usability and meeting the user's needs are discussed. The basics of Human Computer Interaction, the software development lifecycle, prioritization, and communication skills are covered. Techniques such as use-cases and prototyping are presented in the context of requirements engineering.  
Credit: 5

#### **CS838 Concurrent and Distributed Systems**

This course covers the fundamentals of concurrent and distributed systems including threading, synchronization and deadlock prevention as well as logical clocks, group communication and distributed transactions.

It also covers current topics such as web services and software for multiprocessors and multicore processors.

Credit: 5

#### **CS840 System Metrics and Risk Analysis**

Software development has risks – time, resources and change. Measuring and managing risk is essential to successful software development. In this course, students will investigate and analyze current and emerging best practices for managing risk and learn how a good metrics program can be developed. Students will also use metric data to support risk assessment and analyze risk exposure, while developing a risk mitigation plan for their organization.

Credit: 5

#### **CS841 Research and Writing IX**

This course is the ninth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

#### **CS842 Business Intelligence**

This course presents decision making frameworks, their advantages and limitations. Topics include constructing a data warehouse and its use for data mining in order to do trend analysis; the development and protection of business intelligence; and knowledge management within an enterprise. These topics will lead a student to appreciate the value of the knowledge contained in the data gathered by an organization and its impact on the business.

Credit: 5

#### **CS845 Software Architecture and Design**

Commonly known architecture patterns can often be combined to form large systems. This course teaches students to recognize these common architecture patterns and their

functionalities then combine them into more complex patterns. Students will discuss the advantages of systems planning for an organization and identify the role played by the Systems Architect in the long term management of an information system.

Credit: 5

#### **CS846 Research and Writing X**

This course is the tenth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

#### **CS847 Enterprise Systems Architecture Planning**

This course presents current approaches to the high level design of system architectures. The emphasis is placed on high-level design issues and opportunities for long-term systems planning.

Credit: 5

#### **CS850 Networking and Security**

A generation ago, business referred to the shop owner down the street. Today’s business is global; companies have offices around the world, processing data twenty-four hours a day. Keeping software systems synchronized, online and secure is the ongoing challenge of computer professionals. In this course, students will assess the impact on security concerns when an organization moves from a centralized system to a distributed system. This includes describing emerging security issues and risk factors and designing a secure information system.

Credit: 5

#### **CS851 Research and Writing XI**

This course is the eleventh in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is

intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

#### **CS852 Information Assurance**

This course presents topics of current interest in security and protection of assets. In addition, this course investigates current issues in system security and how security issues impact the systems design effort, the management of an organization’s resources and the mitigation of the risks posed by problems with security. Investigates and analyzes current and emerging best practices for managing risk factors associated with information systems.

Credit: 5

#### **CS855 Futuring and Innovation**

Develops the skills in futuring through a variety of techniques. Introduces formal methods of innovation and diffusion of innovation.

Credit: 5

#### **CS856 Research and Writing XII**

This course is the final one in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory / unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

#### **CS895 Research Continuation**

The doctoral candidate will enroll in this course to maintain registered status at CTU

and to provide extended time to complete the dissertation or publishable papers.

Prerequisite: Approval

Credit: 3 per quarter

#### **CS898 Advanced Topics in Computer and Information Sciences I**

Taught on demand, this course covers advanced topics in computer or information science. The course may substitute for any course in the DCS programs and may be taken individually with approval.

Credit: 5

#### **CS899 Advanced Topics in Computer and Information Sciences II**

Taught on demand, this course covers advanced topics in computer or information science. The course may substitute for any course in the DCS programs and may be taken individually with approval.

Credit: 5

#### **CSS099 Special Topics in Computer System Security**

This course addresses issues of current interest in Computer System Security. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.

Credit: 4

#### **CSS150 Introduction to Computer Security**

This course provides the foundation for the study of computer system security. The course centers around the ten domains comprising the Information Security Common Body of Knowledge. Topics include access control systems, telecommunications and network security, cryptography, operations security and business continuity and disaster recovery planning. Students will be exposed to security management practices as well as security architecture and models, security laws, investigations and ethics.

Credit: 4

#### **CSS199 Special Topics in Computer System Security**

This course addresses issues of current interest in Computer System Security. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

#### **CSS200 Principles of Network Security**

This course identifies and explains technical issues involved in network security. It also covers the fundamentals of wireless

networking protocols, their security issues and threats. Covered topics include cryptography and cryptography applications; access control; firewalls; key management network security issues; application, e-mail and middleware security; wireless local area network technologies.

Prerequisite: IT200, CSS150  
Credit: 4

#### **CSS250 Security Risk Management**

This course addresses the concepts of risk management. It explores general methodologies used to assess and manage risks to information security. The course also identifies the activities involved in the process of information security risk management for a business organization. Activities such as detection, recovery and damage control methods will be explored.

Prerequisite: CSS200  
Credit: 4

#### **CSS299 Special Topics in Computer System Security**

This course addresses issues of current interest in Computer System Security. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **CSS300 Vulnerability Assessment and Management**

This course surveys tools and techniques designed to detect intrusion into an organization's computer systems. In the hands-on lab component of the course, students will use a number of public domain and commercially available security tools. The course examines common attack methods, general inadequacies in various systems, and commercial intrusion detection systems. Utilization of the risk assessment process for determining cost effective vulnerability solutions is emphasized.  
Prerequisite: CSS200  
Credit: 4

#### **CSS320 Process Engineering**

In this course students will learn to describe process requirements for developing and maintaining a consistent security posture throughout the corporate enterprise. The fundamentals of process engineering as related to security requirements will be discussed. It includes the integration of plans, systems and development requirements and the processes necessary for them to maintain maximum functionality.  
Prerequisite: CSS150  
Credit: 4

#### **CSS350 Computer Forensics I**

This course introduces the student to the field of computer forensics. It covers the history of computer forensics and how the use of electronic evidence can support criminal investigation. The course examines procedures for investigating computer and cyber crime and concepts for collecting, analyzing, recovering and preserving forensic evidence.

Credit: 4  
Prerequisite: CJUS141, CSS150  
Corequisite: CJUS365

#### **CSS351 Computer Forensics II**

This course is a more in-depth study of the technical aspects of computer forensics. Its focus is the examination and analysis of data on computer storage media. It covers current computer forensic tools, digital evidence controls, computer forensic analysis and recovering files.

Prerequisite: CSS350  
Credit: 4

#### **CSS380 Business Continuity and Disaster Recovery Planning**

This course provides students with a background on each of the following topics: disaster recovery issues as they impact business, possible threats, categories of disruptions, results from the assessment, disaster recovery plan, developing a recovery team, backup alternatives, facility backups, electronic vaulting, off-site storage, testing and drills, maintenance, phases of planning for recovery, preventions.

Prerequisite: CSS150  
Corequisite: CSS320  
Credit: 4

#### **CSS399 Special Topics in Computer System Security**

This course addresses issues of current interest in Computer System Security. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **CSS440 Security Policy and Leadership**

This course focuses on the design process used by an organization as it implements a security policy. This includes key policy considerations of acceptable use, remote access, information protection, perimeter security, wireless communications and e-mail. Emphasis is on the procedures to be considered for the implementation of policy and leadership required to enact and maintain security within

the organization. Selected case studies and security policies will be reviewed and analyzed.

Prerequisite: CJUS365, CSS300  
Credit: 4

#### **CSS450 Security Capstone**

The capstone is a research-based course that integrates contents learned throughout the program. Projects will simulate a professional work environment.

Prerequisite: Senior status  
Credit: 4

#### **CSS495 Advanced Research and Study in Computer Systems Security**

This course gives the student an opportunity to conduct an independent in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair.

Prerequisite: Approval  
Credit: 1-6

#### **CSS499 Special Topics in Computer System Security**

This course addresses issues of current interest in Computer System Security. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval  
Credit: 1-6

#### **EBUS099 Special Topics in e-Business**

This course addresses issues of current interest in e-business. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.  
Credit: 4

#### **EBUS115 Visual Basic Programming**

This course provides an introduction to Visual Basic programming, emphasizing fundamentals that are common to both structured and object-oriented programming. Students use graphical controls to create and enhance the user interface, create control structures to handle decisions and iterations, and decompose complex programs into forms and subprograms.

Prerequisite: CS104, MATH103 or MATH143  
Credit: 4

#### **EBUS199 Special Topics in e-Business**

This course addresses issues of current interest in e-business. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval  
Credit: 1-6

#### **EBUS208 Web Site / Portfolio Development**

The fundamentals of web servers, web sites, HTML, XHTML and web authoring are presented in the context of using the technology to craft a message for an audience. It also includes fundamentals of linking, graphics, and other media. The creation of a career portfolio is required.

Prerequisite: IT080 or Approval  
Credit: 4

#### **EBUS215 Intermediate Visual Basic Programming**

This course continues the study of Visual Basic programming, emphasizing the implementation of windows-based database applications.

Prerequisite: EBUS115  
Credit: 4

#### **EBUS218 Multimedia for the Web**

This course expands the principles and techniques introduced in EBUS 208. Introduced in this class are the use of a visual editor, multimedia principles and graphics/animation creation using state of the art software programs. Students will develop and publish a multimedia web site which can be used to expand the portfolio begun in EBUS208.

Prerequisite: EBUS208  
Credit: 4

#### **EBUS228 Advanced Web Publishing**

Advanced Web Publishing provides an introduction to client-side and server-side scripts used to create dynamic web pages. Form validation techniques, script control structure and syntax, server objects, and maintaining session state between the client and server will be explored.

Prerequisite: CS104, EBUS208  
Credit: 4

#### **EBUS299 Special Topics in e-Business**

This course addresses issues of current interest in e-business. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval  
Credit: 1-6

#### **EBUS308 Introduction to e-Business**

The intent of this course is to provide many more opportunities than merely selling products electronically. It covers how to integrate suppliers, customers and employees into a community of partners working toward business success. Additionally, during the course, the student will investigate how to create and market new products and services,



manage supply chains, foster organizational change, improve communication, and establish electronic customer service. Case studies are used to investigate successful and unsuccessful e-Business practices.  
Prerequisite: BADM100  
Credit: 4

#### **EBUS325 Web Design**

The basic elements/principles of design are introduced as they relate to web design. Creation of a well designed web site with student designed graphics and animation will be required. Real world customer interaction will be incorporated and integration of knowledge gained in previous web courses will be emphasized.  
Prerequisite: EBUS218  
Credit: 4

#### **EBUS399 Special Topics in e-Business**

This course addresses issues of current interest in e-business. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **EBUS420 Web-based Database Applications**

EBUS420 provides an in-depth study of creating dynamic Web applications using a database and advanced topics in Web programming. Web user interface design, along with client/server-side script form validation and server-side script database access, will be presented. This course requires the completion of a functioning Web-based application using a database.  
Prerequisite: EBUS228, CS250 or IT235  
Credit: 4

#### **EBUS432 e-Commerce**

This course provides an in-depth study of e-Commerce. Business-to-business, business-to-consumer, electronic commerce infrastructure, and designing and managing online storefronts will be explored. Other topics include payment processing, Web server security, usage statistics and hosting considerations. The student will create a functional online store.  
Prerequisite: EBUS420  
Credit: 4

#### **EBUS481 Technology Project I**

This course is the first in the sequence EBUS481/EBUS482. It covers the computer software product life cycle. Student teams design a software system based on user requirements. There is an emphasis on requirements in engineering and design. The

ideal project involves a work-related project or a project for a corporate partner that satisfies actual business needs.  
Prerequisite: Approval  
Credit: 4

#### **EBUS482 Technology Project II**

A follow-up to EBUS481, this course covers the computer software product life cycle. Student teams implement the design developed in EBUS481. There is an emphasis on implementation, integration and testing.  
Prerequisite: EBUS481  
Credit: 4

#### **EBUS495 Advanced Research and Study in e-Business**

This course may be used for an independent in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be approved by the department chair.  
Prerequisite: Approval  
Credit: 1-6

#### **EBUS499 Special Topics in e-Business**

This course addresses issues of current interest in e-Business. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **ECON201 Macroeconomics**

During this course the student will study the basic institutions, terminology and theory of the main economic activities of production, distribution, and consumption, especially as they apply to the operation of our national economy. Specific topics include savings and investment, national output, expenditure and income, real versus potential GDP, aggregate demand and supply and fiscal and monetary policy.  
Credit: 4

#### **ECON254 Microeconomics**

This course introduces the tools of economics as they apply to the operation of market economy. Topics include supply and demand analysis, consumer behavior, economic nature of production and costs, behavior of firms in both competitive and monopoly environments, income distribution theory and effects of government intervention in the market system.  
Credit: 6

#### **ECON305 Global Managerial Economics**

In this course students will apply the theory and tools of micro and macroeconomics and research to the formation of business decisions in the global environment.  
Credit: 4

#### **ECON201 Macroeconomics**

During this course the student will study the basic institutions, terminology and theory of the main economic activities of production, distribution and consumption, especially as they apply to the operation of our national economy. Specific topics include savings and investment, national output, expenditure and income, real vs. potential GDP, aggregate demand and supply and fiscal and monetary policy.  
Prerequisite: BADM100  
Credit: 4

#### **ECON202 Microeconomics**

This course introduces to the student the tools of economics as they apply to the operation of market economy. These tools include the topics of supply and demand analysis, consumer behavior, economic nature of production and costs, behavior of firms in both competitive and monopoly environments, income distribution theory and effects of government intervention in the market system.  
Prerequisite: ECON201, MATH103 or MATH143  
Credit: 4

#### **ECON299 Special Topics in Economics**

This course addresses issues of current interest in economics. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **ECON301 Managerial Economics**

During this course the student will study the firm and the various markets that make up its environment. Economic analysis will be used to help evaluate alternative courses of action in the process.  
Prerequisite: ECON202  
Credit: 4

#### **ECON 310 Global Managerial Economics**

In this course students will apply the theory and tools of micro and macroeconomics and research to the formation of business decisions in the global environment.  
Prerequisite: ECON201  
Credit: 4

#### **ECON399 Special Topics in Economics**

This course addresses issues of current interest in economics. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **ECON616 Applied Managerial Economics**

During this course the student will study the practical aspects of both micro- and macroeconomics and how they are applied to the managerial environment. The students will investigate the role of economic principles in management analysis and decision making; the study of demand, cost and supply concepts from a business viewpoint; and the application of national income measures to strategic planning and the future.  
Prerequisite: MGMT507C or Approval  
Credit: 4

#### **ECON699 Special Topics in Economics**

This course addresses issues of current interest in economics. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **EE110 Introduction to Engineering**

This course provides the beginning engineer with fundamental knowledge and skills associated with the electrical or computer engineering professions. It will introduce common electronic components, basic circuit configurations, and laboratory instruments. Bench practices and lab reports will be introduced along with computer aided analysis.  
Prerequisite: MATH080  
Credit: 4

#### **EE221 Circuit Analysis I**

This calculus-based course introduces analysis and relationships of voltage, current, resistance and power. Series, parallel and complex circuits are analyzed with Ohm's Law. Kirchhoff's voltage and current laws and network theorems are studied. Laboratory circuit construction, tests and measurements are performed using the appropriate components and equipment. Circuit simulation tools used in industry are also introduced.  
Prerequisite: EE110, MATH201  
Credit: 5

#### **EE252 Digital Design I**

This course introduces the analysis and design of combinational and sequential digital systems. Number systems, Boolean switching

algebra and Karnaugh mapping are presented as basic tools used in the design of digital systems using SSI and MSI level components. Lab activity emphasizes the design and analysis techniques presented in lectures. Prerequisite: EE110, CE242  
Credit: 5

### **EE312 Embedded Microcontrollers**

Introduces embedded microcontroller development processes and tools. The hardware and software architecture of a contemporary off-the-shelf microcontroller is analyzed to determine its functional role as an embedded controller in the design of a digital system. An assembly language program development and simulation system introduces students to embedded system development environments. Prerequisite: EE252  
Credit: 5

### **EE325 CMOS Design**

This course introduces the design and performance of complementary MOSFET devices and circuits. Emphasis is on digital circuit performance as it relates to the physical layout of the IC. Projects include layout of digital circuits, from individual devices to multi-transistor elements, and analysis of the resulting circuit performance. Exercises include computer simulation and system integration as a tool for design. Lab projects provide experience with layout, extraction and analysis of circuits designed to meet given specifications. Prerequisite: EE375, EE252  
Credit: 5

### **EE331 Circuit Analysis II**

This calculus-based course covers circuit analysis related to AC and transient signals. Resistance, reactance and impedance parameters are analyzed in series, parallel and complex circuits. Trigonometric functions, AC network theorems, transformer and passive filter theories are applied. Laboratory circuit construction, test and measurements are performed using the appropriate components and equipment. Laboratory emphasis is placed on the knowledge and use of test and measurement instruments. Circuit simulation tools used in industry are employed. Prerequisite: EE221, MATH302  
Credit: 5

### **EE335 Advanced Engineering Mathematics**

This course introduces mathematical techniques that provide alternative, simpler methods of solving engineering problems. It investigates

topics of vector calculus (including gradient, divergence and curl), partial differential equations (including Separation of Variables) and complex analysis (including graphical representation with conformal mapping). Double and triple integrals are solved. Techniques are presented in three coordinate systems: Cartesian, cylindrical and spherical. Prerequisite: MATH302, MATH304  
Credit: 5

### **EE341 Advanced Circuit Analysis**

Introduces Laplace transform and frequency domain methods to model, analyze and design electrical circuits. Additional topics include Bode analysis techniques, Fourier series and Fourier transforms. Methods studied are applied in passive and active filter design. Prerequisite: EE331  
Credit: 5

### **EE343 Signals and Systems**

This course investigates analysis methods for signals and linear systems, especially as these methods apply to communication and control systems. Studies include signal classification, power and energy calculations, and time and frequency domain representations of signals and systems. The course continues Laplace and Fourier analysis, and introduces convolution. Signal and system simulation techniques are explored. Prerequisite: EE341, MATH304  
Credit: 4

### **EE352 Digital Design I**

This course continues the study of digital system design emphasizing the use of programmable logic devices and modern design methods. Contemporary logic families are reviewed along with practical design limitations. Computer simulation tools are introduced in the design process. Prerequisite: EE252  
Credit: 5

### **EE375 Electronic Design I**

This course provides a foundational knowledge for analyzing and designing analog electronic circuits as well as an intuitive approach to the design process. Discrete components and circuits are analyzed and designed to develop an understanding of how these components and circuits have lead to the fabrication of Integrated Circuits (ICs). Computer-aided circuit simulation, as well as hands-on applications of analysis and design theory, validates theoretical analysis and design concepts. Prerequisite: EE331  
Credit: 5

### **EE385 Instrumentation**

To use electronic instruments effectively, it is necessary to understand basic theory and how it relates to practical measurements. Topics include the mainstream instruments as well as spectrum analyzers, network analyzers, logic analyzers and probes. Prerequisite: EE375, EE252  
Credit: 4

### **EE395 Electronic Design II**

Single and multiple stage amplifiers are analyzed and modeled in terms of amplifier parameters such as gain, input and output impedances and frequency response. Lab projects require designing, constructing and demonstrating circuits to meet selected specifications and objectives. Lab projects must be satisfactorily completed to meet course requirements. Circuit performance is measured against the design objectives and specifications. Prerequisite: EE375  
Credit: 5

### **EE415 Advanced Electronic Design**

This course investigates the extended analysis of feedback effects in circuits as a basis for the design of amplifier systems, filters and analog systems. Designs are modeled and then implemented in the laboratory. Circuit performance is measured against the design objectives and specifications. Prerequisite: EE395  
Credit: 5

### **EE443 Communications Systems I**

This is an introductory course in communications theory emphasizing the correlation between signal information in the time domain and frequency domain. Basic signal filters are developed and applied. Basic principles of linear and angle modulation and demodulation are presented. Concepts of analog communication systems are introduced. Prerequisite: EE343, MATH366  
Credit: 4

### **EE463 Communications Systems II**

This is a continuation of basic communications theory and principles, emphasizing digital communications. Basic concepts in representing digital signals are studied along with contemporary techniques for digital modulation and multiplexing. Spread spectrum system fundamentals are also introduced. In addition, students use a contemporary communications systems design application tool to model and evaluate communications systems. Prerequisite: EE443  
Credit: 4

### **EE47X Capstone Engineering Design**

These courses provide the Electrical Engineering and Computer Engineering major senior-level students with the opportunity to independently solve one or more engineering design problems. A student will be required to define the problem specifications in the form of a project plan that must be approved by the course faculty mentor. The project plan serves as the framework for the student's efforts to satisfactorily solve the design problem. The resulting design may be in the form of a hardware implementation, computer simulation or both. A professional final report and briefing are required at the end of the course. Prerequisite: Approval  
Credit: 4  
Note: The EE47X series will be listed in the course schedule under one of the following: EE472 Advanced Digital System Design EE473 Communications System Design EE474 Control System Design EE475 Electronic System Design EE477 System Design (Special Topic) EE479 System Design Continuation

### **EE490 Product Design I**

This is the first of a two-course, capstone design sequence that integrates students into product design teams comprising engineering, engineering technology and logistics students. Each team is given a conceptual problem to be solved by the creation of a new product. This practicum exposes the team to current product development methods and issues beyond functionality, such as human factors, safety, engineering economics, maintenance and manufacturing. Students completing EE490 are expected to take the follow-on course, EE491, in the next term. Prerequisite: Approval  
Credit: 4

### **EE491 Product Design II**

This is the completion of a two-course, capstone design sequence. Students enrolled in EE491 are expected to have completed EE490 in the previous term. Credit: 4  
Prerequisite: EE490

### **EE495 Advanced Research and Study in Electrical Engineering**

This course provides the opportunity for independent, in-depth research and/or study in an area of student interest. Credits are assigned based on the complexity and depth of the project, which must be approved by the department chair. Prerequisite: Approval  
Credit: 1-6



### **EE499 Special Topics in Electrical Engineering**

This course addresses issues of current interest in electrical engineering. Course content varies as determined by student interest and evolution of the discipline.

Prerequisite: Approval  
Credit: 1-6

### **EE500 Foundations in Electrical Engineering**

This course provides an extensive overview of the relevant undergraduate engineering background required for the MSEE and MSCE programs. Topics include basic signal representation and manipulation, application of Laplace and Fourier transforms in analysis of linear time-invariant systems, fundamentals of amplitude and exponential modulation and demodulation, and an overview of solid-state fundamentals.

Prerequisite: MATH500 or Approval  
Credit: 4

### **EE600 Modern Solid State Devices**

This course provides an introduction to the basic physics, principles of operation, and applications of CMOS digital IC devices and circuits. The student will relate physical layout of the integrated circuit to functional and performance models, and relate these to performance and reliability. Students will evaluate current research and alternate technologies.

Prerequisite: EE500 or PHY350  
Credit: 4

### **EE605 Digital Signal Processing**

This course develops the principles of digital signal processing. Topics covered include discrete-time signals, the Z-transform and discrete Fourier transform, finite impulse response (FIR) and infinite impulse response (IIR) filters and methods of digital filter design.

Prerequisite: MATH500  
Credit: 4

### **EE625 Spread-Spectrum Communications**

This course addresses the principles of spread-spectrum communication systems. Topics include spread-spectrum concepts, direct-sequence and frequency-hop systems, finite-field math to include generator polynomials, maximum-length sequence generators, code-tracking loops, receiver synchronization and CDMA digital cellular communication systems.

Prerequisite: EE500  
Credit: 4

### **EE645 Digital Communications**

This course presents advanced techniques for transmitting digital data. Topics include formatting and transmission of data, channel coding techniques and signal recovery methods.

Prerequisite: EE500  
Credit: 4

### **EE650 Space Communications**

This course addresses the principles of modern communication methods using the space arena as a practical theater of application. Topics include modulation/demodulation techniques, digital encoding/decoding, error detection and correction, interleaving methods, antennas, channel characteristics and multi-access techniques. Specific satellite communication systems are discussed to amplify applicability and establish a real-world appreciation for the theory presented in the course.

Prerequisite: EE500  
Credit: 4

### **EE660 Modern Electronic Design**

This course explores the issues, methods, tools and processes in the design of modern electronic systems. Students will research and integrate information, identify and apply models, consider experimental design and evaluate design alternatives in a "just-in-time" approach to design.

Prerequisite: EE600  
Credit: 4

### **EE695 Advanced Research and Study in Engineering**

This course provides the opportunity for independent, in-depth research and/or study in an area of student interest. A research or study plan is required. The course is usable as a master's elective in engineering.

Prerequisite: Approval  
Credit: 1-6

### **EE699 Special Topics in Engineering**

This course addresses issues of current interest in electrical and/or computer engineering. Course topics will vary as determined by student interest and evolution of the discipline. The course is usable as a master's elective in engineering.

Prerequisite: Approval  
Credit: 1-6

### **EMBA600 Managing Programs, Projects and Initiatives**

In this course the student will be introduced to the tools and methods necessary to manage successful projects. While theory and concepts will be addressed, the direction of this course is to provide an overview of how the discipline of project management has developed to the point where it is now incorporated into virtually every domestic and international industry and organization. To facilitate the successful completion of an initiative all of these elements must be placed in an organized framework. Time and budget limitations, lack of staff, lack of resources and a host of additional limitations routinely conspire to ensure good projects fail.

Credit: 4

### **EMBA610 Global Management Perspectives**

The student will analyze the challenges and opportunities that exist in the global marketplace. This course covers a cross-section of international business decision making: international trade issues and institutions, international finance, international strategy, international marketing and international organizational issues. This interdisciplinary course is designed to present managing in a global perspective.

Credit: 4

### **EMBA620 Transactional/Transformational Leadership**

This course is designed to introduce theoretical and practical methodology surrounding effective business and social leadership. The social relationships between leaders and followers as well as the 'concentric rings' or levels of leadership that exist throughout most societies and businesses will be discussed. What constitutes practical, moral and effective leadership will be addressed in the context of political, business and small groups.

Credit: 4

### **EMBA630 Decision in Management: Navigating Uncertainty**

Students in this course will be introduced to various models, concepts and ideas that will assist them in creating high performance qualitative and quantitative solutions for working systems that maintain and encourage innovation and growth.

Prerequisite: Approval  
Credit: 4

### **EMBA640 Entrepreneurship/Intrapreneurship and Innovation**

This course is designed to introduce the student to the idea of Intrapreneurship and the opportunities for innovation that exist within an existing corporation. These same skills apply to those mavericks that would pursue the same innovation outside of mainstream business community as Entrepreneurs. The similarities and differences will be addressed along with the necessary multidisciplinary and dynamic skill-sets required to build a successful enterprise from within and outside the traditional business structures.

Prerequisite: Approval  
Credit: 4

### **EMBA650 Emerging Markets**

Students in this course will learn how to identify and analyze the various governmental, business and political challenges and opportunities that exist when operating within

emerging international markets. International law, business ethics, policy options, tariffs and operation of existing economies and organizations are examined. The roles of history and tradition are also explored in light of their potential impact on various emerging global market economies.

Prerequisite: Approval  
Credit: 4

### **EMBA660 Financial Structures and Valuation**

This course will address how the success of an organization relies largely on the fundamental concepts and techniques of asset allocation, financial management and determining methods of organizational performance. This course is designed to develop managers who understand that value creation is at the heart of every organization's mission and who can implement strategies to increase value within the organization. The financial management, asset valuations models and corporate accounting methods introduced in this class will provide a significant and in-depth overview of modern organizational financial practices.

Prerequisite: Approval  
Credit: 4

### **EMBA670 Domestic and Global Economic Environments**

In this course students will address the role of global economic markets within the international business arena. The impact of domestic and international economies, issues, and governmental policies on economic strategies will be evaluated. Accurate analysis, interpretation, and application of global economic data will be emphasized.

Prerequisite: Approval  
Credit: 4

### **EMBA680 Organizational Behavior and Corporate Ethics**

This course is designed to stimulate thinking on issues of ethics and social responsibility and provide the necessary skills to recognize and manage ethical and social issues. Increasing awareness of the ethical requirements of business conduct, determining and building personal standards of integrity and professionalism and providing a framework of professional standards and responsibilities will be addressed. In combination with the Decision Models course, the student will continue developing analytical skills necessary for identifying and resolving ethical and social dilemmas.

Prerequisite: Approval  
Credit: 4

### **EMBA690 Strategic Management in Dynamic Environments**

Students will master analytical and integrative tools to perform in-depth analyses of industries, firms, and competitors. Course material includes methods to predict competitive behavior and develop and implement strategic plans to achieve and sustain a competitive profile in the emerging global marketplace.

Prerequisite: Approval

Credit: 4

### **EMBA695 Capstone**

The capstone provides MBA students the opportunity to integrate knowledge and skills gained throughout the program in the completion of selected, real-world projects, culminating in a publishable work, proposal, or initiative that addresses an existing problem in the workplace.

Prerequisite: Approval

Credit: 4

### **ENG115 English Composition**

In this course, students focus on developing writing skills through practice and revision. Students will examine expository, critical, and persuasive essay techniques.

Credit: 4

### **ENG116 English Composition II**

During this course the students will learn the writing process (prewriting, researching, drafting, revising, editing, and assessing) and source documentation. The course also introduces students to six basic writing strategies used in effective writing (exemplification, description, comparison and contrast, process, definition, and cause and effect). Additionally, the student will review basic grammar, punctuation, spelling and sentence structure.

Prerequisite: ENG115

Credit: 6

### **ENG202 Professional Writing and Composition**

The course covers the preparation of a wide variety of technical documents, including mechanism and process descriptions, instructions, proposals, recommendations, letters, memos, and electronic mail. Particular attention is given to adapting writing style to a particular audience, adjusting document mechanics and semantics for a specific purpose, formatting design elements in a consistent manner, and integrating graphics into a document.

Prerequisite: ENG116

Credit: 6

### **ENGL080 English Composition Preparation**

The English 080 course is a preparatory course designed to meet the individual student's needs in preparing for ENGL111, English Composition I. Special attention is paid to the fundamentals of grammar, punctuation, spelling, diction, sentence structure, paragraph formation and essay organization.

Credit: 4

### **ENGL111 English Composition I**

During this course the students will review the writing process (prewriting, researching, drafting, revising, editing and assessing) and cover documenting sources. The course also introduces students to four basic writing strategies used in effective writing (exemplification, description, compare and contrast, and process). Additionally the student will review basic grammar, punctuation, spelling and sentence structure by using literary excerpts. Students will also learn basic document preparation skills using Microsoft Word in the lab.

Prerequisite: ENGL080 or Placement

Credit: 4

### **ENGL112 English Composition II**

During this course the student will review critical thinking, the writing process and integrating sources, while being introduced to two basic writing strategies used in effective writing (definition and cause and effect). Additionally there will be work in two advanced methods of effective writing (combining devices and strategies in a formal argumentative / persuasive research paper). The reviewing of persuasive appeal and argumentative structure will also be studied. Literary excerpts will be used as models for student writing. Finally students will learn advanced document preparation skills using Microsoft Word in the lab.

Prerequisite: ENGL111

Credit: 4

### **ENGL199 Special Topics in English**

This course addresses topics of current interest in English or Literature. Course content will vary as determined by student interest and the faculty availability.

Prerequisite: Approval

Credit: 1-6

### **ENGL200 Professional Writing**

The course covers the preparation of a wide variety of technical documents including mechanism and process descriptions, instructions, proposals, recommendations,

letters, memos, and electronic mail. Particular attention is given to adapting writing style to a particular audience, adjusting document mechanics and semantics for a specific purpose, formatting design elements in a consistent manner, and integrating graphics into a document.

Prerequisite: ENGL112

Credit: 4

### **ENGL210 Professional Speaking**

During this course the student will learn the essentials of business and professional presentations, including extemporaneous, introduction, demonstration, informative (business briefing) and persuasive (argumentative on controversial issue) presentations.

Additionally, students will study information on word choices, organization, audience analysis and graphics and use them in several evaluated experiences in speech preparation and presentation. Both theoretical understanding and practical experience will be critiqued often. These concepts and skills (or principles and techniques) are adapted to platform speaking, boardroom discussions, class interactions and personal conversations. Further attention is given to models, elements, principles and procedures of public communication. Special attention will be given to the presentation and delivery mix of several student presentations.

Prerequisite: ENGL112

Credit: 4

### **ENGL299 Special Topics in English**

This course addresses topics of current interest in English or Literature. Course content will vary as determined by student interest and the faculty availability.

Prerequisite: Approval

Credit: 1-6

### **FIN210 Managing Programs, Projects and Initiatives**

In this course the student will be introduced to the tools and methods necessary to manage successful projects. While theory and concepts will be addressed, the direction of this course is to provide an overview of how the discipline of project management has developed to the point where it is now incorporated into virtually every domestic and international industry and organization. To facilitate the successful completion of an initiative all of these elements must be placed in an organized framework. Time and budget limitations, lack of staff, lack of resources and a host of additional limitations routinely conspire to ensure good projects fail.

Credit: 4

### **FIN220 Financial Statement Analysis**

In this course students will analyze financial statements for different types of businesses. The focus of the course is to calculate financial ratios and use them to analyze the stability of the firm.

Credit: 4

### **FIN310 Financial Management Principles**

This course examines the key components of financial decision-making: valuation and risk management. Students will examine the implications of forecasting, capital budgeting, working capital management, and project risk management.

Prerequisite: ACC350

Credit: 4

### **FIN322 Investments**

This course focuses on investments and investment strategies. Various investment vehicles such as stocks, bonds and commodities are examined. Students will explore the principles of security analysis and valuation.

Credit: 4

### **FIN354 Risk Management**

In this course, students will explore personal and corporate exposure to risk, as well as the tools used to manage risk. The management of organizations' and individuals' exposure to property damage and legal liability will be covered.

Credit: 4

### **FIN356 International Finance**

This course focuses on the workings of international financial markets, the risks of doing business in the international area, and the management of exchange risk exposure. Students will examine valuation and portfolio analysis of foreign investments.

Prerequisite: FIN310

Credit: 4

### **FIN412 Money and Capital Markets**

In this course, students will focus on the capital structure of financial institutions and the flow of funds through our economic system. The course emphasizes concepts such as the creation of money, the impact of savings and the interrelation of interest rates and inflation. The financial system is examined to understand the roles played by consumers, businesses and government, particularly the Federal Reserve System.

Prerequisite: FIN310

Credit: 6

#### **FIN434 Corporate Finance**

The financial dimensions of business decisions are studied. Topics covered will include dividend policy, optimal capital structure, default risk of corporate debt, dividend policy and common stock repurchases, raising external capital, and the institutional aspects of acquiring capital.

Prerequisite: FIN322, FIN412

Credit: 6

#### **FIN600 Financial Statement Analysis**

In this course, students learn how to analyze financial statements and methods used to value companies.

Credit: 4

#### **FIN605 Corporate Portfolio Management**

This course provides students with an overview of investment alternatives, the workings of investment markets, and the management of investment portfolios as they relate to corporations.

Prerequisite: FIN600

Credit: 4

#### **FIN610 Financial Management for Multinational Enterprises**

Within the context of the multinational firm, the course examines the development of policy, financing options for international business, and the making of standard financial management decisions.

Prerequisite: FIN600

Credit: 5

#### **FIN661 Finance Capstone 1**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by business leaders. Students will assess finance problems and develop courses of actions to address those problems. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus is on crafting an effective policy and implementing a strategy. All assignments and activities will be discussed during the first class session. Individual and team participation are imperative for this course

Credit: 4 (2 – 2 credit courses)

#### **FIN662 Finance Capstone 2**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by business leaders. Students will assess

finance problems and develop courses of actions to address those problems. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus is on crafting an effective policy and implementing a strategy. All assignments and activities will be discussed during the first class session. Individual and team participation are imperative for this course

Credit: 4 (2 – 2 credit courses)

#### **FINC200 Applied Finance and Managerial Accounting**

This course represents a survey of current financial and managerial accounting techniques used to efficiently manage organizations. The student will be introduced to basic financial statements and their analysis, operational and capital budgeting techniques, business operations and funding along with cost-volume-profit analysis and scheduling issues.

Prerequisite: BADM100, MATH143

Credit: 4

#### **FINC210 Financial Management Principles**

This is an introductory course that examines fundamental components of financial decision-making. Students will examine the components of an effective financial system, the process of financial statement analysis and capital budgeting, and the role of risk and return in finance.

Credit: 4

#### **FINC220 Financial Statement Analysis**

In this course students will analyze financial statements for different types of businesses. The focus of the course is to calculate financial ratios and use them to analyze the stability of the firm.

Prerequisite: FINC210

Credit: 4

#### **FINC299 Special Topics in Finance**

This course addresses issues of current interest in finance. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

#### **FINC310 Money and Capital Markets**

In this course, students will focus on the capital structure of financial institutions and the flow of funds through our economic system. The course emphasizes concepts such as the creation of money, the impact of savings and the interrelation of interest rates and inflation. The financial system is examined

to understand the roles played by consumers, businesses and government, particularly the Federal Reserve System.

Credit: 4

#### **FINC320 Investments**

This course focuses on investments and investment strategies. Various investment vehicles such as stocks, bonds and commodities are examined. Students will explore the principles of security analysis and valuation

Prerequisite: FINC210

Credit: 4

#### **FINC330 Risk Management**

In this course, students will explore personal and corporate exposure to risk, as well as the tools used to manage risk. The management of organizations' and individuals' exposure to property damage and legal liability will be covered.

Prerequisite: FINC210

Credit: 4

#### **FINC399 Special Topics in Finance**

This course addresses issues of current interest in the field of finance. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

#### **FINC400 Financial Management**

This course examines the process of budgeting. Students will examine the components of and develop budgets. Students will also utilize capital budgeting tools to evaluate investment opportunities.

Prerequisite: FINC210

Credit: 4

#### **FINC410 Corporate Finance**

The financial dimensions of business decisions are studied. Topics covered will include financial statement preparation and analysis, risk and return, the time value of money, the valuation of stocks and bonds, cost of capital calculations and capital budgeting.

Prerequisite: FINC210

Credit: 4

#### **FINC420 International Finance**

This course focuses on the workings of international financial markets, the risks of doing business in the international area, and the management of exchange risk exposure. Students will examine valuation and portfolio analysis of foreign investments.

Prerequisite: FINC210

Credit: 4

#### **FINC460 Finance Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to formulate decisions within a business entity and analyze the financial implications of those decisions. Individual and team participation are imperative for this course.

Prerequisite: FINC210

Credit: 4

#### **FINC499 Special Topics in Finance**

This course addresses issues of current interest in the field of finance. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

#### **FINC600 Financial Statement Analysis**

In this course, students will analyze financial statements and examine methods used to value companies.

Prerequisite: Approval

Credit: 4

#### **FINC605 Corporate Portfolio Management**

This course provides a study of investment alternatives, the workings of investment markets, and the management of investment portfolios as they relate to corporations.

Prerequisite: FINC600

Credit: 4

#### **FINC610 Financial Management for Multinational Enterprises**

Within the context of the multinational firm, the course examines the development of policy, financing options for international business, and the making of standard financial management decisions.

Prerequisite: FINC600

Credit: 4

#### **FINC615 Applied Managerial Finance**

In this course, students will learn how to use finance concepts to make business decisions. Financial reporting, planning, and analysis will be central topics in the course.

Prerequisite: FINC600

Credit: 4

#### **FINC660 Finance Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by business leaders. Students will assess finance problems and develop courses of actions to address those problems. Specifically, the course



focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus is on crafting an effective policy and implementing a strategy. All assignments and activities will be discussed during the first class session. Individual and team participation are imperative for this course.  
Prerequisite: FINC625  
Credit: 4

**FINC699 Special Topics in Finance**  
This course addresses issues of current interest in finance. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

**FINP310 Taxation in Financial Planning**  
This course provides an introduction to the taxation of individuals. Particular attention is placed on tax planning concepts and responsibilities of the tax planner.  
Credit: 4

**FINP315 Principles of Risk Management and Insurance**  
This course covers non-speculative risk management with emphasis on risk minimization and risk control. Topics also include a study of the various insurance vehicles from both the personal and business perspective.  
Credit: 4

**FINP320 Investments**  
This course examines various investment vehicles such as stocks, bonds and commodities in light of their role in the personal financial planning environment.  
Credit: 4

**FINP399 Special Topics in Financial Planning**  
This course addresses issues of current interest in financial planning. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

**FINP420 Employee Benefits and Retirement Planning**  
This course provides a study of the financial and non-financial aspects of planning for retirement and other lifetime goals. Particular attention is given to the role of employer provided benefits in the personal financial planning process.  
Prerequisite: FINP310, FINP315, FINP320  
Credit: 4

**FINP430 Estate Planning**  
This course examines the various tax and legal impacts of protecting an individual's estate to provide for their beneficiaries.  
Prerequisite: FINP310, FINP315, FINP320  
Credit: 4

**FINP450 Financial Planning Capstone**  
This course presents a comprehensive application of the personal financial planning process. The role of the personal financial planner is considered as well as the various legal, ethical and professional aspects of their relationship with their clients.  
Prerequisite: FINP420, FINP430  
Credit: 4

**FINP499 Special Topics in Financial Planning**  
This course addresses issues of current interest in financial planning. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

**HCM300 Healthcare Law and Regulations**  
This course presents an overview of the system, including legal principles, obligations, and legal rights. Topics include contracts, torts, civil and criminal liability, and legal protections. Various laws that govern healthcare business operations are explored. Ethical issues affecting healthcare will be explored.  
Credit: 4  
Same as: HSS300

**HCM307 The Healthcare Industry**  
This course provides a comprehensive overview of the healthcare industry, with an emphasis on the development and diversification of healthcare organizations, different management structures, the process of health policymaking, and basic healthcare operations.  
Credit: 4

**HCM320 Administration in Healthcare Services**  
The emphasis in this class is on the organization and administration of health services programs. This course includes examination of: mission statements; organizational goals and objectives; the role of values and ethics; access and use of services; resource, cost, and benefit analysis; delivery models; assessment and assurance of quality.  
Credit: 4  
Same as: HSA320

**HCM325 Policy and Ethical Issues in Healthcare Services**  
This course surveys current issues facing healthcare managers and practitioners. Topics include: healthcare reform, right to life, euthanasia, healthcare rationing, termination of medical treatment, right-to-die, patient advocacy and long-term care issues.  
Credit: 4

**HCM337 Current Legal, Ethical, and Regulatory Issues in Healthcare**  
This course is an introduction to legal, ethical, and regulatory standards governing healthcare organizations. Topics include legal requirements, responsibilities, and constraints related to health provider/patient relationships, medical records, malpractice insurance, and licensure of health professionals as well as unique ethical dilemmas in the healthcare field, such as those related to patient privacy, confidentiality and informed consent.  
Prerequisite: HCM307  
Credit: 4

**HCM350 Healthcare Systems**  
This course focuses on healthcare delivery system topics including the history of healthcare systems, system organization, economics and financing of healthcare. The role of quality and future directions in healthcare will be discussed.  
Credit: 4

**HCM367 The Healthcare Organization**  
In this course, students will explore the organizational structure of healthcare institutions and healthcare delivery. This course will emphasize the interrelatedness of psychological, social, cultural, and political factors in healthcare delivery, organizational culture, and healthcare management.  
Prerequisite: HCM307  
Credit: 4

**HCM387 Management Principles in Healthcare**  
This course explores management issues in healthcare related to financial, physical and human resources. This course will emphasize planning in areas such as risk assessment, technology, information systems, staffing requirements, unique needs of specialized providers, and resource allocation. It will also emphasize the importance of sensitivity and competency in managing a diverse workforce, including an overview of essential skill and knowledge requirements for cultural

competency, both as a manager and a member of a healthcare organization.  
Credit: 4

**HCM400 Health Management and Supervision**  
Learners examine motivation theory and its application to individual and group functioning in the work environment. Leadership styles related to particular circumstances are analyzed. Negotiation is covered through readings and class participation and includes an analysis on the effectiveness of negotiation on overall productivity.  
Prerequisite: HRMT210  
Credit: 4

**HCM410 Fiscal Management in Healthcare Services**  
This course introduces concepts and techniques of managerial accounting for general health services managers. Topics covered include: fiscal management and performance, cost, revenue, risk, fiscal planning and forecasting, budgeting, control, and reporting. Financial management in long-term care facilities, home health agencies, and hospitals are discussed.  
Prerequisite: ACCT201  
Credit: 4  
Same as: HSA410

**HCM415 Health Information Systems**  
In this case-oriented course students will apply management information system principles to healthcare management systems.  
Credit: 4

**HCM427 Human Resource Management in Healthcare**  
This course is specifically designed to analyze human resource management functions as they affect employee productivity and satisfaction in health services organizations. The course stresses individual, social, and organizational factors, laws, and relevant principles in human resource management as they apply to the healthcare field. There will be a specific emphasis on how these issues affect recruitment, selection for interview, job descriptions, staffing, hiring, training, supervision, evaluation, retention, and discipline.  
Prerequisite: HCM307  
Credit: 6

**HCM477 Finance in Healthcare**  
This course will provide a conceptual and practical background in healthcare finance, including funding sources, the

interrelationship between departmental and total facility budget, the accounting and reporting process, budgetary prioritizing, the grant-writing process, and the influence of third parties on revenue and expenditures. Prerequisite: HCM307  
Credit: 6

#### **HCM481 HCM Internship/Project I**

This course provides an opportunity for the student to apply learned concepts in a healthcare setting with a preceptor/mentor. The student will observe healthcare operations and participate as a member of the healthcare management team. During this phase of the externship, the student will identify a project for planned implementation through the next phase of the externship.  
Credit: 4

#### **HCM482 HCM Internship/Project II**

This course is the second quarter of an internship requirement for Healthcare Management. During this course, the student should participate in governance and operations of the healthcare organization. An understanding of regulatory requirements affecting healthcare organizations is applied. The student is expected to implement the project identified in HCM481. Prerequisite: HCM481  
Credit: 4

#### **HCM611 Managing the Healthcare Organization**

This course provides a general orientation to management practices in the healthcare field. The focus is on applying essential management concepts and processes to the unique social, physical, and emotional environments of healthcare organizations.  
Credit: 5

#### **HCM612 Managing the Healthcare Organization**

This course provides a general orientation to management practices in the healthcare field. The focus is on applying essential management concepts and processes to the unique social, physical, and emotional environments of healthcare organizations.  
Credit: 4

#### **HCM621 Ethics, Policy, and Law in Healthcare Management**

This course examines key ethical, regulatory, and legal issues related to healthcare management and delivery of healthcare services. Emphasis is placed on the interface of ethics, policy, and the law on medical negligence, malpractice and professional liability, medical records, information management, patient

consent, confidentiality, privacy, patient rights and responsibilities, contracts, labor relations, and other current issues.  
Credit: 4

#### **HCM631 Systems in Healthcare**

This course focuses on issues facing healthcare systems in a changing environment. Students will examine resource allocation, risk assessment, and financing. Prerequisite: HCM611  
Credit: 4

#### **HCM660 Healthcare Capstone**

The Healthcare Management capstone is an integrative and interactive course in which the student uses the functional skills acquired from previous core and concentration courses to resolve issues or take advantage of opportunities faced by healthcare businesses and leaders. The course provides the opportunity to assess situations and develop decisive courses of actions to address those situations. Specifically, the course focuses on how to create and sustain operating strategies that create value for the healthcare facility, business, consumers, and society as a whole. The student is developing an effective policy, strategy, or implementation plan.  
Credit: 4

#### **HCM661 Healthcare Management Capstone I**

The Healthcare Management capstone is an integrative and interactive course in which the student uses the functional skills acquired from previous core and concentration courses to resolve issues or take advantage of opportunities faced by healthcare businesses and leaders. The course provides the opportunity to assess situations and develop decisive courses of actions to address those situations. Specifically, the course focuses on how to create and sustain operating strategies that create value for the healthcare facility, business, consumers, and society as a whole. The student is developing an effective policy, strategy, or implementation plan.  
Credit: 4 (2 – 2 credit courses)

#### **HCM662 Healthcare Management Capstone II**

The Healthcare Management capstone is an integrative and interactive course in which the student uses the functional skills acquired from previous core and concentration courses to resolve issues or take advantage of opportunities faced by healthcare businesses and leaders. The course provides the opportunity to assess situations and develop decisive courses of actions to address those situations. Specifically, the course focuses on

how to create and sustain operating strategies that create value for the healthcare facility, business, consumers, and society as a whole. The student is developing an effective policy, strategy, or implementation plan.  
Credit: 4 (2 – 2 credit courses)

#### **HIS150 World History Since 1500**

This course introduces the student to most significant events, personalities, trends and issues associated with the historical development of world civilization in the five centuries since the Middle Ages, beginning with an overview of the Renaissance and Reformation and concluding with an assessment of the contemporary legacy of the Cold War. It explores the rise of capitalism and the modern nation state, the expansion of Western Europe, advances in science and technology, the impact of industrialization, and the global conflicts of the 20th century.  
Credit: 4

#### **HIS250 World Culture and Values**

This course helps the student to develop a global viewpoint appropriate for the business and technology leaders of the 21st Century. It develops an appreciation for the variations in culture across the world's regions and peoples. Additionally, it helps the student to develop a framework for understanding the elements and expressions of culture, and how culture shapes and is shaped by historical trends, events, situations, climate, geography, beliefs and values. Emphasis is placed on the driving political, intellectual and technological forces as shapers of culture and values, especially those that have influenced the development of the global marketplace. Prerequisite: HIS150, ENGL116  
Credit: 4

#### **HIST099 Special Topics in History**

This course addresses issues of current interest in history. Course content will vary as determined by student interest. This course cannot be used to satisfy any degree requirements.  
Credit: 4

#### **HIST150 World History Since 1500**

This course introduces the student to most significant events, personalities, trends and issues associated with the historical development of world civilization in the five centuries since the Middle Ages, beginning with an overview of the Renaissance and Reformation and concluding with an assessment of the contemporary legacy of the Cold War. It explores the rise of capitalism

and the modern nation state, the expansion of Western Europe, advances in science and technology, the impact of industrialization, and the global conflicts of the 20th century.  
Credit: 4

#### **HIST199 Special Topics in History**

This course addresses issues of current interest in history. Course content will vary as determined by student interest and faculty availability. Prerequisite: Approval  
Credit: 1-6

#### **HIST210 World History and Culture I**

HIST210 covers major cultures and civilizations of the world from ancient times to the birth of Western Imperialism in the 16th Century. Topics include cultures and historical experiences representative of Africa, Asia, Europe, the Middle East, and pre-Columbian America. Of particular interest is the evolution of world religions or philosophies that prevail and are still critical in the modern world: Hinduism, Buddhism, Confucianism, Judaism, Christianity and Islam. Western Civilization is used as a timeline and a reference for the historical events which shaped the modern world outside Indo-European civilization.  
Credit: 4

#### **HIST250 World Cultures and Values**

This course helps the student to develop a global viewpoint appropriate for the business and technology leaders of the 21st Century. It develops an appreciation for the variations in culture across the world's regions and peoples. Additionally, it helps the student to develop a framework for understanding the elements and expressions of culture, and how culture shapes and is shaped by historical trends, events, situations, climate, geography, beliefs and values. Emphasis is placed on the driving political, intellectual and technological forces as shapers of culture and values, especially those that have influenced the development of the global marketplace. Prerequisite: HIST150, ENGL112  
Credit: 4

#### **HIST299 Special Topics in History**

This course addresses issues of current interest in history. Course content will vary as determined by student interest and faculty availability. Prerequisite: Approval  
Credit: 1-6

#### **HIST310 World History and Culture II**

This course presents an examination of world history from the 16th century to the present. These topics include the birth of Western



Imperialism, the fall of the Islamic empires, the African kingdoms and the slave trade, and the collapse of traditional China. Other topics include the rise of Japan, the New Imperialism and industrialization of the 19th century, the decolonization process, the Cold War, Latin American revolutions, conflicts in the Middle East and other contemporary issues. Driving political, intellectual and technological forces are also explored as shapers of culture and values, especially those that have influenced the development of the global marketplace. Western Civilization is used as a timeline and a reference to the impact of non-Western cultures on Indo-European Civilization.  
Credit: 4

#### **HIST399 Special Topics in History**

This course addresses issues of current interest in history. Course content will vary as determined by student interest and faculty availability.  
Prerequisite: Approval  
Credit: 1-6

#### **HIT080 Introduction to Computing for Healthcare Professionals**

Introduction to Computing for Healthcare Professionals identifies the use of computers to support professional activities and the role of computers in healthcare. Students will develop skills in the use of computer applications to perform common tasks in the healthcare work environment. Topics include types of computers, analog/digital conversion, computer hardware and software, word processing, spreadsheet, presentation applications and email systems.  
Credit: 4

#### **HIT099 Special Topics in Health Information Technology**

This course addresses issues of current interest in health information technology. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.  
Credit: 4

#### **HIT100 Health Services and Organization**

This course provides an introduction into healthcare organizations. Students are introduced to the wide ranging types of health delivery organizations including hospitals, ambulatory care programs, physician offices, surgicenters and allied health providers. Topics include organizations, healthcare personnel, finance, public health, Medicare, managed care and nursing homes.  
Credit: 4

#### **HIT105 IT for Healthcare Professionals**

This course is an introduction to Information Technology (IT) for Healthcare Professionals. Topics include operating systems, introduction to networking, the Internet, database concepts, radiological information systems, and hospital information systems. We will examine the future of IT in the health sciences by looking at internet information, ethical and security issues.  
Prerequisite: HIT080 or Placement  
Credit: 4

#### **HIT120 Introduction to ICD9 Classification and Reimbursement**

This course provides an introduction into the processes used in the healthcare industry for disease classifications and reimbursement. Students are introduced to disease, diagnostic procedures and the processes used to classify, identify and categorize procedures. Topics include introduction to classification systems, coding ICD-9 coding and inpatient reimbursement methods including Fee for Service, diagnostic related groupings (DRGs), All Inclusive Rates, Risk Assignment and outpatient reimbursement.  
Credit: 4

#### **HIT130 Introduction to CPT Coding/Billing**

This course introduces students to coding and billing for medical insurance. Students are introduced to Current Procedural Terminology (CPT) processes and using CPT errata. Topics include coding systems and traditional reimbursement methods.  
Prerequisite: HIT120, BIO122, HSS121  
Credit: 4

#### **HIT140 Healthcare Management**

This course provides an introduction to the management of healthcare organizations. Management practices relating to organizational planning, organizing, controlling and motivating are discussed. Special emphasis is placed on management within professional healthcare settings including hospitals, large clinic settings, for-profit and non-profit organizations.  
Credit: 4

#### **HIT199 Special Topics in Health Information Technology**

This course addresses issues of current interest in health information technology. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **HIT210 Healthcare Economics**

This course provides an introduction to the economic forces facing the healthcare industry on a micro-economic level. Students learn how economic principles, forces and market conditions impact healthcare providers, organizations and patients. Topics include market conditions, supply and demand, consumer demand, competition, monopoly, government intervention and aggregate supply and demand.  
Prerequisite: HIT100  
Credit: 4

#### **HIT233 Fundamentals of Health Tech Systems**

This course introduces system support operational practices and theory as used in large enterprises. Students are introduced to the skills, concepts and knowledge needed to provide and maintain high quality customer service in an IT system support organization.  
Prerequisite: IT200  
Credit: 4

#### **HIT250 Principles of Quality Improvement**

Emphasis is placed on traditional and innovative ways that quality is looked at in the health industry. Topics include moral, legal and professional requirements for assuring clinical patient quality. Also covered are a number of specific general approaches used in determining epidemiological source of disease and pathology. The role of the physician, organizational programs and public health agencies is discussed.  
Credit: 4

#### **HIT295 Health Internship/Practicum**

This course provides students with experience in conducting the coding and billing procedures of patient healthcare bills. The operations and functions of health information programs within a healthcare organization are considered. Students will be provided with multiple health information projects/scenarios to evaluate, code, and complete.  
Prerequisite: Approval  
Credit: 4

#### **HIT299 Special Topics in Health Information Technology**

This course addresses issues of current interest in health information technology. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **HRM 220 Staffing the Organization**

This course examines the legal, technological, and strategic issues related to hiring, recruitment, selecting, and staffing the organization. Topics to be considered include: Recruitment sources, Interview Strategies and Preparation of Interview Questions, Determining "Fit" in the organization, legislation that affects hiring, Reference Checks, Employment Tests, Documentation, and Employee Orientation.  
Prerequisite: HRMT 210 and ENGL 111-112  
Credit: 4

#### **HRM246 Human Resource Management**

This course focuses on acquiring, utilizing, and developing human resources. It is an overview of common personnel activities recruitment, selection, compensation, productivity, and satisfaction. Additionally, employee diversity, ethical issues, and equal employment opportunity will be discussed.  
Credit: 4

#### **HRM315 Managing Human Resources**

This course discusses the principles, policies, and practices of human resource management. The role of managing and enhancing the productivity and potential of the human resources of the business organization is the primary focus of the course.  
Credit: 4

#### **HRM335 Legal Issues in HRM**

In this course, students will explore the legal regulations that affect human resource management. Students will learn how to prevent legal problems and handle issues as they arise.  
Prerequisite: HRM315  
Credit: 4

#### **HRM345 Building Effective Teams**

In this course students will explore two of the characteristics of the modern work environment: diversity and teams. They will explore the opportunities and challenges that arise from a diverse workforce. In addition, team building and conflict resolution skills will be covered in this course.  
Prerequisite: MGM335  
Credit: 4

#### **HRM350 Workforce Effectiveness**

This course covers a variety of areas related to creating an effective workplace. It includes several aspects of human resource administration such as selection, training, development, and appraisal. This course also emphasizes a systems approach to the work

place environment and explores the human machine design interface in order to create effective working conditions.

Prerequisite: HRM315

Credit: 4

#### **HRM355 Labor Relations**

This course covers the role of labor relations in human resource management. Labor-management will be discussed from both the union and non-union perspectives.

Prerequisite: HRM315

Credit: 4

#### **HRM415 Compensation and Benefits**

Compensation plays a critical role in modern organizations. An effective compensation system enables the organization to achieve organizational goals, improve productivity, and motivate employees. This course is designed to provide a working knowledge and a general understanding of compensation and benefits.

Prerequisite: HRM315

Credit: 6

#### **HRM420 Managing Labor-Management Relations**

This course explores labor-management relations from union and non-union perspectives. Issues discussed are collective bargaining, the negotiation process, the grievance system, arbitration and mediation, and The National Labor Relations Act. Unions, past, present and future are discussed as a context for unions and labor relations in the United States.

Prerequisite: HRM330 and ENG 111-112

Credit: 4

#### **HRM440 Managing Organizational Change**

This course focuses on the theories, stages, practices and implications of the organizational change process. Some topics discussed include preparing to manage change, articulating choices, envisioning the future and implementing change programs. Students study organizational development models to apply to the change process. The major objective of this course is to equip managers and HR professionals with the skills and knowledge needed to address the continuous changes in the organization.

Prerequisite: BADM305, HRM 210, ENG111-112

Credit: 4

#### **HRM450 Organizational Change**

Change is a common occurrence in today's business organizations. This course presents both conceptual and experiential approaches to the topic of organizational change and

organization development. Special emphasis is placed on developing interpersonal skills in order to analyze situations.

Prerequisite: MGM335, HRM315

Credit: 6

#### **HRM460 Employee Training and Development**

In this course, students look at the role of training and development as it relates to organizational performance. The course will cover types of training as well as instructional design and methods. Employee development concepts and planning will be discussed.

Prerequisite: HRM315

Credit: 6

#### **HRM499 Special Topics in Human Resource Management**

This course addresses issues of current interest in human resource management. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

#### **HRM610 Strategic Human Resource Management**

The subject of human resource management (HRM) is analyzed from a strategic, long-range view. Emphasis is placed on relating business strategies to HRM strategies and linking human resources to the organizational strategic plan.

Credit: 5

#### **HRM620 Managing Organization Development and Change**

Change management and developing the organization is a topic for all managers.

This course provides the foundation for managers and human resource professionals to address organizational change, HRM policies and procedures from a process consultation perspective.

Credit: 4

#### **HRM635 Current Legal Issues in Human Resource Management**

Provides knowledge of current issues related to employment and human resource law that impact the organization's bottom line. There is an emphasis on affirmative action, labor relations and conflict resolution. Topics include a variety of federal legislation, downsizing, healthcare coordinated services, international aspects, negotiation, grievance processes and diversity.

Credit: 4

#### **HRM660 Human Resource Management Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by human resource management professionals in the business environment. The course provides the opportunity to assess human resource (HR) situations and develop courses of action that integrate HR functions into issues resolution. Specifically, the course focuses on how to create and sustain strategies that involve integrating HR functions into an organization's strategic plan to create value to the business, consumers, and society as a whole. The primary focus is on formulating and implementing an HR strategy that effectively aligns with and supports the organization's strategy implementation initiatives.

Prerequisite: Approval

Credit: 4

#### **HRM661 Healthcare Management Capstone I**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by human resource management professionals in the business environment. The course provides the opportunity to assess human resource (HR) situations and develop courses of action that integrate HR functions into issues resolution. Specifically, the course focuses on how to create and sustain strategies that involve integrating HR functions into an organization's strategic plan to create value to the business, consumers, and society as a whole. The course focuses on formulating and implementing an HR strategy that effectively aligns with and supports the organization's strategy implementation initiatives.

Credit: 4 (2 – 2 credits)

#### **HRM662 Healthcare Management Capstone II**

This is part 2 of an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by human resource management professionals in the business environment. The course provides the opportunity to assess human resource (HR) situations and develop courses of action that integrate HR functions into issues resolution. Specifically, the course focuses on how to create and sustain strategies that involve integrating HR functions into an organization's strategic plan to create value to the business, consumers, and society as a whole. The course focuses on formulating and implementing an HR strategy that effectively

aligns with and supports the organization's strategy implementation initiatives.

Credit: 4 (2 – 2 credits)

#### **HRMT210 Introduction to Human Resource Management**

This course examines the role and function of the Human Resource Department in the organization. It is an overview of human resource activities including job analysis, performance appraisals, recruiting, selection, compensation, and career development. Additionally, employee diversity, labor relations, organization development and equal employment opportunity will be discussed.

Prerequisite: BADM100, ENG111, ENG112

Credit: 4

#### **HRMT220 Staffing the Organization**

This course examines the legal, technological, and strategic issues related to hiring, recruitment, selecting, and staffing the organization. Topics to be considered include: recruitment sources, interview strategies and preparation of interview questions, determining "fit" in the organization, legislation that affects hiring, reference checks, employment tests, documentation, and employee orientation.

Prerequisite: HRMT210, ENGL111, ENGL112

Credit: 4

#### **HRMT300 Managing Employee Performance**

This course examines the nature of performance management including the role of performance appraisals, performance measurement, the legal issues impacting performance, methods for conducting performance appraisals, and training needs of managers and employees to provide and receive performance feedback.

Prerequisite: HRMT210, ENGL111, ENGL112

Credit: 4

#### **HRMT325 Compensation and Benefits**

This course reviews the design and management of compensation strategies. Students will explore approaches to compensation, the role of compensation in competitive advantage, internal consistency in both compensation and benefits, the linkage between compensation and benefits, traditional versus contemporary practices and the impact of legal mandates on compensation and benefits practices. Consideration will be given to challenges that impact compensation and benefit decisions such as global corporations, flexible work schedules, virtual employees, international employees and contingent employees.

Prerequisite: HRMT210, ENGL111, ENGL112

Credit 4

### **HRMT330 HRM Legal Environment**

The following legal regulations are discussed: EEOC, COBRA, Fair Labor Standards Act, NLR, ADA and FLMA. The student learns proper procedures to prevent legal problems including issues concerning unions, diversity, grievances, counseling, documentation and termination. Prerequisite: HRMT210, ENGL111, ENGL112  
Credit: 4

### **HRMT399 Special Topics in Human Resource Management**

This course addresses issues of current interest in human resource management. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **HRMT410 Training and Employee Development**

The course emphasizes the role of training and employee development as a strategic aspect of organizational performance. The course also provides students with the opportunity to develop training designs from needs assessment to evaluation, including return on investment. These skills are essential for contemporary managers. Topics covered include linking training and employee development to organizational strategy, conducting needs assessment, designing and evaluating training and development programs, traditional and contemporary instructional methods, including distance learning, and using information technology to track and implement training and development programs. Prerequisite: HRMT210  
Credit: 4

### **HRMT420 Managing Labor-Management Relations**

This course explores labor-management relations from union and non-union perspectives. Issues discussed are history of unions in the United States, development of labor laws, collective bargaining, the negotiation process, the grievance system, arbitration and mediation, and employee relations councils. The course concludes with a discussion of the future of unions and labor relations in the United States. Prerequisite: HRMT330  
Credit: 4

### **HRMT430 Managing Diversity**

Increasing diversity in the United States work force raises the importance of learning,

understanding and managing personnel of various backgrounds. Issues researched and analyzed in this course include: benefits of a diverse workforce for corporate America; increasing, improving and enhancing participation and productivity in the work force; educating the organization on issues related to a diverse workforce; and assessing organizational culture. Prerequisite: HRMT210  
Credit: 4

### **HRMT440 Managing Organizational Change**

This course focuses on the theories, stages, practices and implications of the organizational change process. Some topics discussed include preparing to manage change, articulating choices, envisioning the future and implementing change programs. Students study organizational development models to apply to the change process. The major objective of this course is to equip managers and HR professionals with the skills and knowledge needed to address the continuous changes in the organization. Prerequisite: Senior status, HMRT310, BADM305  
Credit: 4

### **HRMT485 Human Resources Capstone**

This course provides the opportunity to demonstrate knowledge, skills, principles and practices learned from experiences in each of the HRMT courses. The capstone is applied, scholarly research focusing on a specific question that synthesizes knowledge from and is relevant to the principles and practices of HR. The ideal project would involve a work related issue for an organizational partner that satisfies an actual need. Prerequisite: Senior status; last elective; last course  
Credit: 4

### **HRMT499 Special Topics in Human Resource Management**

This course addresses issues of current interest in human resource management. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **HRMT640 Strategic Human Resource Management**

The subject of Human Resource Management (HRM) is analyzed from a strategic, long-range view. Emphasis is on relating business strategies to HRM strategies and linking human resources to the organizational strategic plan.

The human resource manager is viewed as a consultant within the organization. Other topics include organizational change, HRM policies and procedures, and the importance of leadership vision.  
Credit: 4

### **HRMT645 Operational Human Resource Management**

This course examines the importance of developing effective operational policies and the role of organizational decision making in that process. It also reviews the ramifications of current laws, ethical considerations, the conflicts around decision making styles, and various aspects of organizational behavior, that influence operational policy. This course assumes prior knowledge in human resource management.  
Credit: 4

### **HRMT650 Current Legal Issues in Human Resource Management**

This course provides knowledge of current personnel legal issues impacting the design and development of Human Resource Policy and the impact of these laws on the organization's bottom line. Emphasis is on affirmative action, labor relations, and conflict resolution. Topics include federal legislation, downsizing, healthcare coordinated services, international aspects, negotiation, grievance process and diversity.  
Credit: 4

### **HRMT655 Managing Organizational Development and Change**

Change management and developing the organization is a topic for all managers. This course provides the foundation for managers and human resource professionals to address organizational change, HRM policies and procedures from a process consultation perspective.  
Credit: 4

### **HRMT660 Human Resource Management Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous courses to resolve issues or take advantage of opportunities faced by human resource management professionals in the business environment. The course provides the opportunity to assess human resource (HR) situations and develop courses of actions that integrate HR functions into issues resolution. Specifically, the course focuses on how to create and sustain strategies that involve integrating HR functions into an organization's

strategic plan to create value to the business, consumers, and society as a whole. The primary focus is on formulating and implementing an HR strategy that effectively aligns with and supports the organization's strategy implementation initiatives. Prerequisite: Approval  
Credit: 4

### **HRMT699 Special Topics in Human Resource Management**

This course addresses issues of current interest in human resource management. Course content will vary as determined by student interest and evolution of the discipline.  
Credit: 1-6

### **HSA310 Economics of Healthcare**

This course presents an introduction to the economics of healthcare. The economic principles and market conditions impacting health services will be discussed. The student will identify various forces influencing the economics of healthcare including but not limited to competition, healthcare providers, and insurance. The student will be expected to make a written and/or oral presentation during this course.  
Credit: 4

### **HSA320 Administration in Healthcare Services**

The emphasis in this class is on the organization and administration of health services programs. This course includes examination of: mission statements; organizational goals and objectives; the role of values and ethics; access and use of services; resource, cost, and benefit analysis; delivery models; assessment and assurance of quality.  
Credit: 4

### **HSA350 Healthcare Systems**

This course focuses on healthcare delivery system topics including the history of healthcare systems, system organization, economics and financing of healthcare. The role of quality and future directions in healthcare will be examined. The student will be expected to make a written and/or oral presentation during this course.  
Credit: 4

### **HSA410 Fiscal Management in Healthcare Services**

This course introduces concepts and techniques of managerial accounting for generalist health services managers. Topics covered include: fiscal management and performance, cost, revenue, risk, fiscal planning and forecasting, budgeting, control,



and reporting. Financial management in long-term care facilities, home health agencies, and hospitals are discussed.

Prerequisite: ACCT201

Credit: 4

#### **HSA481 HSA Externship/Project I**

This course provides an opportunity for the student to apply learned concepts directly in a healthcare setting with a preceptor/mentor. The student will observe healthcare operations and participate as a member of the healthcare management team. During this phase of the externship, the student will identify a project for planned implementation through the next phase of the externship. The student will be expected to make a written and/or oral presentation during this course.

Credit: 4

#### **HSA482 HSA Externship/Project II**

This course is the second quarter of an internship requirement for Health Services Administration. During this course, the student should participate in governance and operations of the healthcare organization. An understanding of regulatory requirements affecting healthcare organizations is applied. The student is expected to implement the project identified in HSA481. At the completion of the internship, the student will be expected to present the project to the organization and school in written and/or oral presentations.

Prerequisite: HSA481

Credit: 4

#### **HSS121 Medical Terminology**

This course is designed for students in the allied health curriculum who need to know the language of healthcare. The purpose of the course is to help the student to succeed in a chosen healthcare career by familiarizing them with how medical words are formed and by providing a systematic learning structure. Students will learn various parts of a term including prefixes, roots, suffixes and combining forms as used in the study of the human body.

Credit: 4

#### **HSS134 Medical Law and Ethics**

Medical law and ethics are studied so that the student is aware of the basic legal relationship between the physician and the patient, and the nature of the allied health professional's responsibility in regard to those relationships.

Credit: 4

#### **HSS260 Healthcare Legal Concepts**

Legal forces facing the healthcare practitioner

and organizations are introduced in this course. Students learn how common law, statutes and court decisions impact healthcare providers, organizations and patients. Topics include introduction to legal systems, the physician-patient relationship, organizations, antitrust law, hospital admission and discharge, consent, medical records, liability, physician responsibilities and peer review mechanisms.

Prerequisite: HIT100, HIT210

Credit: 4

#### **HSS300 Healthcare Law & Regulations**

This course presents an overview of the system, including legal principles, obligations, and legal rights. Topics include contracts, torts, civil and criminal liability, and legal protections. Various laws that govern healthcare business operations are explored. Ethical issues affecting healthcare will be explored.

Credit: 4

Same as: HCM300

#### **HSS402 Research**

This research course is designed to acquaint the student with the scientific research process. The course focuses on advanced scholarly activities in the use of and rigor in planning research. Emphasis is placed on literature review and steps in developing a research proposal for a pilot study. Ethical dimensions of health related research are examined.

Prerequisite: Senior status

Credit: 4

#### **HUM140 Art Appreciation**

This survey course introduces students to various art forms, such as visual, literary, theatrical, and musical art.

Credit: 4

#### **HUMN200 Art and Music Appreciation**

This course provides a variety of experiences designed to present art and music in historical and contemporary cultural perspectives. Field trips, hands-on activities and participation at community functions complement exposure to some of the great works of both western and non-western cultures, improving the students' abilities to express opinions of music and art in their everyday lives.

Credit: 4

#### **HUMN299 Special Topics in Humanities**

This course addresses topics of current interest in humanities. Course content will vary as determined by student interest and faculty availability.

Prerequisite: Approval

Credit: 1-6

#### **ID612 Leadership**

Course provides a systems approach to developing the successful organization of the future. Students will examine how to lead others, stimulate purposeful innovation, build culture and manage change. Change models and methodologies are discussed within an environment of rapidly changing technology. An emphasis is placed on understanding the management issues involved in implementing organizational changes. Students develop an understanding of the knowledge and skills necessary to maximize their productivity and effectiveness as change leaders.

Credit: 4

#### **INTD111 Creating Academic and Professional Success**

This course introduces students to the basic knowledge, skills, and abilities necessary for academic, work, and life related success. The course has been designed to help students acquire, develop, and utilize basic learning and learning how to learn, critical thinking, analysis, synthesis, and evaluation methods and practices which will allow them to formulate reasonable alternatives, hypotheses, and/or premises for academic, social, and professional use. A clear, precise, fair, and unbiased approach to analysis, evaluation, problem-solving, and decision-making activities is emphasized and promoted.

Credit: 4

#### **INTD121 Introduction to the Design Process**

This course introduces an interdisciplinary design process that students can use throughout their professional careers. Several design projects encourage teamwork, promote creativity, and introduce engineering science and technology. The course also creates awareness of economic and human factors, offers ethical considerations to product design, and focuses on incorporating the customer into the design process.

Credit: 4

#### **INTD140 Customer Service**

This course defines a customer as "any entity or person whose cooperation is essential for an organization's success. A customer could be a co-worker or a client." Additionally it presents quality customer relations as "doing what you say you will do, when you say you will do it." Students will cover task management, customer service with a sense of urgency and properly managing conflict when it occurs.

Credit: 2

#### **INTD210 Science and Technology in Society**

This course traces the history, philosophy, methods and consequences of science and technology in society. It examines the historical development of science from the time of the ancient Greeks through modern genetics, relativity and quantum mechanics in order to help understand the promises and limitations of modern science. Additionally, it provides a deep understanding of the scientific method and clarifies the differences between science, religion, pseudo-science and engineering. Topics include science and engineering as social operations, with moral and qualitative consequences far outside the laboratory.

Credit: 4

#### **INTD260 Career Development**

This course should be taken during the last two quarters of a student's degree program. It investigates career development theory, cultural aspects of professional career fields, responsibilities professionals have toward society, and leadership roles of the professional in today's society. Additionally, the course covers techniques for researching and investigating potential career paths and opportunities, identifying transferable skills, preparing a resume, self-marketing, interviewing, negotiating salary and employment packages and entering today's workforce. Students will develop their professional portfolios with papers, projects, capstones from other courses and work projects to help market themselves in the workplace. Prerequisite: EBUS208, ENGL112, PSYC100

Credit: 2

#### **INTD340 Career Planning**

During this course students will investigate career development theory, cultural aspects of professional career fields, responsibilities professionals have toward society and leadership roles of the professional in today's society. Students learn techniques for researching and investigating potential career paths and opportunities, identifying transferable skills, preparing a resume, marketing themselves, interviewing, negotiating salary and employment packages, and entering today's workforce. Students will develop their professional portfolios with papers, projects, and capstones from other courses and work projects to help market themselves in the workplace.

Prerequisite: IT208 or EBUS208, ENGL112 or ENG116, PSY105 or PSYC100 or SOC205 or SOCL101

Credit: 4

**INTD607 Creative Leadership**

This course outlines a new leadership paradigm adapting to the present worldwide fundamental change in management/ leadership philosophy and practice, and the shift from command-and-control to information-based organizations. Emphasis is on generative versus reactive thinking techniques, learning to see in new ways, and taking actions to make positive things happen. It helps the students develop into future leaders who perceive and think clearly, handle complex changes, and design and lead knowledge-creating organizations. Major elements included in the course are power, creativity, self-mastery, dynamic case studies and application.

Credit: 4

**INTD612 Leadership**

Provides a systems approach to developing the successful organization of the future. Students will examine how to lead others, stimulate purposeful innovation, build culture and manage change. Change models and methodologies are discussed within an environment of rapidly changing technology. An emphasis is placed on understanding the management issues involved in implementing organizational changes. Students develop an understanding of the knowledge and skills necessary to maximize their productivity and effectiveness as change leaders.

Credit: 4

**INTD670 Leadership and Ethical Decision-Making**

Course will review and analyze the concepts of leadership versus managerial roles and responsibilities and examine how societal expectations for ethical behavior and regulatory scrutiny of ethical conduct affect both leaders and managers in an organizational setting. This course will differentiate among decision problems and ethical decision-making processes and address issues related to managing conflicts within a decision making process. Students will also examine a variety of complex ethical issues confronting industry professionals as they work with various stakeholders of an organization. Additionally, students will explore the 'Code of Conduct' at work, issues related to managing conflicts of interests within a decision making process, differentiate among decision problems and ethical decision making.

Credit: 4

**IRM681 Insurance and Risk Management Capstone I**

This course represents the first half of a two-course capstone in insurance and risk management. Students will be mentored in a real-world project that integrates skills gained through the completion of the CPCU designation with graduate level management principles to solve an insurance business problem.

Prerequisite: Approval (see the MBA-IRM degree program description)

Credit: 4

**IRM682 Insurance and Risk Management Capstone II**

This course represents the second half of the two-course capstone in insurance and risk management. Students will be mentored in a real-world project that integrates skills gained through the completion of the CPCU designation with graduate level management principles to solve an insurance business problem.

Prerequisite: IRM681

Credit: 4

**IT080 Introduction to Computing**

Introduction to Computing identifies the use of computers to support professional activities and the role of computers in business and society. Students will develop skills in the use of computer applications to solve common problems. Topics covered include computer hardware and software, networks, the Internet, word processing, spreadsheet and presentation applications.

Credit: 4

**IT099 Special Topics in Information Technology**

This course addresses issues of current interest in information technology. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.

Credit: 4

**IT105 Information and Technology Literacy**

This course is intended to provide students with information technology fluency at CTU, especially the ability to maximize their use of information technology such as computers and their programs during the course of their careers as students and future professionals. Students will learn how to use various software programs common to the academic environment and how to perform tasks that will enhance their technological savvy in the classroom, at home, and for business.

Credit: 4

**IT115 Java Programming**

This course introduces programming using the Java language. The basic concepts of object-oriented programming will be discussed in this course. Topics studied will include control structures, data and program design, objects and classes. Students will complete several Java programs before the end of this course. This course will also prepare students to take IT215 Intermediate Java Programming.

Prerequisite: CS104, or CS123, MATH103 or MATH143 or MATH150

Credit: 4

**IT122 Fundamentals of Operating Systems**

This course is an introduction to the basic concepts of operating systems. The fundamentals of common operating systems, client/ server function, and system architecture are discussed, including legacy operating system platforms and security processes utilized in today's enterprises.

Prerequisite: CS123

Credit: 3

**IT145 Introduction to Operating Systems and Client/Server Environments**

This course is an introduction to the basic concepts of operating systems and specialized networking operating systems models. The fundamentals of common operating systems, client/ server environments, network structure, theoretic models and system architecture are discussed including legacy operating system platforms and security processes utilized in today's enterprises.

Prerequisite: CS104 or CS123

Credit: 4

**IT170 Introduction to Object-Oriented Programming I**

This course introduces the concepts of object-oriented programming. Topics studied will include control structures, data and program design, objects, and classes. Students will solve simple problems with programming during this course.

Prerequisite: CS104 or CS123, MATH103 or MATH143 or MATH150

Credit: 2

**IT171 Introduction to Object-Oriented Programming II**

This course continues the discussion of concepts of object-oriented programming. Topics studied will include control structures, data and program design, objects, and classes. Students will compile and execute several programs during this course.

Prerequisite: IT170

Credit: 2

**IT180 Introduction to Computer Technology**

Provides an understanding of the fundamentals of microcomputer systems in terms of PC maintenance and upgrading, and prepares students for the A+ certification exams (Core and Operating System). Class presentations, along with hands-on lab exercises, are intended to provide real-world knowledge of microcomputer systems. Component identification, system maintenance, installation, configuration and trouble shooting will all contribute to the overall learning experience. Efforts are made to cover newer systems as well as older microcomputer systems that may still be in use today.

Prerequisite: IT080 or Approval

Credit: 4

**IT190 Introduction to IT**

Introduction to IT provides an overview of issues and opportunities presented by the fast-paced world of information technology. Students receive an overview of computer-based systems and learn about the development operation and management of these systems. The course includes basic hardware and software principles and current information systems. Topics include databases and networking and their critical organizational importance; IT systems development; the impact of the Internet on organizations; and emerging technologies and trends for the future.

Prerequisite: IT080 or Approval

Credit: 4

**IT199 Special Topics in Information Technology**

This course addresses issues of current interest in information technology. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

**IT200 Introduction to Networking**

Introduction to networking explores the essential elements of computer networks, protocols of data communication and the role of network operating systems in both peer and server-based environments. Application and implementation of network management software are practiced. Attributes of contemporary network operating systems are presented and discussed. Security mechanism used to protect the system and its content is explored. A practical, multipart network design project reinforces the learning experience.

Prerequisite: IT080 or Approval

Credit: 4



### **IT208 Web Portfolio Publishing**

The fundamentals of web servers, web sites, HTML, XHTML and web authoring are presented in the context of using the technology to craft a message for an audience. Also includes fundamentals of linking, graphics, and other media.  
Credit: 4

### **IT215 Intermediate Java Programming**

Intermediate Java Programming builds on the foundation established in IT115 Java Programming. Students will spend more time on object-oriented features. Topics covered include graphics, user interfaces, basic data structures, exceptions, multi-threading, multimedia, files, streams and applets.  
Prerequisite: IT115 or IT171  
Credit: 4

### **IT218 Multimedia for the Web**

This course expands the professional web design principles and techniques introduced in IT310 Web Publishing. Introduced in this class is the use of a visual editor to produce enhanced web pages. Introduction to multimedia principles including; graphics, sound and animation will be covered using state of the art software programs. Students will be required to develop and publish a multimedia web site which can be used to expand the portfolio begun in IT310.  
Prerequisite: IT208 or EBUS208  
Credit: 4

### **IT225 IT Support Systems**

IT Support Systems introduces the increasingly important area of systems support. Students will develop the skills, concepts and knowledge needed to provide high-quality customer service in an IT systems support organization. Students will also integrate technical, managerial and communications knowledge to support an applied problem.  
Prerequisite: IT080 or Approval  
Credit: 4

### **IT235 Database Applications with Access**

This course introduces the basic database concepts. The course stresses the implementation of databases in the real world. Students learn about basic database design and terminology, and learn how to create a variety of databases using MS Access. During the quarter, students develop several databases and become familiar with tables, forms, queries and reports.  
Prerequisite: IT080 or Approval  
Credit: 4

### **IT242 Operating Systems and Practical Networking**

Operating Systems and Practical Networking explores the essential elements of computer networks. Additionally, protocols of data communication, the role of network operating systems, security concerns, and multi-operating systems are examined.  
Prerequisite: IT122  
Credit: 3

### **IT254 Spreadsheet Applications**

This course introduces the basic concepts of a spreadsheet, and stresses the application of advanced functions in solving real-world problems. Spreadsheet design, graphing and report generation will be emphasized. Students will complete several spreadsheet projects.  
Prerequisite: IT080 or Approval  
Credit: 4

### **IT270 Intermediate Object-Oriented Programming I**

Intermediate Object-Oriented Programming I builds on the foundation established in IT170 and IT171. Students will spend more time designing object-oriented features. Topics covered include user interfaces, data structures, and exceptions.  
Prerequisite: IT171 or IT115  
Credit: 2

### **IT271 Intermediate Object-Oriented Programming II**

Intermediate Object-Oriented Programming II continues to build on the skills of the previous courses. Topics covered include graphical user interfaces, multi-threading, files, multimedia, streams, and applets.  
Prerequisite: IT270  
Credit: 2

### **IT299 Special Topics in Information Technology**

This course addresses issues of current interest in information technology. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **IT300 Computer Networks and Communications**

The Computer Networks and Communications course reinforces the network objectives identified in IT200 and extends the understanding to business and commercial networking. By presenting concepts of data communications and network design within the wide area networking arena students understand

the operation of telecommunication systems, transmission media and communications hardware, network topologies, switching methods and protocols, security and existing network analysis. The course requires the completion of a research project.  
Prerequisite: IT200 or IT242  
Credit: 4

### **IT301 Computer Networks and Communications**

The Computer Networks and Communications course reinforces the network objectives identified in IT242 and extends the understanding to business and commercial networking. By presenting concepts of data communications and network design within the wide area networking arena students understand the operation of telecommunication systems, transmission media and communications hardware, network topologies, switching methods and protocols, security and existing network analysis.  
Prerequisite: IT242 or IT200  
Credit: 4

### **IT315 Advanced Java**

Advanced Java provides knowledge and proficiency in server-side Java through the use of J2EE and associated resources. The course includes the use of design patterns and UML, application development and an introduction to Enterprise Java Beans (EJB). Students will be required to build a Web site using J2EE facilities including a practical database, Web server and application server.  
Prerequisite: IT215 or IT271  
Credit: 4

### **IT326 Network Infrastructure Administration**

Provides instruction in installing, managing, monitoring, configuring, and troubleshooting DNS, DHCP, Remote Access, Network Protocols, IP Routing, and WINS in a Windows network infrastructure. In addition, this course provides instruction in managing, monitoring, and troubleshooting Network Address Translation and Certificate Services.  
Prerequisite: IT242  
Credit: 4

### **IT327 Implementing, Managing and Maintaining a Network Infrastructure**

Provides instruction on implementing, managing, and maintaining a Windows Server network infrastructure.  
Prerequisite: IT326  
Credit: 4

### **IT329 Network Infrastructure Design**

Provides instruction on how to analyze the business requirements for a network infrastructure, and design a network infrastructure that meets business requirements. Network infrastructure elements include network topology, routing, IP addressing, name resolution such as WINS and DNS, virtual private networks, remote access and telephony solutions.  
Prerequisite: IT326  
Credit: 4

### **IT340 Client/Server System and Network Administration**

This course provides a foundation to build your understanding of client/server systems management to include systems administration, network design and administration, operating system configuration and application software interfaces. Windows and UNIX provide a relevant environment for exploration.  
Prerequisite: CS146, IT145, IT200  
Credit: 4

### **IT362 Network and Systems Administration**

This course provides a foundation to build your understanding of client/server systems management to include systems and network administration, as well as security concepts.  
Prerequisite: IT242  
Credit: 3

### **IT370 Advanced Object-Oriented Programming I**

Advanced Object-Oriented Programming I provides knowledge and proficiency in server-side programming. The course includes the use of design patterns and UML, application development, and enterprise applications.  
Prerequisite: IT271  
Credit: 2

### **IT371 Advanced Object-Oriented Programming II**

Advanced Object-Oriented Programming II increases proficiency in server-side programming. Students will build a website including a practical database, web server, and application server.  
Prerequisite: IT370  
Credit: 2

### **IT382 Systems Administration**

This course provides a foundation to build your understanding of client/server systems management to include systems administration, network design and administration, operating system configuration and application software interfaces.  
Prerequisite: IT362  
Credit: 3

### **IT399 Special Topics in Information Technology**

This course addresses issues of current interest in information technology. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

### **IT400 Information Technology Architectures**

The major objective of this course is to introduce the concepts, methodology and terminology of Enterprise Architecture and integrate this knowledge with previous courses in operating systems, database management systems, networking, and programming. The course will primarily focus on the overall planning process of enterprise architecture. Issues and options involved in implementing an enterprise architecture incorporating a distributed IT system will be examined from a Macro Level. We will conduct an ongoing discussion of how the emergent profession of enterprise architecture fits into the duties and responsibilities of today's IT manager. We will also look at other resources and references relating to the field of enterprise architecture. Through a term paper and class presentation, the student will become intimately familiar with an aspect of enterprise architecture in a distributed IT system.

Prerequisite: IT200

Credit: 4

### **IT405 Information Technology Architectures**

This course allows students to re-examine their knowledge of operating systems, database systems, networking and programming within the context of IT systems architectures. The course will primarily focus on the overall architectural options and issues for distributed IT systems.

Prerequisite: IT242, CS250, IT171

Credit: 4

### **IT410 Web Page-Based Database Application Programming with Visual Basic**

This course continues the study of Visual Basic programming, emphasizing the implementation of web page-based database applications.

Prerequisite: EBUS215

Credit: 4

### **IT441 IT Strategic Planning**

This senior-level course covers strategic business planning for information technology using the latest technology trends while considering their impact on organizations.

It includes business reengineering, client/server computing, downsizing, open systems and hardware/software advances and new implementations in management from a strategic perspective.

Prerequisite: IT200 or IT242

Credit: 4

### **IT454 Security Management**

This course focuses of various practices that need to be established within an organization for an effective and efficient management of security. Topics such as security policies design and implementation, risk assessment and management, and security procedures will be covered.

Prerequisite: IT301

Credit: 4

### **IT456 Security Architecture**

This course is an in-depth study of network security architecture. Students will examine both Internet security architectural models and web security protocols. Encryption, digital signatures, firewalls, proxy services, and virtual private networks (VPNs) will be covered. Additionally, students will examine cryptography protocols and standards.

Prerequisite: IT454

Credit: 4

### **IT458 Disaster Recovery**

In this course, students learn the importance of recovery planning and the strategies for disaster recovery. This course covers the fundamental elements of disaster recovery planning, such as risk analysis, strategies for recovery and backup, plan maintenance, and testing.

Prerequisite: IT456

Credit: 4

### **IT460 Managing Information Systems**

This course emphasizes planning, budgeting, implementing and controlling the development of information systems within an enterprise arena. Students will identify business practices that establish proven information system techniques, processes and procedures, and how and when to apply them from the point of view of the first-line manager to the chief executive officer. This course requires the completion of a research project.

Prerequisite: Approval

Credit: 4

### **IT481 IT Capstone I**

IT481 is the first of two courses emphasizing the life cycle of information technology applications. It builds on the theoretical basis

of CS376 and integrates the other courses of the IT curriculum. Working in teams, students develop a system to meet user requirements.

Prerequisite: CS376 or CS475, ENGL200 or ENG202 or ENGL210 or PSP110

Credit: 4

### **IT482 IT Capstone II**

A continuation of IT481, this course requires completion of the project, emphasizing implementation and testing.

Prerequisite: IT481

Credit: 4

### **IT485 ISM Capstone I**

IT485 is the first of two sequential capstone courses, IT485 and IT486. This course will incorporate skills, technology and planning processes learned during the degree curriculum and integrate business methods in the development of an organizational concept, analyze that concept, and plan for all resources required to implement the concept. Scenarios will provide the planning guidance and generate organizational response requirements reflecting changes in the business arena.

Prerequisite: Senior status

Credit: 4

### **IT486 ISM Capstone II**

IT486 is the second of two sequential capstone courses, IT485 and IT486. Student teams will implement the business concepts developed in IT485, completing deliverables planned in the previous course and developed system design specifications, infrastructure layout, strategic technology implementation plan, business plan as well as a functional multi-page web site with connections to a database interface and web base form for DB input/output. Emphasis will be on implementation and testing of the planned system processes. Scenarios will generate organizational response requirements reflecting changes in the business arena.

Prerequisite: IT485

Credit: 4

### **IT491 IT Capstone I**

IT491 is the first of four courses emphasizing the life cycle of information technology applications. It builds on the theoretical basis of CS475 and integrates the other courses of the IT curriculum. Working in teams, students begin to develop a system to meet user requirements.

Prerequisite: CS475, ENG202, PSP110

Credit: 2

### **IT492 IT Capstone II**

IT492 is the second course in the capstone sequence. Students will collaborate on an IT project, focusing on appropriate methodology. Teams will continue to work on developing a system to meet user requirements.

Prerequisite: IT491

Credit: 2

### **IT493 IT Capstone III**

A continuation of the IT Capstone sequence, this course emphasizes implementation of the project.

Prerequisite: IT492

Credit: 2

### **IT494 IT Capstone IV**

The final course in the IT Capstone sequence, this course emphasizes testing and quality of the project.

Prerequisite: IT493

Credit: 2

### **IT495 Advanced Research and Study in Information Technology**

This course can be used for an independent in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair.

Prerequisite: Approval

Credit: 1-6

### **IT499 Special Topics in Information Technology**

This course addresses issues of current interest in information technology. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

### **IT501 Foundations in Information Technology**

This course provides a conceptual foundation in database systems, computer networks and telecommunications, and information technology systems development and implementation. Emphasis is placed on preparing the student for further graduate study in Information Technology.

Prerequisite: Graduate Standing

Credit: 4

### **IT600 Information Technology Management**

Information Technology Management explores the use of information technology to achieve competitive advantage, efficient operations

and effective decision-making. This course also analyzes the functions of information technology and its impact on competitive strategy and organizational operations. Credit: 4

#### **IT601 Information Technology in Business Management**

This course examines how organizations can leverage the technologies of the Internet to create new opportunities for business success. It explores the management of information technology, its use in business functions, and e-Business. Credit: 4

#### **IT610 Relational Database Management Systems**

Students are introduced to the design and development of relational databases from conceptual models of a requirement to a database. The course covers external view of the relational database model to include administration and architecture. Prerequisite: IT501 or Approval Credit: 4

#### **IT612 Database Analysis, Design and Implementation**

This course covers the logical and physical design of relational database management systems implementation using conceptual modeling. It includes study of conceptual modeling, use of CASE tools and security design consideration. Concepts of conceptual database modeling, such as data warehousing and distributed database management systems, are covered. Prerequisite: IT610 Credit: 4

#### **IT640 Networking and Telecommunications**

Students will learn the foundations of networking architectures to include LAN and point-to-point topologies, TCP/IP and communications protocols. The course covers the basic concepts of data communications and design. This includes discussions on network operating systems as well as transmission media, communications hardware, network topologies, switching methods and network analysis. Prerequisite: IT501 or Approval Credit: 4

#### **IT642 Network Administration**

Network Administration presents the principles and practices of network administration. User management, backup management and high-reliability configuration system security are presented. Also covers network issues such

as addressing and routing. Windows- UNIX interoperability is also discussed. Prerequisite: IT640 Credit: 4

#### **IT651 Technology Management Capstone**

In this course students will apply technology management skills to resolve problems, manage technology, and create value-added strategies within an enterprise. Preparation and presentation of an Information Technology Plan is required. Credit: 4

#### **IT655 Technology Management Capstone I**

In this course students will apply technology management skills to resolve problems, manage technology, and create value-added strategies within an enterprise. Preparation and presentation of an Information Technology Plan is required. Credit: 2

#### **IT656 Technology Management Capstone II**

In this course students will apply technology management skills to resolve problems, manage technology, and create value-added strategies within an enterprise. Preparation and presentation of an Information Technology Plan is required. Prerequisite: IT655 Credit: 2

#### **IT660 Information Technology Systems Development**

This course covers the life cycle development and management of systems using state-of-the-practice tools and techniques. Provides a foundation in the techniques used to specify and design systems of software and hardware components. Provides an overview of the tools used in systems engineering. Includes topics relating to elicitation of requirements and developing the specification and design of today's business systems. Prerequisite: IT501 or Approval Credit: 4

#### **IT662 Information Technology Systems Implementation**

Study for this course covers the testing, implementation and maintenance of computer systems to support business processes. Topics include test planning, test procedures and test activities. Management activities and technical support necessary for successful implementation are discussed. Prerequisite: IT660 Credit: 4

#### **IT699 Special Topics in Information Technology**

This course addresses issues of current interest in information technology. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval Credit: 1-6

#### **ITM301 Client Operating Systems B**

This course provides instruction on implementing, administering and troubleshooting information systems that incorporate Windows XP Professional. Prerequisite: IT200 Credit: 4

#### **ITM302 Server Operating Systems**

This course provides instruction on how to install, configure, administer, and support the primary services in the Microsoft Windows Server operating system to include the creation and management of Windows Server user, group, and computer accounts, sharing of system resources, and the installation and maintenance of system hardware. Prerequisite: IT180, IT200 Credit: 4

#### **ITM304 Active Directory Services**

This course provides instruction for working with Microsoft Windows Server Active Directory, directory services in planning, implementing, and maintaining forests, sites, domains, and organizational units (OUs) that meet the accessibility, performance, and security goals of a business plan. In addition, instruction is provided in using Group Policy to deploy software and configure a computer or user environment. Prerequisite: ITM306 Credit: 4

#### **ITM306 Network Infrastructure Administration**

This course provides instruction in configuring, maintaining, and troubleshooting a Windows Server network infrastructure to include IP Addressing, Name Resolution, Network Security, and Routing and Remote Access. Prerequisite: ITM302 Credit: 4

#### **ITM308 Planning and Maintaining a Network Infrastructure**

This course provides instruction on how to install, configure, administer, and support the primary networking services in the Microsoft Windows Server operating system. It examines basic TCP/IP networking concepts, Domain

Name System (DNS), Windows Internet Naming Service (WINS), and Routing and Remote Access Service (RRAS), and network security technologies such as digital certificates and IP security (IPSec) extensions. Prerequisite: ITM306 Credit: 4

#### **ITM309 Network Infrastructure Design**

This course provides instruction through lectures, discussions, demonstrations, textbook exercises, and classroom labs the skills and abilities necessary to design an Active Directory and network infrastructure that meets the technical and business requirements of an organization. Understanding the design process, required components, and the integration of technologies are key elements in this course. Prerequisite: ITM304, ITM308 Credit: 4

#### **ITM312 Administering SQL**

This course provides instruction on Microsoft SQL Server 2000 System Administration to include installing or upgrading to SQL Server 2000, creating databases, back up and restores system and user databases, manage SQL server 2000 security, automate routine administrative tasks, and monitor the performance and activity of the SQL server. Prerequisite: ITM302 Credit: 4

#### **ITM313 eMail Administration**

This course provides instruction on the fundamentals of implementing and managing a Microsoft Exchange Server messaging environment. Prerequisite: ITM302, ITM304 Credit: 4

#### **ITM314 Operating System Security**

This course provides instruction on the fundamentals of implementing and administering security on Windows Server network to include implementation and administration of the various security mechanisms provided with the Microsoft Windows Server operating system. Prerequisite: ITM306 Credit: 4

#### **ITM321 Certified Network Associate Prep**

This course provides instruction on installing, configuring and operating LAN, WAN and dial access services for small networks (100 nodes or fewer), including the use of these protocols: IP, IGRP, Serial, Frame Relay, IP RIP, VLANs, RIP, Ethernet and Access Lists. Prerequisite: IT200 Credit: 4



**ITM322 Building Scalable Internetworks**  
ITM322 Building Scalable Internetworks is an advanced routing course that presents technologies and techniques used by major industry vendors and network administrators implementing scalable local and wide area network (LAN and WAN) solutions.  
Prerequisite: ITM321  
Credit: 4

**ITM323 Building Multilayer Switched Networks (BCMSN) Prep**  
This course provides instruction on building scalable multilayer switched networks, creating and deploying a global intranet, and implementing basic troubleshooting techniques in environments that use multilayer switches for client hosts and services. This course covers topics on switching technology, implementation and operation, planning and design, and troubleshooting.  
Prerequisite: ITM321  
Credit: 4

**ITM324 Building Remote Access Networks**  
ITM324 Building Remote Access Networks is an advanced networking course that presents technologies and techniques used by major industry vendors to enable and enhance wide area network (WAN) solutions.  
Prerequisite: ITM321  
Credit: 4

**ITM325 Internetwork Troubleshooting**  
This course provides instruction in troubleshooting sub-optimal performance in a converged network environment. This course also covers such topics as establishing a baseline, determining an effective troubleshooting strategy, resolving problems at the physical and data link layers, resolving problems at the network layer, and resolving problems at the transport and application layers.  
Prerequisite: ITM321  
Credit: 4

**ITM326 Managing Network Security**  
This course introduces network security and AAA Security for routers; and evaluates network security threats. Students learn how to protect Internet access by configuring a perimeter router, use IPSec features in IOS software to create a secure site-to-site VPN using preshared keys and digital certificates, and configure IOS firewall.  
Prerequisite: ITM321  
Credit: 4

**ITM327 Secure PIX Firewall Advanced**  
This course introduces network security firewalls, especially the PIX Firewall. Topics include translations and connections access control lists and content filtering, object grouping, advanced protocol handling, attack guards, intrusion detection and shunning, authentication, authorization and accounting, failover, virtual private networks, system management and PIX device manager.  
Prerequisite: ITM321  
Credit: 4

**ITM328 Secure Virtual Private Networks**  
This course describes the features, functions and benefits of VPN products. It explains the IPSec and IKE component technologies that are implemented in Secure VPN products. Students learn how to install and configure the IPSec VPN software client, and configure VPN 3000 and 3002.  
Prerequisite: ITM321  
Credit: 4

**ITM329 Secure Intrusion Detection System**  
This course provides an introduction of network security and the Intrusion Detection System. Students learn how to install and configure Secure Policy Manager (CSPM) and the CIDS Sensor in multiple network configurations, use CSPM to translate intrusion data into intuitive and effective graphical displays, and develop and implement customized intrusion detection signatures to respond to intrusion attempts.  
Prerequisite: ITM321  
Credit: 4

**ITM330 SAFE Implementation**  
This course provides an architectural overview, security fundamentals, the Security Portfolio, SAFE Medium Network Design and SAFE Remote User Network Implementation.  
Prerequisite: ITM321  
Credit: 4

**ITM399 Special Topics in Information Technology Management**  
This course addresses issues of current interest in information technology management. Course content will vary as determined by student interest and evolution of the discipline.  
Credit: 1-6

**LANG100 Survival Spanish**  
This course is designed to develop basic communication skills to facilitate communication with the Spanish speaking

members of the community. The focus of the course is on practical phrases, commands, and questions. Although the target audience is Criminal Justice, the skills developed can be utilized in any discipline having contact with the Spanish speaking community. No previous Spanish language experience is required.  
Credit: 4

**LITR220 Values in World Literature**  
In this course the student will read and discuss masterpieces of world literature, concentrating on fiction, poetry and drama. Examining character, plot, theme, form and style across a variety of English and non-English works, the student will explore the role that human values play in our decisions and interactions. In such areas as leadership, love, loss, trust, and life and death, the lessons of "the best that has been thought and said" will be applied to our professional and personal lives throughout the course.  
Credit: 4

**LTR215 World Literature**  
This literature courses examines a wide range of stories, poems, and plays. Students learn how to interact with and respond to literature.  
Credit: 4

**MAM100 Breast Anatomy, Physiology and Pathology**  
This course establishes a base knowledge in breast anatomy and physiology. Correlation between breast anatomical structures and mammographic anatomic structure will be described and discussed. This course will also introduce concepts of breast viability and pathology. Benign and Cancerous pathology, including their mammographic appearance, will be presented.  
Credit: 1

**MAM102 Patient Care and Procedures in Mammography**  
This course presents content which provides an introduction to technologist-performed physical breast assessment. Content includes discussions regarding the preliminary patient assessment, physical breast assessment and documentation of findings required for a comprehensive examination for imaging correlation of the breast. This course will also provide a knowledge base of the various positions and projections used in mammography. Content includes discussions on clinical data needed to perform the exam and positioning techniques for screening and diagnostic mammography. Students will also establish a base knowledge in the type and application of interventional procedures involving mammography.  
Credit: 1

**MAM104 Mammography Technique and Quality Control**  
This course provides the student with an overview of the mammography facility and its personnel. It provides a foundation for the types of patient services offered and the regulations that affect the operation of the facility or service. In addition, this course establishes a protocol for quality assurance and quality control that incorporates all operations and functions of mammography facility or service. The interrelatedness of accreditation and service delivery standards will be demonstrated and discussed. This course will also establish a knowledge base in factors that govern and influence the production and recording of mammographic images.  
Credit: 1

**MAM106 Mammography Equipment**  
This course provides the student with a foundation of the concepts of mammography equipment. The types and function of mammographic and quality control equipment, along with the mandated requirements governing their use, will be described and discussed. This course will also develop an understanding of basic principles of sonomammography. Where applicable, ultrasonographic examinations that complement breast imaging will be discussed. In addition, this course will also provide a practice registry exam.  
Credit: 1

**MAT105 Business Math**  
In this course, students explore the practical applications of math. The course emphasizes topics in mathematics that are relevant to students' professional lives.  
Credit: 4

**MAT150 College Level Algebra**  
In this course, students will take an interactive and visual approach to college-level algebra. It covers functions and inverse functions, such as linear, quadratic, polynomial, and rational functions and their graphs. The course includes methods to solve systems of equations and inequalities.  
Credit: 4

**MAT200 Discrete Mathematics**  
This course builds a mathematical foundation in concepts associated with the Computer Sciences. Topics include symbolic logic, induction, sets, relations, functions, Big-Oh, graphs, trees, automata and context-free grammars.  
Prerequisite: CS123, MAT150  
Credit: 4

### **MAT205 College Math**

This course presents the traditional content of pre-calculus with an emphasis on relevant applications.  
Credit: 4

### **MATH060 Pre-Algebra**

This is a self-paced course using the basic operations of addition, subtraction, multiplication and division on whole numbers, decimals and fractions. Techniques of estimation, order of operations and reasonableness of answers are emphasized. The course introduces the real number system and some introductory algebra. Calculators will not be used in this course or on any exam.  
Credit: 4

### **MATH080 Elementary Algebra**

This course presents arithmetic operations on signed numbers, the concepts of symbols and algebraic notation, solutions of linear and quadratic equations, factoring, powers and elementary graphing.  
Prerequisite: MATH060 or Placement  
Credit: 4

### **MATH103 College Algebra**

This course begins with a review of elementary algebra and rational expressions, followed by coverage of functions, including linear and quadratic, and their graphs. Topics covered include symmetry and transformations, removed word zeros of functions, rectangular form of complex numbers, systems of equations, and an introduction to matrices and Cramer's rule. A graphing calculator is required.  
Prerequisite: MATH080 or Placement  
Credit: 4

### **MATH104 Trigonometry**

This course covers the six trigonometric functions, covered from both a right triangle and unit circle perspective. Applications are stressed, using graphs, triangles and trig identities. Complex numbers and their trig form are studied, and vectors in the plane are introduced. A graphing calculator is required.  
Prerequisite: MATH103 or Placement  
Credit: 4

### **MATH115 Pre-Calculus**

This course completes the student's preparation for calculus. Polynomial, rational, composite, inverse, exponential and logarithmic functions are covered in detail. Other topics include polynomial division, partial fractions, conic sections (parabola, circles, ellipses), sequences, series, and parametric equations. A graphing calculator is required.  
Prerequisite: MATH104 or Placement  
Credit: 4

### **MATH143 Business Algebra**

This course provides students with a background in the quantitative techniques necessary to better operate in the business community. Specifically, it focuses on applied mathematical principles with a broad scope toward business applications. Topics include: solving linear systems of equations; the mathematics of finance, including simple and compound interest, annuities, and amortization; basic probability; and an introduction to the binomial distribution.  
Prerequisite: MATH080 or Placement  
Credit: 4

### **MATH200 Discrete Mathematics**

This course studies problems that involve finite or discrete data sets. This course will familiarize the student with many mathematical notations. These notations are used to represent the structure and properties of data, and then are used to help solve problems. Logic and set notation forms a foundation and then other visual representations are introduced. Many algorithms are studied to find solutions, and many techniques are shown to create structure for data storage or information retrieval. Examples of tools include truth tables, Venn diagrams, Big-Oh functions, graphs, trees, paths, and matrix notation. A final part of this course answers the questions of how to define a formal language and how to recognize syntactically correct sentences. The tools used here are automata digraphs, state transition tables and context free grammars.  
Prerequisite: CS104, MATH103  
Credit: 4

### **MATH201 Calculus I**

This course starts with the concept of limits, including one-sided and limits involving infinity, and relates limits to the concept of continuity. The tangent line to a graph at a point leads to the study of the definition and rules of differentiation for both explicit and implicit functions. Applications of the derivative include related rates, curve sketching, and maximum/minimum problems. Basic rules for integration are introduced, including the method of substitution. The definite integral is then applied to finding the area under and between curves. A graphing calculator is required.  
Prerequisite: MATH115 or Placement  
Credit: 4

### **MATH202 Calculus II**

The study of calculus is continued with the differentiation and integration of transcendental functions (exponential, logarithmic, inverse trigonometric and hyperbolic). Applications of the definite

integral include finding volumes of solids of revolution by the disc and shell methods, and the length of plane curves and surfaces of revolution. Integration techniques include integration by parts, partial fractions, trigonometric substitution, and use of tables and technology. Additional topics covered are L'Hopital's Rule, improper integrals and Taylor series polynomials. The course concludes with an introduction to multivariable functions, partial derivatives and double and triple integrals. A graphing calculator is required.  
Prerequisite: MATH201  
Credit: 5

### **MATH300 Advanced Discrete Mathematics**

This course is a continuation of MATH200. Students will examine basic graph theory, the representation of graphs and the algorithms associated with the analysis of graphs. A deeper study of functions and logic are included along with modus ponens and modus tollens as reasoning methods. Students are introduced to basic counting and countability leading to the concept of NP-completeness.  
Prerequisite: MATH200  
Credit: 4

### **MATH302 Differential Equations**

In this course methods are studied to solve differential equations and then to apply them to application problems. Solution methods of specific types of first order differential equations are followed by their application to growth and decay, heating and cooling, and voltage and current response in simple R-L and R-C circuits. Solution methods for solving higher order linear differential equations are followed by their application to predicting the motion of masses under free and damped conditions. Analogous electronic filter and control circuits are modeled and their time domain behavior is predicted, especially for sinusoidal inputs. The final technique studied is the use of Laplace transforms to solve linear differential equations, and their application to second order differential equations from simple circuits.  
Prerequisite: MATH202  
Credit: 5

### **MATH304 Linear Algebra**

This is an introductory course in linear algebra that balances computation and theory. Topics include the solution of systems of linear equations using Gaussian and Gauss-Jordan elimination, matrices, and determinants. Other topics covered are vector spaces, inner product spaces, linear transformations, eigenvalues, and eigenvectors. Also introduced is the Gram-Schmidt orthonormalization process, and Least Squares and Fourier approximations.

The course is divided between lecture and hands-on work in a computer lab using a symbolic math software package.  
Prerequisite: MATH201  
Credit: 4

### **MATH306 Computer Assisted Statistics**

An elementary coverage of statistical techniques is augmented at each step with the aid of a computer program for data processing and analysis in making inferences. Graphical presentation and statistical measures are studied, followed by basic probability concepts leading to binomial and normal distributions. Hypothesis testing is applied to drawing inferences for one and two population parameters.  
Prerequisite: MATH103 or MATH143, IT254 or Approval  
Credit: 4

### **MATH366 Probability and Statistics**

Introduces models used to establish probabilities of basic events and apply them to calculate the probabilities of more complex events. General methods of calculating parameters of discrete and continuous distributions are learned and applied to problems. Several specific discrete and continuous models are studied to recognize their properties and how to apply them.  
Prerequisite: MATH202, CS104  
Credit: 5

### **MATH465 Formal Methods for Software Engineering**

This course introduces the student to a variety of formal methods. These include finite state machines, automata, formal grammars and languages, computability and decidability, invariant assertions and proofs of correctness, and formal specifications. The course discusses application, analysis, advantages, and disadvantages of formal methods.  
Prerequisite: CS265, MATH300  
Credit: 4

### **MATH476 Quantitative Decision-Making**

This course introduces methods to formulate various mathematical models of problems that seek optimal solutions. Software and hand calculations are used to perform algorithms that can find optimal values that help managers to make decisions. Some algorithms are performed on graphical models of complex systems. Attention is paid to the sensitivity of the solution to changes or errors in the model. The objective: guide decision-makers to find optimal ways to implement solutions, but to satisfy many constraints.  
Prerequisite: MATH103 or MATH143, IT254 or Approval  
Credit: 4



**MATH495 Advanced Research and Study**

This course provides the opportunity for an independent, in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair. Prerequisite: Approval  
Credit: 1-6

**MATH499 Special Topics in Mathematics**

This course addresses issues of current interest in mathematics. Course content varies as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

**MATH500 Foundations in Engineering Mathematics**

This course provides an extensive overview of relevant undergraduate mathematics required for the MSEE and MSCE programs. Topics include solution of differential equations, probability theory, Laplace and Fourier transform theory and linear algebra. Prerequisite: MATH302  
Credit: 4

**MATH501 Foundations in Mathematics for Computer Science**

This course provides foundational knowledge in mathematics used in computer science and information technology. The topics include symbolic logic, proof techniques, sets, relations, functions, asymptotic complexity, recurrence equations, trees, graphs, finite automata, and grammars. Basic statistics including mean, mode, standard deviation and the concept of statistical significance of a result are also covered. It addresses basic information, preparing students for participation in the MSCS graduate program. Prerequisite: MATH200, MATH201, MATH306, or Approval  
Credit: 4

**MDR680 Mediation and Dispute Resolution Capstone I**

This is an integrative and interactive capstone applied to practical dispute situations where the student uses the functional skills acquired from previous core and PM concentration courses to resolve issues or take advantage of opportunities faced by mediators in a business setting. The course provides the opportunity to assess situations and develop courses of actions to address those situations. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers,

and society as a whole. The primary focus of the student in this course is on the formulation of a dispute analysis utilizing what you learned, devise a strategic plan to analyze and categorize the material elements in dispute, identify and analyze the material elements within the dispute and design a decision-matrix that is appropriate to apply to the mediation process. Prerequisite: APM Designation  
Credit: 4

**MDR681 Mediation and Dispute Resolution Capstone II**

This is an integrative and interactive capstone applied to practical dispute situations where the student uses the functional skills acquired from previous core and PM concentration courses to resolve issues or take advantage of opportunities faced by mediators in a business setting. The course provides the opportunity to assess situations and develop courses of actions to address those situations. Students will apply the analysis strategy and decision-matrix (from MDR680) to a simulated dispute. Prerequisite: APM Designation and MDR680  
Credit: 4

**MEDA123 Medical Office Management**

This course teaches the student to perform manual and electronic activities of today's medical office, including scheduling appointments, setting up files, and maintaining patient records.  
Credit: 4

**MEDA133 Insurance, Coding and Billing**

This course provides training in the manual and electronic preparation of medical billing, the health insurance claims process, and ICD-9-CM and CPT coding.  
Credit: 4

**MEDA211 Clinical Skills I**

This course presents the theory and practical components relating to Universal precautions, OSHA and CLIA regulations, aseptic technique, instrumentation, vital signs, patient preparation, and assisting the physician with examinations. Prerequisite: MEDA131, MEDA133  
Credit: 4

**MEDA212 Medical Laboratory Procedures**

This course is a clinical laboratory course designed to instruct medical assisting students in the collection and handling of specimens, recognition of normal test values, and the performance and quality control of tests common to a physician's office. Prerequisite: MEDA131, MEDA133  
Credit: 4

**MEDA221 Clinical Skills II**

This clinical course is a continuation of MEDA211 and presents the theory and practical components relating to clinical procedures performed in the physician's office. Prerequisite: MEDA211  
Credit: 4

**MEDA222 First Aid and Safety**

This is a First Responder course in emergency care of injuries and illness. The course will focus on recognizing both medical and traumatic emergencies. It will include the first responder's course of action for appropriate treatment.  
Credit: 4

**MEDA223 Pharmacology**

This course focuses on drug names and drug interactions within the body. Emphasis is placed on computations of dosages and basic knowledge of drugs used according to system disorders. Prerequisite: MEDA131, MEDA133  
Credit: 4

**MEDA230 Wellness**

This course explores wellness from a holistic perspective of body, mind and spirit. Students are introduced to alternative care treatments, nutrition and caring for the dying patient. Students learn to integrate behaviors that support healthy lifestyles.  
Credit: 4

**MEDA231 Medical Transcription**

This course is designed to help the student build proficiency with medical terminology, case history and to gain experience transcribing medical material. Students are required to transcribe authentic physician-dictated medical reports organized by body system or medical specialty. Prerequisite: MEDA212, MEDA221, MEDA223  
Credit: 4

**MEDA232 Externship**

This clinical course provides experience in a selected physician's office or healthcare facility. The medical assisting student will gain experience in administrative and clinical duties. The student is supervised and evaluated by qualified medical personnel. Prerequisite: Approval  
Credit: 4

**MEDA241 Clinical Review**

This course is designed to prepare the student for clinical externship, professional employment, professional organizational membership and registration / certification examinations. Prerequisite: Completion of MA curriculum  
Credit: 2

**MEDA295 Advanced Research and Study in Medical Assisting**

This course is an independent in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair. Prerequisite: Approval  
Credit: 1-6

**MEDA299 Special Topics in Medical Assisting**

This course addresses issues of current interest. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

**MGM105 Professional Communication**

This course concentrates on practical applications of communication theory in the forms of business correspondence, memoranda, and reports.  
Credit: 4

**MGM110 Principles of Business**

This survey course provides students with a general introduction to business activity and how it relates to our economic society. Students will explore how businesses are owned, organized, managed and controlled.  
Credit: 4

**MGM220 Fundamentals of International Business**

This survey course in global business will introduce students to all areas of international business and the environment within which business transactions take place. This non-technical course includes topics related to global business operations and planning, such as investment issues, technology impact, competition, cultural diversity, and legal issues.  
Credit: 6

**MGM230 Business Law**

In this course, students examine the system of law in the United States to the contemporary business environment. Students are guided through the basic structure of the U.S. legal system.  
Credit: 6

**MGM260 Fundamentals of Management**

This survey course examines the elements of management and leadership as they apply to modern organizations. Special emphasis is placed on information and communication technologies found in today's management environment.  
Credit: 6

### **MGM310 e-Business**

This course provides an overview of the elements of e-Business such as strategy, technology, relationships, and related issues. Students will examine how to integrate suppliers, customers, and employees in order to achieve business success.  
Credit: 4

### **MGM316 International Business Communications**

This course is designed to enhance students' knowledge of cultures, traditions, and value systems as they apply in international, multinational, and global business settings. Students explore topics such as language and other forms of communication, traditions, values, norms, cultural diversity, cultural influences on communication and the negotiation process, and ways to improve communications with people whose first language is something other than English.  
Credit: 4

### **MGM330 Business Decision Making**

Critical thinking and problem solving are essential skills in management. In this course, students explore these concepts by learning the fundamentals of probability and statistics, and their applications in Business Decision Making.  
Credit: 4

### **MGM335 Organizational Behavior Principles**

In this course students examine individual and group behavior within the context of the organizational design and culture. This course provides theoretical and practical knowledge for understanding topics such as motivation, leadership, managerial decision-making, group processes, and conflict resolution.  
Credit: 4

### **MGM336 Management in International Business**

This course provides students with an understanding of the unique features that characterize international, multinational, and global businesses. Students explore the nature of management processes and activities in terms of different legal, political, economic, and cultural environments. This course emphasizes the changing context in which business is conducted by covering topics such as the organizational norms, values, administrative philosophies, policies, and practices of international, multinational, and global business organizations.  
Credit: 4

### **MGM340 Operations Management Principles**

This course will examine the principles and techniques of managing operations processes in manufacturing and service industries. Students will explore the interrelationships between operations concepts, such as forecasting, planning products, technologies, facilities, demand, inventory, productivity, quality, and reliability.  
Credit: 4

### **MGM355 International Business Practices**

In this course, students examine the international business environment and how it influences management. It examines the issues and implications involved in the application of modern management practices and principles within the global business environment.  
Prerequisite: ECO305  
Credit: 4

### **MGM336 Management in International Business**

This course provides students with an understanding of the unique features that characterize international, multinational, and global businesses. Students explore the nature of management processes and activities in terms of different legal, political, economic, and cultural environments. This course emphasizes the changing context in which business is conducted by covering topics such as the organizational norms, values, administrative philosophies, policies, and practices of international, multinational, and global business organizations.  
Credit: 4

### **MGM365 The Legal and Ethical Environment of Business**

This course examines the nature of the legal system in which society functions, including business agreements, business entities, and government regulations. Using frameworks for ethical decision-making, students will explore the ethical issues that confront business organizations and individuals.  
Credit: 4

### **MGM366 Legal Operations in International Business**

This course provides a review of the legal operations in global business environments. Students review topics such as comparative analysis of the legal principles, issues, conventions, and competitive influences affecting activities conducted by U.S. businesses in global business environments and by foreign enterprises when operating within the United States. This course also provides

an overview of the structure and organization of foreign legal systems, international trade agreements, associations, and regulatory agencies. Students also review international dispute resolution mechanisms as applied by the international Court of Justice, the European Union, and various arbitral organizations.  
Credit: 4

### **MGM375 Quality and Supply Chain Management**

In this course, students examine the role of quality in management and the supply chain. The principles and processes of quality will be covered. In addition, students will discuss the importance of quality as a business strategy.  
Prerequisite: MGM340  
Credit: 4

### **MGM456 Trade in International Business**

This course provides students with a foundation for understanding international, multinational, and global trade. Students explore the concept of globalization in terms of the effects of international trade and economic activities on importing and exporting countries. Students also discuss the development and history of trade agreements and the effects they have on international business decisions.  
Credit: 6

### **MGM465 Business Strategy**

This capstone course examines business and strategic management from a holistic perspective. Students will analyze major strategic tasks, such as setting strategic vision and goals; and formulating, implementing, and evaluating strategy and tactics.  
Prerequisite: last quarter  
Credit: 6

### **MGM600 Applied Managerial Decision-Making**

Emphasizes the practical application of descriptive and inferential statistics to decision-making made in a managerial role. The following subjects are addressed in the course: data summarization and presentation, data analysis, tests of hypotheses, discrete and continuous distributions, and estimation theory, simple and multiple correlation and regression, analysis of variance, multivariate statistics and non-parametric methods. The student will apply the knowledge learned by completing a data aggregation and reduction exercise report and by accomplishing a research report summarizing an application of applied statistics from either the academic or professional literature.  
Credit: 4

### **MGM604 Organizational Behavior**

Designed to help potential managers deal effectively with the human element in organizations. Examines causes of human behavior and how it affects management challenges such as communication, decision-making, leadership and motivation.  
Credit: 4

### **MGM608 Managing e-Business**

Provides an understanding of the tools, skills, business concepts and social issues that surround the emergence of e-Business. It examines the resulting transformation of business organizations and the global economy. It takes a strategic and organizational perspective, instead of focusing on narrow technological and design issues. It investigates how technology and e-Commerce strategies are being used and explores the applicability of accepted business practices in an e-Business environment. It also examines the legal and regulatory issues (security authentication, privacy-encryption, safeguarding of intellectual property rights, acceptable use policies and legal liabilities) associated with e-Business. Case studies are used to investigate successful and unsuccessful e-Business practices.  
Credit: 4

### **MGM623 Public Administration**

This course covers the system structure overlay and develops the framework for day-to-day operations in the criminal justice system: tracking key metrics, planning, marshalling resources, executing objectives and assessing quality.  
Credit: 4

### **MGM624 Applied Accounting for Decision-Making**

In this course, students will learn how to use management accounting concepts to make business decisions. Students focus on the budget process, utilization of internal and external data for control and performance analysis, and allocation of resources to achieve corporate objectives.  
Credit: 5

### **MGM625 Applied Finance for Decision-Making**

In this course, students will learn how to use finance concepts to make business decisions. Financial reporting, planning, and analysis will be central topics in the course.  
Credit: 5

### **MGM626 Economics for Decision-Making**

This course examines micro- and macroeconomics as they relate to business management. These concepts will be applied

to the managerial decision-making and planning processes.  
Credit: 5

#### **MGM628 Marketing in the Digital Age**

Explores how e-Business is transforming traditional marketing concepts and functions and examines the advantages and disadvantages of digital age marketing. The focus is on how businesses are capitalizing on the convergence of media in order to increase or create their market presence. Products, services and information-based marketing strategies including business-to-business and business-to-consumer models are explored. Topics include: e-tailers, brand development, marketing mix for the Internet, advertising, competition and pricing implications, consumer behavior and demographic changes, interactive strategies, intelligent information agents, customer service, implementation, fulfillment, distribution channels and measuring results. The course will examine successful business models.  
Credit: 4

#### **MGM630 Applied Managerial Marketing**

Emphasizes the application of marketing concepts, tools and the decision-making processes middle managers use in developing marketing plans, programs and strategies. The following subjects are examined within the marketing strategy framework: market analysis and measurement, profitability and productivity analysis, product development, promotion and pricing strategies, the logistics systems approach and the marketing plan. The student will apply the knowledge learned by structuring and presenting to the class a practical strategic marketing plan.  
Credit: 4

#### **MGM634 Advanced Grant Writing**

In this course the student will cover proposal and grant writing preparation from groundwork to the final analysis of the finished product. Practical guidance is given on how to construct a realistic proposal and how to respond to a call for contracts from federal or state agencies. Developing public relations and forming relationships with the media are also an important part of successful appropriations.  
Credit: 6

#### **MGM638 Transforming the Enterprise with IT**

Explores the managerial, organizational and business implications of IT and e-Business. More importantly, it focuses on how to leverage IT and align the technologies with the strategy, people and organizational processes in order

to gain a competitive advantage. As such, it examines strategic issues related to the integration of technology in order to support the value chain within a business. Fostering organizational change, reengineering of business processes, supply chain management, intermediation, and the role of e-Business in innovation processes, technology diffusion and knowledge management is explored. Organization design and the interrelationships among business functions will also be examined. Concepts and principles from e-Business models will be used to develop a thorough understanding of the methods that are central to the development and implementation of strategic and structural alternatives.  
Credit: 4

#### **MGM640 Operations Management**

This course provides an overview of the issues and decisions involved in the production of goods and services. This course emphasizes the latest approaches, methods and systems to ensure management success under demanding cost, schedule, and performance requirements. As such it focuses on production design, enterprise planning, production scheduling, implementation and the control of production systems. Concepts examined include operations strategies, process analysis, quality and improvement, planning and control, inventory management, risk control systems, and supply chain management.  
Credit: 4

#### **MGM641 Operations Management Capstone I**

This course capstone provides a format for the student(s) to evaluate and design implementation plans to the issues and decisions involved in the production of goods and services. This course emphasizes the latest operation and systems approaches as well as various methods used to ensure management success under demanding cost, schedule, and performance requirements. Explores forecasting, planning products, processes, technologies and facilities, demand and inventory in the production systems, control for productivity, quality and reliability. Concepts examined include operations strategies, process analysis, quality and improvement, planning and control, inventory management, and risk control systems. This is the first course of a 2-course capstone sequence in operations management that requires the establishment of a project plan for improving operations. The plan takes into account cost, schedule and performance requirements. The deliverable is first draft of the capstone project that includes a project plan for the improvement of operations.  
Credit: 2

#### **MGM642 Operations Management Capstone II**

This course capstone provides a format for the student(s) to evaluate and design implementation plans to the issues and decisions involved in the production of goods and services. This course emphasizes the latest operation and systems approaches as well as various methods used to ensure management success under demanding cost, schedule, and performance requirements. Explores forecasting, planning products, processes, technologies and facilities, demand and inventory in the production systems, control for productivity, quality and reliability. Concepts examined include operations strategies, process analysis, quality and improvement, planning and control, inventory management, and risk control systems. This is the second course of a 2-course capstone sequence in operations management that requires the establishment of a project plan for improving operations. The plan takes into account cost, schedule and performance requirements. The deliverable is the capstone project that includes a project plan for the improvement of operations.  
Prerequisite: MGM641  
Credit: 2

#### **MGM646 Managing Service Operations**

Some organizations are producers of goods, but all organizations depend on effective customer service for both internal and external customers. This course deals with the differences in the operational aspects of manufacturing and service organizations. The focus is on building sustainable excellence in customer service. Specific areas of concern are the identification of service problems, the development of solutions, and the design of systems that ensure the continuation of excellent service. Course will provide an examination of methods for designing and operating service delivery systems, such as in the health care, financial, transportation, hospitality, and governmental services industries. Topics include process and facility design, facility layout and location, queuing, demand forecasting and management, service quality, staffing, and personnel scheduling.  
Credit: 4

#### **MGM647 Operations Strategy**

Operations Strategy deals with innovative solutions to operational problems. It includes a systematic examination of alternative operating models. The course provides a methodology for evaluating a company's operations strategy, strategies for improving operating systems, and tools for managing growth. This course

will discuss issues related to the creation and delivery of goods and services. Topics include the design of production processes, the layout and location of facilities, forecasting, scheduling, inventory control, queuing, materials planning, and quality control. Analytical techniques such as linear programming are used in studying these problems.

Prerequisite: MGM646

Credit: 4

#### **MGM661 Business Administration Capstone I**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous core and concentration courses to resolve issues or take advantage of opportunities faced by business leaders. The course provides you with the opportunity to assess situations and develop courses of actions to address those situations. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus of the student is on crafting an effective policy and strategy implementation plan.  
Credit: 4 (2 – 2 credit courses)

#### **MGM662 Business Administration Capstone II**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous core and concentration courses to resolve issues or take advantage of opportunities faced by business leaders. The course provides you with the opportunity to assess situations and develop courses of actions to address those situations. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus of the student is on crafting an effective policy and strategy implementation plan.  
Credit: 4 (2 – 2 credit courses)

#### **MGM670 Legal and Ethical Decision-Making**

This course will survey the basic ethical concepts and content in the major areas of law, with an explanation and identification of sources of legal authority and familiarization with relevant legal language. In addition, the course will examine a variety of complex ethical issues confronting industry professionals as they work with customers and colleagues. By working with and analyzing actual cases, the student will be able to make informed choices when faced with the issues in the workplace.  
Credit: 4



### **MGM800 Critical and Creative Thinking**

Explores and develops the student as a reflective practitioner of management. Readings and discussion will concentrate on the development of creative, critical, and strategic thinking skills. Understanding both argumentation and developing a greater capacity for creativity, students will actively engage in acts of creative leadership which will continue throughout the program and culminate in the leadership course in the third year.

Credit: 5

### **MGM801 Research and Writing I**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM805 Classic and Contemporary Management Theory**

The purpose of this course is to develop practitioner scholars. Through extensive readings in Organizational Behavior, Organization Theory and Strategy students will develop critical reflection in the context of action. Building from historical foundations in the field of organizational studies, students will enter into examination and conversations with a wide variety of contemporary management thinkers and researchers.

Credit: 5

### **MGM806 Research and Writing II**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more

research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM810 Action Research**

Action Research explores various methods and contexts for field research. Students will examine their historical experience with research in a wide variety of forms, understanding their personal biases and values in the process. Drawing on readings and conversations with contemporary practitioner researchers, students will explore and practice methods in greater detail through participation in live interventions.

Credit: 5

### **MGM811 Research and Writing III**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM815 Qualitative and Ethnographic Methods**

Instills and examines the fundamental principles of inquiry through active experimentation with ethnographic and quasi-ethnographic methods. Analysis of ethnographic descriptions and data via live, large datasets using automated methods.

Credit: 5

### **MGM816 Research and Writing IV**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to

demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM820 Quantitative Methods**

Students will learn fundamental concepts of parametric and non-parametric statistics and develop a thorough understanding of the primary theorems of statistics. The course covers measures of central tendency, various forms of probability, ANOVA, and GLM. Exploration of multivariate statistics will be practiced via large datasets in live research projects. Particular attention is given to scale & survey development.

Credit: 5

### **MGM821 Research and Writing V**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM825 Research Methods & Design**

This course is an examination of 'full cycle research' starting with a qualitative examination of an organizational phenomenon and then addressing how to measure it via survey, experiments, or other designs. It concludes with issues of verification and implementation based on the outcome of the quantitative phase. Also focuses on scale development skills involving reliability and validity measures, as well as confirmatory

factor analysis, and issues of survey development and implementation.

Credit: 5

### **MGM826 Research and Writing VI**

This is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM830 Philosophy of Science, Values, and Ethics**

Starting with classic readings, and supplemented by contemporary readings in socio-technical systems from the global perspectives including; Eastern, Western, and indigenous approaches to appropriate technology, students will also look at moral dilemmas and choices in organizational life and professional careers. Examines how one can build or contribute to the development of the good, true and beautiful in organizations and careers.

Credit: 5

### **MGM831 Research and Writing VII**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM835 Process Consulting and Intervention**

Starting with readings from classic authors, students will develop the models and thinking behind process interventions and tacit skill development of self-as-instrument. They will also explore various methods and techniques of consulting through active conversations with practicing consultants. The course covers the use of quantitative and qualitative methods to provide feedback and guidance in the management and leadership of organizations. Finally, students will be involved in live interventions in organization from entry and planning through delivery and follow-up. These will start with basic interventions such as interview and feedback/ action planning to Future Search, Appreciative Inquiry and related techniques.

Credit: 5

### **MGM836 Research and Writing VIII**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM840 Leadership**

This is an active course in leadership, building on critical and creative thinking. Students will be expected to build and develop their leadership with new doctoral students via cooperative research projects and programs of research.

Credit: 5

### **MGM841 Research and Writing IX**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of

expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM845 Strategic Thinking**

Develops and expands students' ability to think strategically. This will involve various typologies and methods of exploration and an examination of heuristics and biases. Students will develop the capacity for concurrent action and 'birds-eye' perspectives of ongoing organizational activity.

Credit: 5

### **MGM846 Research and Writing X**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM850 Strategic Organization Design**

As leaders in their organization, students will learn various methods and techniques of analysis and design, including methods of organizational change. They will examine the nature of 'clicks & bricks' as well as 'make or buy' decisions in outsourcing products and services.

Credit: 5

### **MGM851 Research and Writing XI**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor

and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM855 Futuring and Innovation**

This course develops skills in futuring via Delphi, Future Search, scenario building and other techniques. Students will talk with futurists and futures organizations, becoming involved in the World Futures Society and tech trending with leading electronics and aerospace companies. They will develop a socio-technology plan for the future of the organization and will also look at formal models of innovation and diffusion of innovation.

Credit: 5

### **MGM856 Research and Writing XII**

This course is the last of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within management and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of "satisfactory" certifies that the project has been judged as being of publishable quality, applying management knowledge to the solution of a practical problem.

Credit: 3

### **MGM895 Research Continuation**

The doctoral candidate will enroll in this course to maintain registered status at CTU and to provide extended time to complete the dissertation or publishable papers.

Prerequisite: Approval

Credit: 3 per quarter

### **MGMT507 Foundations in Business Administration**

These courses provide a thorough foundation in the concepts of financial accounting, financial management, managerial economics and statistical methodology used in modern management decision-making. The focus is on understanding financial accounting statements, applying common principles of management accounting, conducting financial analysis, determining project selection, formulating capital structure and preparing capital budgets. Demand, cost and supply concepts from a business perspective are included, as well as an introduction to practical applications of descriptive and inferential statistics used in decision analysis. The courses assume no prior knowledge of these areas and are an excellent refresher course for those with some familiarity in these areas. They are organized as a set of self-paced, one-credit modules. A self-assessment determines the need for each of the modules below.

Credit: 4

### **MGMT507A Accounting**

This course provides a thorough foundation in the concepts of financial and managerial accounting. The focus will be on understanding financial accounting statements, applying common principles of financial and management accounting and conducting accounting focused financial analysis.

Credit: 1

### **MGMT507B Finance**

This course provides a thorough foundation in the concepts of financial management, used in management decision-making. The focus will be on the application of finance principles to financial analysis, capital budgeting decisions, and the capital structure of the corporation.

Credit: 1

### **MGMT507C Economics**

This course provides a thorough foundation in the concepts of management economics used in management decision-making. The focus will be on the application of demand and supply, and cost concepts from an economic viewpoint as used in Business Decision Making.

Credit: 1

### **MGMT507D Statistics**

This course provides a thorough foundation in the concepts of statistical methodology used in management decision-making. The focus will be on practical applications of descriptive and inferential statistics as used in decision analysis.

Credit: 1



### **MGMT600 Applied Managerial Decision-Making**

This course emphasizes the practical application of descriptive and inferential statistics to decisions made in a managerial role. The following subjects are addressed in the course: data summarization and presentation, data analysis, tests of hypotheses, discrete and continuous distributions, estimation theory, simple and multiple correlation and regression, analysis of variance, multivariate statistics and non-parametric methods. The student will apply the knowledge learned by completing a data aggregation and reduction exercise report and by accomplishing a research report summarizing an application of applied statistics from either academic or professional literature. Prerequisite: MGMT507D or Approval  
Credit: 4

### **MGMT604 Organizational Behavior**

After this course the student will be able to help potential managers deal effectively with the human element in organizations. It examines causes of human behavior and how it affects management challenges such as communication, decision-making, leadership and motivation. The course is oriented towards team and project-based organizations and builds knowledge and skills to successfully operate in contemporary organizations. As a class, students will reflect on both our experience in organizations (companies) and as an organization (the class).  
Credit: 4

### **MGMT608 Managing e-Business**

This course provides the student with an understanding of the tools, skills, business concepts and social issues that surround the emergence of e-Business. It examines the resulting transformation of business organizations and the global economy and takes a strategic and organizational perspective instead of focusing on narrow technological and design issues. Investigations will be done on how technology and e-commerce strategies are being used, and will explore the applicability of accepted business practices in an e-Business environment. Additionally, the course examines the legal and regulatory issues (safeguarding of intellectual property rights, acceptable use policies and legal liabilities) associated with e-Business. Case studies are used to investigate successful and unsuccessful e-Business practices.  
Credit: 4

### **MGMT623 Public Administration**

This course covers the system structure overlay and develops the framework for day-to-day operations in the criminal justice system: tracking

key metrics, planning, marshalling resources, executing objectives and assessing quality.  
Credit: 4

### **MGMT635 Grants and Contracts**

In this course the student will cover proposal and grant writing preparation from groundwork to the final analysis of the finished product. Practical guidance is given on how to construct a realistic proposal and how to respond to a call for contracts from federal or state agencies. Developing public relations and forming relationships with the media are also an important part of successful appropriations.  
Credit: 4

### **MGMT638 Transforming the Enterprise with IT**

During this course the student will explore the managerial, organizational and business implications of IT and e-Business. More importantly, the course focuses on how to leverage IT and align the technologies with the strategy, people and organizational processes in order to gain a competitive advantage. As such, it examines strategic issues related to the integration of technology in order to support the value chain within a business. Fostering organizational change, reengineering of business processes, supply chain management, intermediation, and the role of e-Business in innovation processes, technology diffusion and knowledge management are explored. Organizational design and the interrelationships among business functions will also be examined. Concepts and principles from e-Business models will be used to develop a thorough understanding of the methods that are central to the development and implementation of strategic and structural alternatives.  
Credit: 4

### **MGMT640 Operations Management**

This course provides an overview of the issues and decisions involved in the production of goods and services. This course emphasizes the latest approaches, methods and systems to ensure management success under demanding cost, schedule, and performance requirements. As such it focuses on production design, enterprise planning, production scheduling, implementation and the control of production systems. Concepts examined include operations strategies, process analysis, quality and improvement, planning and control, inventory management, risk control systems, and supply chain management.  
Credit: 4

### **MGMT645 Operations Management Capstone**

This course capstone provides a format for the student(s) to evaluate and design implementation plans to the issues and decisions involved in the production of goods and services. This course emphasizes the latest operation and systems approaches as well as various methods used to ensure management success under demanding cost, schedule, and performance requirements. The course will explore forecasting, planning products, processes, technologies and facilities, demand and inventory in the production systems, control for productivity, quality and reliability. Concepts examined include operations strategies, process analysis, quality and improvement, planning and control, inventory management, risk control systems, and supply chain management.  
Credit: 4 [each capstone is 4 credit hours for a total of 12 credit hours]

### **MGMT646 Managing Service Operations**

Some organizations are producers of goods, but all organizations depend on effective customer service for both internal and external customers. This course deals with the differences in the operational aspects of manufacturing and service organizations. The focus is on building sustainable excellence in customer service. Specific areas of concern are the identification of service problems, the development of solutions, and the design of systems that ensure the continuation of excellent service. Course will provide an examination of methods for designing and operating service delivery systems, such as in the health care, financial, transportation, hospitality, and governmental services industries. Topics include process and facility design, facility layout and location, queuing, demand forecasting and management, service quality, staffing, and personnel scheduling.  
Credit: 4

### **MGMT647 Operations Strategy**

Operations Strategy deals with innovative solutions to operational problems. It includes a systematic examination of alternative operating models. The course provides a methodology for evaluating a company's operations strategy, strategies for improving operating systems, and tools for managing growth. This course will discuss issues related to the creation and delivery of goods and services. Topics include the design of production processes, the layout and location of facilities, forecasting, scheduling, inventory control, queuing, materials planning, and quality control. Analytical techniques such as linear programming are used in studying these problems.  
Prerequisite: MGM646  
Credit: 4

### **MGMT650 Applied Research Design and Methods**

This course examines the nature of the research process and presents basic guidelines for reading, designing, conducting, assessing, analyzing, interpreting, and evaluating quantitative and qualitative research studies. Students will design and conduct a study of a technology delivered and/or integrated lesson, report and evaluate the results, and evaluate the project.  
Credit: 4

### **MGMT660 Management Capstone**

This is an integrative and interactive capstone course in which the student uses the functional skills acquired from previous core and concentration courses to resolve issues or take advantage of opportunities faced by business leaders. The course provides you with the opportunity to assess situations and develop courses of actions to address those situations. Specifically, the course focuses on how to create and sustain strategies that create value to the business, consumers, and society as a whole. The primary focus of the student is on crafting an effective policy and strategy implementation plan.  
Credit: 4

### **MGMT697 Advanced Research and Study in Management**

This course is an independent in-depth research and/or study of an area of student interest. It requires a research or study plan usable as a master's elective in management. Prerequisite: Approval  
Credit: 1-6

### **MGMT699 Special Topics in Management**

This course addresses issues of current interest in management. Course topics will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **MIS300 Introduction to Information Systems**

In this course, students examine management skills as they relate to the information systems. Students receive an overview of computer-based systems, the development of these systems and the e-Business environment. It also examines the legal and regulatory issues (security authentication, privacy-encryption, safeguarding of intellectual property rights, acceptable use policies and legal liabilities) associated with e-Business. Case studies are used to investigate successful and unsuccessful e-Business practices.  
Credit: 4

### **MIS330 Programming Concepts**

Students examine programming concepts and apply constructs such as control structures, arrays, functions, and procedures. Students will learn problem solving and flow-charting techniques. Credit: 4

### **MIS350 Information Systems Security**

This course offers an overview of information security technologies as applied to operating systems, database management systems, and computer networks. This course introduces the student to the fundamental security topics and concepts necessary for both the IT Technologist and Network Professional. This course provides the student with a fundamental understanding of general security concepts, communications security, infrastructure security, basics of cryptography, and operational/organizational security leading to an understanding of the fundamentals of network security. Credit: 4

### **MIS370 Management for Information Systems**

This capstone course examines the role of information systems within the management of an organization. Students will know information system techniques, processes, and procedures, and how and when to apply them from the point of view of the first line manager to the chief executive officer. Students will explore a number of issues such as intellectual property rights, information policy, information technology trends and opportunities, and the use of technology to generate a competitive advantage. Case studies will be used to provide the student with realistic experiences. Credit: 4

### **MIS405 Database Systems**

This course will introduce students to basic relational database concepts and design. In the course, students will learn concepts such as the design process, database objects, object hierarchy, data types, normalization of data, keys, indexes, and referential integrity. Students will use real life case studies. Credit: 6

### **MIS420 Network Systems**

This course provides students with a conceptual overview of networks, including the essential elements of computer networks, protocols of data communication, and the role of network management software. The course begins with a focus on hardware

and network topographies and then shifts to network operating systems. Network communication is presented at the conceptual level via OSI reference model, and then at a practical level with TCP/IP. Attributes of contemporary network operating systems are presented and discussed. Activities needed to maintain healthy network environments are investigated. Credit: 6

### **MKT250 Marketing**

Students will study and apply the fundamentals of marketing within an organization and the contemporary market environment. The course will focus on marketing strategy and development of a marketing mix. Credit: 6

### **MKT305 Marketing and the Virtual Marketplace**

This course focuses on marketing strategies and their applications in business. Students will examine the marketing and planning process, and analyze the various implications for traditional and Internet marketing strategies. Credit: 4

### **MKT325 Consumer Behavior Fundamentals**

In this course, students learn about the motivations, influences, and processes underlying consumption behavior. Post purchase behavior and techniques for applying research findings to business strategy are also covered. Prerequisite: MKT305 Credit: 4

### **MKT350 Marketing Research Practices**

This course examines the tools and techniques of marketing research as an aid to marketing decision-making. It covers all aspects of research from research design to interpretation and reporting results. Prerequisite: MKT305 Credit: 4

### **MKT355 Principles of Advertising and Public Relations**

This course focuses on the advertising and public relations components of marketing promotion. Students will examine effective advertising and public relations practices and procedures within various markets. Prerequisite: MKT305 Credit: 4

### **MKT380 Applied Marketing Management**

This course explores the application of management principles to the marketing function. Emphasis is placed on the application of planning, implementation, controlling, and evaluation of marketing strategies as the means for achieving an organization's objectives. Prerequisite: MKT355 Credit: 4

### **MKT430 Personal Selling and Customer Focus**

In a world of increasing customer demands and expectations, this course emphasizes a hands-on approach to using customer service to improve business results. This course broadly defines the customer as any entity or person whose cooperation is essential for an organization's success. As such, a customer may be external or internal to an organization. This course also examines the role of the sales function and techniques necessary for the successful selling of both tangibles and intangibles. Emphasis is placed on communication skills necessary to manage relationships for personal influence. Credit: 6

### **MKT460 Integrated Marketing Strategies**

This course explores the nature and scope of sales promotion both through direct and media marketing. It includes an examination of the planning, budgeting, and implementation of an integrated marketing strategy. Prerequisite: MKT305, MKT350 Credit: 6

### **MKT446 Marketing Concepts in International Business**

In this course, students study the decision-making process in marketing products and services across national boundaries and explore the design and modification of marketing strategies for international, multinational, and global markets. This course introduces methods of adapting marketing efforts with consideration of product, price, promotion, and distribution decisions within the restraints of particular cultural, economic, and political environments. Credit: 6

### **MKT618 Marketing Research Methods**

This course provides a systematic approach to obtaining, recording, analyzing, summarizing, and presenting research information to support marketing and business decisions. This course focuses on consumer/customer

analysis for the purposes of developing new products (or services) and refining current product offerings, distribution strategies, promotional campaigns, pricing strategies, and customer service efforts. Credit: 5

### **MKT628 Marketing in the Digital Age**

This course explores the key trends in e-business, e-commerce, and e-marketing—how the traditional marketing concepts and functions are being transformed to adapt to the digital environment. This course also examines the advantages and disadvantages of digital age marketing and focuses on the convergence of media to increase or create businesses' market presence. Products, services, and information-based marketing strategies, including B2B, B2C, C2C, and C2B models, are also explored. Students will learn the concepts of interactive marketing, dynamic pricing, disintermediation, mass customization, and customerization. Additionally, this course examines successful e-business, e-commerce, and e-marketing models. Credit: 4

### **MKT638 International Marketing**

The course examines issues involving trends, factors, and forces (such as institutions, culture, politics, law, and the environment) that affect global marketing activities. In this course, students study the decision-making process in marketing products and services across national boundaries and explore the design and modification of marketing strategies for international, multinational, and global markets. This course is designed to provide the background to make marketing decisions at the international level. This course introduces methods of adapting marketing efforts with consideration of product, price, promotion, and distribution decisions within the restraints of particular cultural, economic, and political environments. Credit: 4

### **MKT661 Marketing Capstone 1**

This is an integrative capstone course in which the student synthesizes the skills acquired from previous courses to identify, develop, and capitalize on market opportunities. The course provides the student with the opportunity to assess market conditions and develop courses of action which will take advantage of the student analysis. Specifically, the course focuses on how to create and sustain strategies that provide value to the business, consumers, and society as a whole. The goal is on crafting an effective and comprehensive strategic marketing plan. Credit: 4 (2 – 2 credit courses)

### **MKT662 Marketing Capstone 2**

This is an integrative capstone course in which the student synthesizes the skills acquired from previous courses to identify, develop, and capitalize on market opportunities. The course provides the student with the opportunity to assess market conditions and develop courses of action which will take advantage of the student analysis. Specifically, the course focuses on how to create and sustain strategies that provide value to the business, consumers, and society as a whole. The goal is on crafting an effective and comprehensive strategic marketing plan.  
Credit: 4 (2 – 2 credit courses)

### **MKTG110 Salesmanship**

This course examines the role of the sales function and techniques necessary for the selling of both tangibles and intangibles. Emphasis is placed on communication skills necessary to manage relationships for personal influence  
Credit: 4

### **MKTG210 Introduction to Marketing**

This course introduces students to the fundamentals of contemporary marketing. A broad study of the concepts, techniques, and vocabulary of this discipline is covered which will allow the student to take more advanced and specialized marketing courses.  
Prerequisite: Approval  
Credit: 4

### **MKTG220 Advertising and Media Practices**

Students will gain an understanding of advertising, public relations and brand management. Specific topics covered include the planning, creation and use of these communication tools from the point of view of management and the market.  
Prerequisite: MKTG210  
Credit: 4

### **MKTG299 Special Topics in Marketing**

This course addresses issues of current interest in marketing. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **MKTG301 Introduction to Marketing**

This course introduces students to the fundamentals of contemporary marketing. A broad study of the concepts, techniques, and vocabulary of this discipline is covered which will allow the student to take more advanced and specialized marketing courses.  
Prerequisite: Approval  
Credit: 4

### **MKTG305 Marketing and the Virtual Marketplace**

This course focuses on marketing strategies and their applications in business. Students will examine the marketing and planning process, and analyze the various implications for traditional and Internet marketing strategies.  
Credit: 4

### **MKTG310 Sales Management**

Sales management covers the vital area of managing either a service or tangible product's sales force. Areas of study and application include recruitment, selection, management, training and compensation of a sales force. This course also covers the relationship between a marketing and sales department and their various roles within an organization.  
Prerequisite: MKTG210  
Credit: 4

### **MKTG320 Consumer Behavior**

Consumer behavior examines the forces which influence both consumer and institutional buying decisions for both domestic and international markets. This course integrates how the behavior of a market is considered and applied to new product development, target marketing and other related marketing and organizational goals.  
Prerequisite: MKTG210  
Credit: 4

### **MKTG330 Marketing Research**

Marketing Research considers the construction and implementation of market research methods to solve marketing problems and uncover opportunities. Research design, data collection, problem formulation, and data analysis are emphasized.  
Prerequisite: MKTG210  
Credit: 4

### **MKTG399 Special Topics in Marketing**

This course addresses issues of current interest in logistics. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **MKTG410 International Marketing**

In this course, students study the decision-making process in marketing products and services across national boundaries and explore the design and modification of marketing strategies for international, multinational, and global markets. This course introduces methods of adapting marketing efforts with consideration of product, price, promotion, and distribution

decisions within the restraints of particular cultural, economic, and political environments.  
Prerequisite: MKTG210  
Credit: 4

### **MKTG420 Product Service Planning**

The factors and issues surrounding new product or service development are analyzed and applied. Consideration is given to all major decisions related to product introductions which include market research, behavior, channel and distribution decisions.  
Prerequisite: MKTG210  
Credit: 4

### **MKTG422 Direct Marketing**

The nature and scope of sales promotion and direct marketing, and their roles within the marketing function, are examined. Planning, administration, control mechanisms and testing are among the topics considered.  
Prerequisite: MKTG301  
Credit: 4

### **MKTG430 Integrated Marketing Strategy Capstone**

As a capstone course MKTG430 is a comprehensive application of all previous marketing and management course work.  
Prerequisite: MKTG210  
Credit: 4

### **MKTG495 Advanced Research and Study**

This is an independent in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair.  
Prerequisite: Approval  
Credit: 1-6

### **MKTG499 Special Topics in Marketing**

This course addresses issues of current interest in marketing. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **MKTG618 Marketing Research Methods**

This course provides a systematic approach to obtaining, recording, analyzing, summarizing, and presenting research information to support marketing and business decisions. This course focuses on consumer/customer analysis for the purposes of developing new products (or services) and refining current product offerings, distribution strategies, promotional campaigns, pricing strategies, and customer service efforts.  
Credit: 5

### **MKTG628 Marketing in the Digital Age**

This course explores how e-Business is transforming traditional marketing concepts and functions, and examines the advantages and disadvantages of digital age marketing. It focuses on how businesses are capitalizing on the convergence of media in order to increase or create their market presence. Products, services and information-based marketing strategies, including business-to-business and business-to-consumer models, are explored. Topics include e-tailers, brand development, marketing mix for the Internet, advertising, competition and pricing implications, consumer behavior and demographic changes, interactive strategies, intelligent information agents, consumer service, implementation, fulfillment, distribution channels and measuring results. Successful business models will be examined.  
Prerequisite: Approval  
Credit: 4

### **MKTG630 Applied Managerial Marketing**

This course emphasizes the application of marketing concepts, tools and the decision-making processes middle managers use in developing marketing plans, programs and strategies. It additionally examines, within the marketing strategy framework, market analysis and measurement, profitability and productivity analysis, product development, promotion and pricing strategies, the logistics systems approach and the marketing plan. The student will apply the knowledge learned by structuring and presenting to the class a practical strategic marketing plan.  
Credit: 4

### **MKTG638 International Marketing**

The course examines issues involving trends, factors, and forces (such as institutions, culture, politics, law, and the environment) that affect global marketing activities. In this course, students study the decision-making process in marketing products and services across national boundaries and explore the design and modification of marketing strategies for international, multinational, and global markets. This course is designed to provide the background to make marketing decisions at the international level. This course introduces methods of adapting marketing efforts with consideration of product, price, promotion, and distribution decisions within the restraints of particular cultural, economic, and political environments.  
Credit: 4

### **MKTG660 Marketing Capstone**

This is an integrative capstone course in which the student synthesizes the skills acquired from



previous courses to identify, develop, and capitalize on market opportunities. The course provides the student with the opportunity to assess market conditions and develop courses of action which will take advantage of the student analysis. Specifically, the course focuses on how to create and sustain strategies that provide value to the business, consumers, and society as a whole. The goal is on crafting an effective and comprehensive strategic marketing plan.

Credit: 4

#### **MKTG699 Special Topics in Marketing**

This course addresses issues of current interest in marketing. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

#### **MPM332 Organizational Leadership**

In this course, students will explore techniques for effective leadership. The course will focus on skills necessary in a project environment. Students will examine how to lead others, stimulate purposeful innovation, build culture and manage change.

Credit: 4

#### **MPM344 Project Risk Management**

Project Risk Management is a study of risk management in the context of projects and programs, with special focus on developing the competency of the project risk manager. This course addresses the area of non-speculative, business risk. Specific emphasis is placed on risk minimization, risk control, and risk management.

Prerequisite: MPM401

Credit: 4

#### **MPM346 Contracts and Procurement**

This course covers the management of contracts and procurements for projects from the initial planning for contract work through contract close out. Special emphasis is provided on how procurement and proposals integrate into the project management process and how the project manager maintains control of the process.

Prerequisite: MPM401

Credit: 4

#### **MPM357 Project Performance and Quality Assurance**

In this course, students will explore quality assurance concepts and principles within the total quality management framework

in manufacturing or service organizations. Students will also study benchmarking, the contractual aspects of quality, statistical process control, process improvement, yield management, quality issues of incoming material control and quality audits.

Prerequisite: MPM401

Credit: 4

#### **MPM401 Project Management Theory**

This course provides an overview and introduction to the discipline of project management, coupled with an examination of the techniques that project managers use to complete their projects on schedule, within budgeted cost, and according to specified scope. Using materials based on the PMBOK® (Guide to Project Management Body of Knowledge, published by the Project Management Institute or PMI®), students learn the operational framework of project management relating to the project lifecycle of project initiating, planning, executing, controlling, and closing. This course also provides the basis for the more advanced development of project management skills in subsequent project management courses.

Credit: 6

#### **MPM420 Managing Project Risks and Opportunities**

This course examines risk management within projects. Students will closely examine the roles and techniques of risk management planning, risk identification, risk assessment (qualitative and quantitative), risk response, and risk monitoring and control.

Prerequisite: MPM401

Credit: 6

#### **MPM422 Managing the Project Lifecycle**

This course introduces the discipline of project management. It emphasizes the techniques that can be used to ensure project success under demanding cost, schedule, and performance requirements. Using materials based on the PMBOK® (Guide to Project Management Body of Knowledge, published by the Project Management Institute or PMI®), students learn the operational framework of project management relating to the project lifecycle of project initiating, planning, executing, controlling, and closing.

Credit: 6

#### **MPM424 Introduction to Project Management**

This course introduces the discipline of project management. It emphasizes the techniques that can be used to ensure project

success under demanding cost, schedule, and performance requirements. Using materials based on the PMBOK® (Guide to Project Management Body of Knowledge, published by the Project Management Institute or PMI®), students learn the operational framework of project management relating to the project lifecycle of project initiating, planning, executing, controlling, and closing.

Credit: 4

#### **MPM426 Project Scheduling and Cost Management**

This course shows the student the latest approaches, methods, and systems to ensure management success under demanding cost, schedule, and performance requirements. Conflict and risk management initiatives plus Gantt, PERT, and CPM scheduling methods are included.

Prerequisite: MPM424

Credit: 4

#### **MPM434 Project Scheduling and Cost**

This course exposes students to approaches, methods, and systems to ensure management success under demanding cost, schedule, and performance requirements. Conflict and risk management initiatives along with Gantt, PERT, and CPM scheduling methods are included.

Prerequisite: MPM401

Credit: 6

#### **MPM466 HR Project Management**

This course builds on the foundations of HR management and project management and covers the three areas in the PMBOK for project HR managers: organizational planning, staff acquisition, and team development. Within these areas emphasis is given to management and behavioral theories that impact change, communication, motivation, stress, conflict, negotiation, leadership and politics in a project-management environment.

Prerequisite: MPM401

Credit: 6

#### **MPM650 Project Management Processes in Organizations**

Emphasizes the development and integration of project management in organizations. The following subjects are examined from the project management perspective: history and development of project management as a discipline, integrating project management into various organizational systems, strategic planning, competitive technology, joint ventures and human resources. This course provides a theoretical and conceptual

foundation for the remainder of the project management courses. Examines general strategies and tools for identifying, evaluating and mitigating risk in project management.

#### **MPM655 Project Planning, Execution and Closure**

Offers a practical approach emphasizing the project phases and processes presented by such organizations as the Project Management Institute (PMI®) in their Guide to the Project Management Body of Knowledge (PMBOK®). This course will provide an overview of aspects related to the project life cycle and project management techniques that are used to manage projects that are on schedule, within budget and meet performance criteria. The student will learn the basic project management framework as well as the preparation of a basic project plan. Subsequent courses will focus on project management processes such as scheduling, cost control, procurement and contracting, and risk management. Examines ways of identifying, evaluating and mitigating risk in planning, execution, and closure.

Prerequisite: MPM650

Credit: 5

#### **MPM660 Schedule and Cost Control Techniques**

Emphasizes a hands-on approach to using project management tools to facilitate scheduling, estimating, tracking and controlling the schedule and costs of the project. A project baseline will be set so that actual schedule and cost variances can be compared to the project baseline and corrective actions can be developed to address the variances. Specific topics that will be covered include: Gantt, PERT and Milestone charts, Critical Path Methods, Earned Value techniques, present value and internal rates of return. Topics including ways to communicate project status and to do contingency planning will be discussed. Examines ways of identifying, evaluating and mitigating risk in scheduling and cost control.

Credit: 5

#### **MPM665 Contracting and Procurement in Project Management**

This course includes writing, negotiating and adhering to contracts as well as legal and ethical considerations. Procurement, including writing, clarifying and communicating specifications is covered. There is an emphasis on contract administration and dealing with subcontractors.

Topics include bidding, types of bids (including RFPs, RFQs, IFBs, etc.), types of contracts, their respective purposes and their impact on risk, and project contract negotiation. Changes in contracts and methods to resolve disputes are included. Contract types including fixed price, cost plus, fixed fee, time and materials, etc. and writing clear Statements of Work are discussed. Examines ways of identifying, evaluating and mitigating risk in contracting and procurement. Prerequisite: MPM650  
Credit: 5

#### **MSL101 Fundamental Concepts of Leadership**

Introduction to the fundamental components of leadership. The course helps students be more effective leaders and managers in the future, whether serving as leaders in military or civilian life. Subjects include values, leadership, and "life skills" (communications theory and practice, interpersonal relationships, and fitness). Students should be prepared to receive more complex leadership instruction by the end of the course. Lab is required once a week.  
Credit: 4.5

#### **MSL102 Basic Leadership**

An introduction to the "life skills" of problem solving, decision making, and leadership. The course is designed to help students in the near-term as leaders on and off campus. Topics include critical thinking, problem solving methods, leadership theory, followership, group cohesion, goal setting, and feedback mechanisms. Lessons emphasize student discussions and practical exercises. Lab is required once a week.  
Credit: 4.5

#### **MSL201 Advanced Leadership**

This course delves into theoretical and practical leadership topics. Several communication and leadership topics are examined (written and oral communication, assertiveness, motivation, organizational culture, etc.). Included is a major leadership problem solving case study. Students will be grounded in fundamental leadership principles by the end of the course and be able to apply such principles to future life experiences. Lab is required once a week.  
Credit: 4.5

#### **MSL202 Tactics and Officership**

This course focuses on the practical application of decision making and leadership and examines the roots of national and Army values and ethics. Students will use a case study that traces the Army's successes and failures from the Vietnam War to the present to help them put previous lessons on values,

communications, decision making, and leadership in a real-world context. Lab is required once a week.  
Credit: 4.5

#### **MSL301 Fundamentals of Military Leadership And Training I**

This course focuses on building leadership competencies and military skills in preparation for a student's future responsibilities as a military leader. Studies will include the principles of war, decision-making processes, planning models, and risk assessment. Advanced leadership instruction will focus on motivational theory, the role and actions of leaders, and organizational communications. Lab is required once a week and physical training is required three times per week.  
Credit: 4.5

#### **MSL302 Fundamentals of Military Leadership And Training II**

This course builds on the skills and knowledge attained in MSL301. Instruction will include individual leader development, planning and execution of small unit operations, individual and team development, and the Army as a career choice. Students should be prepared to attend Advanced Camp at Fort Lewis, Washington the following summer by course completion. Lab is required once a week and physical training is required three times per week.  
Credit: 4.5

#### **MSL303 National Advanced Leadership Course**

This is a mandatory 5-week practicum conducted at Fort Lewis, Washington for all Advanced Course Army ROTC students. Students will be assigned as members of a training unit for 24 hours a day, seven days a week for their time at camp. During that time, students will be placed in numerous leadership positions at various levels of responsibility and in varied scenarios. They will be assessed on their ability to work with others in a challenging environment.  
Credit: 4.5

#### **MSL401 Leadership, Management and Ethics**

This course begins the final transition from student to lieutenant. Focus will be on the skills needed to operate effectively as an Army officer. Areas covered are coordinating staff activities, counseling theory/practice, training management, and ethics. Each student should possess the abilities needed to be a competent member and leader in an organization by the end of the course. Lab is required once a week and physical training is required three times per week.  
Credit: 4.5

#### **MSL402 Transition to Lieutenant**

This course completes the transition from student to lieutenant. It will delve into the legal and ethical aspects of decision making and leadership. Studies will also include how the Army organizes for tactical and strategic operations and how to manage administration and logistics at the unit level. The semester will culminate with a major capstone exercise in small unit leadership. Lab is required once a week and physical training is required three times per week.  
Credit: 4.5

#### **MSL498 Special Studies in Leadership**

This course is for the student participating in the Army ROTC Advanced Course who wants to pursue further studies in the application of leadership principles and group dynamics. This course is by arrangement only.  
Credit: 4.5

#### **NRSG151 Foundations of Professional Practice**

This course examines the roles and responsibility of professional nurses within a rapidly changing health care system. Historical, conceptual, ethical, legal, and political influences on nursing practice are examined. Students are introduced to Florence Nightingale and Jean Watson's nursing theories, professional nursing values, fundamentals of teamwork and communication, as well as conflict resolution and negotiation. The role of the nurse in assuring patient safety and optimal patient outcomes is emphasized. The student is introduced to the structure of a competency-based nursing curriculum, including the learning philosophy, strategies, and measurements that will be applied during the program.  
Credit: 4

#### **NRSG152 Fundamentals of Nursing I**

This course presents the basic principles and concepts involved in caring for adults. Students will apply concepts from physiology and nursing to the promotion of health in adults in acute care and community based settings.  
Credit: 4

#### **NRSG153 Fundamentals of Nursing II**

This course builds upon the basic principles and concepts involved in caring for adults. Complex assessment techniques and the application of advanced skills such as electrocardiography, invasive tubes and catheters, and biologic examinations will be emphasized.

Prerequisite: NRSG152, BIO142  
Credit: 4

#### **NRSG154 Care of the Adult in the Health Continuum**

Students will receive the didactic instruction and clinical support to provide care to the adult client in ambulatory care and chronic care settings. Emphasis will be placed on detailed assessment, the use of specialized screening tools, medication review and teaching, and wellness screening. Students are encouraged to experience the holistic experience of wellness as well as chronic illness as it impacts the client and their family.  
Prerequisite/Corequisite: NRSG153, BIO142  
Credit: 4

#### **NRSG155 Pharmacology Basics**

This course outlines the basic concepts of pharmaceuticals, pharmacokinetics, pharmacodynamics and pharmacotherapeutics. Students will calculate proper medication dosages using different systems of drug measurements. Principles and practices of intravenous therapy techniques, complications, fluid balance and the responsibilities of the RN are included.  
Credit: 4

#### **NRSG157 Gerontological Nursing**

The course provides a broad theoretical foundation for the study and practice of gerontological nursing. Concepts of successful aging, health promotion, and health protection, psychosociological, and physiological changes that accompany the aging process, cultural dimension, legal and ethical issues, palliative care, polypharmacy, and the continuum of care available to older adults. Theoretical concepts are integrated with principles and standards of gerontological nursing practice to provide a framework for the delivery of gerontological nursing care.  
Credit: 4

#### **NRSG158 Gerontological Nursing Practicum**

This course provides the student with an opportunity to practice gerontological nursing. Students will use assessment skills to identify the aged patient's mobility, cognition, nutritional status, coping skills, relationships, spiritual values, and risk for depression, infection or falls. Health promotion, maintenance and rehabilitation will be emphasized. Standards of gerontological nursing practice will provide a framework for the delivery of gerontological nursing care.  
Prerequisite: NRSG157  
Credit: 4



**NRSG201 Human Growth and Development**

Nurses must have a current and thorough knowledge base in normal human growth and development to function effectively in a demanding, multidisciplinary healthcare setting. This course examines developmental anatomy, physiological, psychosocial, emotional and spiritual development across the life cycle. Wellness and illness needs, health promotion, self-care and transcultural considerations are examined for infants, children, adolescents, pregnant females, and aging adults.

Credit: 4

**NRSG248 Care of the Adult in the Acute Care Setting**

Students will receive didactic instruction and clinical support to provide care to the adult client in the acute care setting. Emphasis will be placed on rapid patient assessment, expert team communication, performance of clinical skills, and outcome assessment. Students will gain experience in working with families of acutely ill individuals, as well as those at the end of life.

Prerequisite: NRSG154, BIO142

Credit: 4

**NRSG249 Acute Care Practicum**

This course focuses on common physiological conditions and the performance of nursing care skills that are therapeutic for the patient. Emphasis is placed on the role of the nurse as a team member, use of the nursing process and integrating nursing concepts and theory into the clinical experience.

Credit: 4

**NRSG250 Transcultural Nursing**

This is an introductory undergraduate course focused on transcultural nursing with care as the central phenomenon to promote health and well-being. This course is designed to help students learn about culture care beliefs, values and practices in specific cultures and subcultures. In addition, the student learns how to assess the culture care differences of and similarities among cultures to provide culturally congruent and competent nursing care.

Credit: 4

**NRSG251 Care of the Childbearing Family**

This course presents the principles and concepts as well as the clinical support to care for clients and their families during childbearing. The health processes of pregnancy, labor and delivery, and post-partum periods as well as selected high risk or unhealthy processes are discussed. Emphasis is placed on normal physiology and pathophysiology as the basis

for clinical decision making in the care of obstetric patients in both the ambulatory and acute care settings.

Prerequisite: NRSG152, BIO142

Credit: 4

**NRSG252 Care of the Child and Family**

This course presents the principles and concepts to care for the well/ ill child and their family in the ambulatory care setting. Students will develop a comprehensive plan of care for the newborn through adolescence, with an emphasis on disease and injury prevention, assessment and treatment of common pathologic conditions and disorders of development. These principles will also be applied to families with special needs.

Credit: 4

**NRSG254 Psycho-social Disorders**

This course will present information on the pathophysiology, assessment, and comprehensive management of common psycho-social disorders. Students will be exposed to the special care needs of patients with autism, attention deficit disorder, anger management, depression and bi-polar dysfunction, substance abuse, domestic violence, psychosis and schizophrenia. Emphasis will be placed upon the nursing role in case management across the continuum of care.

Prerequisite: PSYC100, NRSG153, BIO142

Credit: 4

**NRSG255 Sophomore Leadership Practicum**

The course will have a weekly seminar to support the student as they prepare for clinical practice as a registered nurse. Management and leadership principles essential to functioning successfully in today's changing environment will be emphasized. Students will explore change theory, principles of delegation and teamwork, organizational analysis, stewardship of resources, ethical challenges, cultural sensitivity and emerging policy opportunities. Clinical experiences will be individualized according to the competency profile of the student to ensure that all of the programs' competency parameters are met prior to graduation.

Prerequisite: Successful completion of 73 quarter credit hours of nursing curriculum

Credit: 8

**NRSG257 Child and Family Practicum**

This course focuses on the role of the nurse in the care of children newborn through adolescents in the ambulatory care setting. Nursing students will use the nursing process to provide care to well and ill children and the family in an

ambulatory care setting. Special needs children will be the primary focus for this course.

Credit: 4

**NRSG265 NCLEX Review**

This course focuses on test-taking strategies, written and computerized exams, and nursing curricular content review. Students master test-taking skills needed for successful completion of the NCLEX-RN Exam. There is no guarantee of success on the NCLEX.

Prerequisite: Successful completion of previous seven quarters of ADN curriculum

Credit: 1

**NRSG300 Professional Nursing Practice**

This course examines the roles and responsibility of professional nurses within a rapidly changing healthcare system. Historical, conceptual, ethical, legal, and political influences on nursing practice are examined. Students are introduced to Florence Nightingale and Jean Watson's nursing theories, professional nursing values, fundamentals of teamwork and communication, as well as conflict resolution and negotiation. The role of the nurse in assuring patient safety and optimal patient outcomes is emphasized. The student is introduced to the structure of a competency-based nursing curriculum, including the learning philosophy, strategies, and measurements that will be applied during the program.

Credit: 4

**NRSG301 Nutrition and Diet Therapy**

The focus of this course is on the impact of nutrition on health promotion, support, and restoration. Nutritional therapy in the treatment of diseases and cultural influences will be integrated throughout the course. Changes in nutritional needs throughout the lifespan will be included.

Credit: 4

**NRSG302 Health Assessment**

Health histories and physical and mental status examinations are conducted using professional interviewing and psychomotor skills. A holistic assessment focus is used across the lifespan. Health patterns or problems are identified and findings are documented as a basis for nursing and medical interventions. Lab hours reflect demonstration time and do not indicate practice time.

Credit: 4

**NRSG303 Community Nursing/Vulnerable Populations**

Community-based nursing focuses on nursing practice that is delivered where the individual or family lives, works or attends school. The emphasis of community nursing is on vulnerable populations with acute or chronic health problems and is comprehensive, coordinated and ongoing. Students will observe vulnerable populations in the community to identify nursing and healthcare needs that may exist.

Credit: 4

**NRSG304 Pathophysiology I**

Pathophysiological concepts and conditions that are relevant to the care of individuals throughout the lifespan are the focus of this course. Physiological mechanisms to compensate for pathophysiological alterations are investigated. Abnormal body functions and disease states are explored. The first portion of this course is presented to facilitate basic physiologic and pathologic principles as it applies to cellular function, defensive mechanisms and immune function. The final portion of this course will provide an in depth analysis of the hematopoietic, cardiovascular and respiratory systems.

Credit: 4

**NRSG305 Management of Critical Health Issues**

In this course, nurses learn to make patient care decisions based on scientific evidence while demonstrating efficiency, cost effectiveness and quality of care. Critical Care Nursing Standards, nursing's unique role in critical care and outcome criteria are examined in the real world of Critical Care Nursing.

Credit: 4

**NRSG400 Transcultural Nursing**

This is an introductory undergraduate course focused on transcultural nursing with care as the central phenomenon to promote health and well-being. This course is designed to help students learn about culture care beliefs, values and practices in specific cultures and subcultures. In addition, the student learns how to assess the culture care differences of and similarities among cultures to provide culturally congruent and competent nursing care.

Credit: 4

**NRSG401 Legal Nurse Consulting**

This course provides foundational information for a career in legal nurse consulting. The course teaches legal concepts for the nurse

to advise law firms, healthcare providers, insurance companies and government agencies regarding nursing and medically related issues or to appear in court as an expert witness. The role of the legal nurse consultant is focused on personal injuries, wrongful death, mental capacity, workers' compensation, medical malpractice, toxic torts, product liability or emotional distress. This course does not prepare the nurse to practice law.  
Credit: 4

#### **NRSG403 Public Health Science/Disaster Preparedness**

Specialization in Public Health is an opportunity and challenge for nurses who will grapple with designing new ways to improve the health of Americans and populations internationally. This course is designed to raise the consciousness of nurses to the emergence of modern-day epidemics, biological threats, increasing vulnerable populations and the complex challenges that these issues present to the health-care team. Students will observe Public Health activities at the state or county level and identify the new role of the nurse in Public Health and disaster preparedness.  
Credit: 4

#### **NRSG404 Forensic Nursing**

This course focuses on the role of the forensic nurse in investigative sciences & victim advocacy. The forensic nurse will learn about crime scene investigation, evidence collection techniques, toxicology, DNA testing of evidence, blunt and sharp injuries, bite injuries, gunshot wounds, domestic and sexual violence, and death investigation. Extensive coverage of legal standards and practices, including testifying, forensic nursing and law enforcement, and international law will be included.  
Prerequisite: Senior status  
Credit: 4

#### **NRSG405 Certifications: ACLS, PALS, TNCC**

In today's society, healthcare institutions and rural and urban communities expect nurses to be proficient in pre-hospital and hospital management of pediatric and adult emergencies. This course is designed for use by healthcare professionals who are preparing for certification in ACLS, PALS, and TNCC. This interactive computer and on-site laboratory program simulates emergency cases in a variety of settings and is ideal for reviewing difficult concepts, practice skills, advanced airways, electrical therapy, algorithms of emergency cardiovascular care and preparation for tests. Students should expect to invest sufficient time in the lab to assure successful completion of all

required return demonstrations. Time in the lab will vary based on RN experience and previous ACLS, PALS, and TNCC courses. A copy of the student's current CPR card must be submitted to the instructor prior to enrolling in the course.  
Prerequisite: RN, MD or EMT  
Credit: 4

#### **NRSG406 Seminar I**

This course provides an opportunity for the nursing student to synthesize and integrate knowledge from nursing, business, behavioral and life sciences, management and diverse service professions. The student will plan and implement a project under the guidance of a master teacher or mentor. Students should expect to invest a minimum of 1 hour per week on a project that will enhance nursing/healthcare service to specific clients in the community.  
Prerequisite: Senior status  
Credit: 2

#### **NRSG407 Seminar II**

This course continues the synthesis and integration of knowledge from nursing, business, behavioral and life sciences, management and diverse service professions. Under the guidance of a master teacher or mentor, the student will plan and implement a project that will enhance nursing/healthcare service to specific clients in the community. Students should expect to invest a minimum of 1 hour per week on the project.  
Prerequisite: NRSG406  
Credit: 2

#### **NRSG409 Pathophysiology II**

Pathophysiological principles will be investigated and integrated as individual systems are recognized for pathological entities that they exhibit. The functional content of this course will review advanced physiological principles and look at the disease process as it applies to an organ system. Emphasis will be placed upon prior learning to fully integrate systems and understand the human being as a whole. The course content will focus on fluid and acid/base concepts. GI pathology, Endocrine and Urologic manifestations of disease in the male and female will be discussed. Finally, content will be structured with a thorough understanding of Neural and Behavioral Pathophysiology.  
Prerequisite: NRS304  
Credit: 4

#### **NRSG481 Nursing Capstone**

Senior project/proposal designed to integrate and apply the various concepts, theories and dynamics of nursing coursework.  
Prerequisite: Approval  
Credit: 4

#### **PALS200 Introduction to Paralegal Practice and Ethics**

This course provides an overview of: the role of the paralegal in the context of the United States court system; the management, communications, and organizational issues relevant to effective paralegal practice, and obligations related to professional ethics. The course will also give students an introduction to the American legal system and sources of law.  
Credit: 4

#### **PALS215 Legal Research and Writing**

This course will provide instruction in the basic skills and tools necessary for conducting legal research and analysis. Students will develop writing skills appropriate to drafting legal correspondence, briefs, memoranda, and court documents.  
Prerequisite: PALS200  
Credit: 4

#### **PALS216 Legal Terminology**

This course develops skills and a knowledge base necessary for students to appropriately use software and technology relevant to paralegal practice.  
Credit: 4

#### **PALS225 Civil Litigation I**

This course introduces the basic concepts and procedure of civil litigation and develops the skills necessary to a paralegal in the initial phases of a law suit.  
Credit: 4

#### **PALS226 Torts**

This course studies the elements of civil actions such as intentional interference with persons and property, negligence, liability, and defamation. The student will explore the available defenses for the various torts studied. Students will examine the requirements for a claim of damages.  
Prerequisite: PALS215  
Credit: 4

#### **PALS230 Contract Law**

This course covers the basic legal concepts related to contract law. Students learn to perform tasks relevant to paralegal practice in contracts.  
Credit: 4

#### **PALS250 Commercial Law**

This course covers the legal concepts involved in paralegal practice of commercial law, including the formation of business organizations, secured transactions, commercial paper, and the Uniform Commercial Code.

Students learn to draft documents and perform tasks relevant in the legal specialty.  
Credit: 4

#### **PALS265 Property/Real Estate**

This course covers the basic legal concepts related to the practice of paralegals in property and real estate. Students learn to draft documents and perform tasks relevant in the legal specialty.  
Credit: 4

#### **PALS275 Family Law**

This course covers the basic legal concepts related to the practice of family law. Students learn to perform tasks relevant in the legal specialty.  
Credit: 4

#### **PALS285 Trusts, Wills and Estates**

This course covers the basic legal concepts related to wills, probate, trusts, and estate administration. Students learn to perform tasks relevant to paralegals in these legal specialties.  
Credit: 4

#### **PALS315 Advanced Legal Research and Writing**

This course builds on PALS215 to provide advanced instruction to the student regarding research and writing. The student will be provided with the means to conduct complex research assignments. The student will learn the appropriate format and use of persuasive writing to prepare a brief.  
Prerequisite: PALS215  
Credit: 4

#### **PALS325 Civil Litigation II**

This course builds upon the foundation of Civil Litigation I, focusing on the responsibilities of a paralegal in the discovery, trial, and post-trial phases of a civil law suit.  
Prerequisite: PALS225  
Credit: 4

#### **PALS330 Paralegal Studies Practicum**

The Paralegal Studies Practicum gives the student practical experience as a paralegal in a mock field setting. Students will have the opportunity to demonstrate an understanding of the legal process and the role of the paralegal in providing legal services, competency in key areas of law, and an understanding of the ethical boundaries in the role of the paralegal. Students will work as part of a problem-solving team member in the role of a paralegal.  
Prerequisite: Completion of 44 credit hours of paralegal studies core courses  
Credit: 4

**PALS400 Uniform Commercial Code and Securities Regulations**

This course covers advanced concepts and practice related to the Uniform Commercial Code and securities regulations. Students learn to draft documents, conduct legal research, and perform tasks relevant in the legal specialty.

Credit: 4

**PALS425 Debtor/Creditor**

This course provides an overview of the rights and remedies of debtors and creditors. The effect of secured and unsecured transactions from the debtor and creditor perspective will be examined. The implications of a bankruptcy claim as it relates to the debtor and creditor will be discussed.

Prerequisite: PALS215

Credit: 4

**PALS450 Intellectual Property**

This course provides an overview of intellectual property as it relates to copyrights, patents and trademark laws. State and federal laws related to intellectual property will be researched. Filing requirements to protect intellectual property will be examined. Infringements of intellectual property will be discussed.

Prerequisite: PALS215

Credit: 4

**PALS475 Internship**

This course provides the student with the opportunity to work in a selected legal office(s). The student is supervised and evaluated by a paralegal, legal assistant or attorney. The paralegal student will have the opportunity to observe and experience the roles and responsibilities in the legal environment. The student will synthesize the experience by completing weekly logs and assignments designed to complement the internship experience. Students may also create a portfolio of the experience for future employment use.

Prerequisite: Approval

Credit: 4

**PALS480 Capstone**

This course provides a synthesis of the role of the paralegal in the context of the United States court system; the management, communications, and organizational issues relevant to effective paralegal practice, and obligations related to professional ethics. Students will complete a capstone project that utilizes the key components of paralegal practice.

Credit: 4

**PBAD200 American Government**

PBAD 200 provides the student with an overview of the framework and basic functions of the various branches of government, the role of politics in democracy, and the relationship of government and public policy. Students will also consider the similarities and differences between national, state, and local governments.

Credit: 4

**PBAD201 Public Administration**

This course provides an introduction to the field of public administration. The course is focused on the structure, functions and processes of the executive branch, agencies of national, state and local governments with an emphasis on non-profit organizations as co-actors with government in the policy-making/policy-implementation area.

Prerequisite: PBAD200

Credit: 4

**PBAD301 Grant Writing Basics**

Students will learn the essential skills of researching a proposal, identifying stakeholders, incorporating the necessary drafting steps, and crafting a perfect match between a funder and solicitor's needs. The course provides guidance on writing proposals for a variety of types of organizations.

Prerequisite: ENGL112

Credit: 4

**PBAD311 Shaping Public Policy: Politics and the Legislative Process**

Students will explore and analyze the dynamics of state legislatures and Congress in this comprehensive study of the legislative process as it relates to the creation and funding of public policy and public institutions. The impact of political parties, interest groups, and the legislative oversight of bureaucracy are also considered.

Prerequisite: PBAD200

Credit: 4

**PBAD321 Public Finance**

This course introduces the economic role of government by integrating economic and public finance theory to analyze policy problems and issues in the public sector. The student will also identify funding sources and how funds are allocated.

Prerequisite: ACCT201, ECON201, PBAD200

Credit: 4

**PBAD401 Bureaucratic Power and Politics**

This course explores how institutional rules control internal decision-making in modern public bureaucracies including public agencies, nonprofit organizations, and private business. The external forces and political factors shaping modern bureaucracies are also considered along with an analytical framework for examining the myths and realities of bureaucracies.

Prerequisite: PBAD201, PBAD311

Credit: 4

**PBAD411 Administrative Law and the Adjudicatory Process**

PBAD411 introduces the student to the elements of modern administrative law and the rule of law in public administration along with the problems public managers face in administrative law processes and the interaction of law, politics, and administration. The student will identify the formal administrative process from agency rulemaking to administrative adjudications and judicial review.

Prerequisite: PBAD401

Credit: 4

**PBAD441 Public Policy Analysis: Concepts and Practice**

Students will use a multi-disciplinary approach to public policy analysis using theories, concepts, and methods to integrate theory and practice. This course provides the reality-based how-to's for conducting policy analysis through application of advanced analytical techniques.

Prerequisite: PBAD411

Credit: 4

**PBAD450 Research Methods**

Students will examine the research process with a focus on the design of research studies, literature review, and research philosophy. Throughout the course, students will integrate the skills they acquire through the completion of various research/analytical projects.

Prerequisite: MATH306, SOCL101

Credit: 4

**PBAD475 Internship**

An internship in Public Administration provides the student with the opportunity to work in the public administration field under the supervision of a professional. The student will synthesize the experience by completing weekly logs and evaluations and assignments designed to complement the internship experience. Students will also

create a portfolio of the experience for future employment use.

Prerequisite: Approval

Credit: 4

**PBAD481 Public Administration Capstone**

This course provides students, through the design of a senior project, to integrate and apply the various concepts, theories, and dynamics of public administration course work.

Prerequisite: PBAD441, PBAD450

Credit: 4

**PFP110 Personal Finance Concepts**

Students will survey the management of personal and family finances. Topics will include financial goals, budgeting, income taxes, personal credit, savings and investment, home ownership, insurance and retirement.

Credit: 4

**PHIL310 Ethics**

This course provides the student with an understanding of ethical expectations and prepares the student to make decisions that are ethically correct and legal. The study of ethics includes the development of ethical standards, prima facie obligations, responsibilities, societal aims and professional codes of conduct. The course will follow the aims of normative ethics. The student should expect to participate and become involved in case studies, hypothetical situations and discussions to develop an attitude that is ethically acceptable, as well as to practice the concepts learned to aid in decision-making.

Credit: 4

**PHL210 Ethics**

Provides the student with an understanding of ethical expectations and prepares the student to make decisions that are ethically correct and legal. The study of ethics includes the development of ethical standards, prima facie obligations, responsibilities, societal aims and professional codes of conduct. The course will follow the aims of normative ethics. The students should expect to participate and become involved in case studies, hypothetical situations and discussions to develop an attitude that is ethically acceptable, as well as to practice the concepts learned to aid in decision making.

Credit: 4

**PHY211 Physics I — Mechanics**

This is a calculus-based physics course for the scientist or engineer. Topics include linear and angular motion, forces, momentum, work, energy, and periodic motion.

Credit: 5

Prerequisite: MATH202



**PHY212 Physics II — Heat, Light and Sound**  
This is a calculus-based physics course for the scientist or engineer. Topics include wave motion, sound, heat, thermodynamics, light, optics and an introduction to the special theory of relativity.  
Prerequisite: PHY211  
Credit: 5

**PHY340 Electromagnetics**  
This course introduces concepts of electromagnetics that include electro- and magneto-statics, Maxwell's equations, capacitance, inductance, dielectric and magnetic materials, and plane wave propagation. Concepts are applied to practical applications in transmission lines and antennas.  
Prerequisite: EE335  
Credit: 5

**PHY350 Solid State Physics**  
This course introduces basic physics and principles of operation of the major semiconductor devices used in solid state circuits, including the diode, the bipolar junction transistor and the field effect transistor. The course extends concepts from basic physics to explain carrier motion and the characteristic equations for these devices.  
Prerequisite: CHE105, PHY212, EE331  
Credit: 5

**PHY495 Advanced Research and Study**  
This course provides the opportunity for an independent, in-depth research project. Credits are assigned based on the complexity and depth of the research project, which must be pre-approved by the department chair.  
Prerequisite: Approval  
Credit: 1-6

**PHY499 Special Topics in Physics**  
This course addresses issues of current interest in physics. Course content varies as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

**PM210 Introduction to Project Management**  
This course provides an introduction to the discipline of project management. It provides an overview of the techniques that project managers use to complete their projects on schedule, within budget, and according to specified scope. Using materials based on the PMBOK® (Guide to Project Management Body of Knowledge, published by the Project Management Institute or PMI®), students learn the operational framework of project management including the project life cycle,

the organizational structure and stakeholder involvement. Project management processes and knowledge areas are introduced.  
Credit: 4  
Replaces: PMGT405

**PM220 Project Management Tools**  
This course emphasizes a step-by-step hands-on approach by using automated project tools such as Microsoft Office Project to help effectively plan, analyze, estimate, manage, and control the resources, schedule, and costs of the project.  
Credit: 4

**PM299 Special Topics in Project Management**  
This course addresses issues of current interest in project management. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

**PM310 Project Planning**  
This course covers the project initiation and planning phases. It establishes the overall approach used to structure the project office and establish project business processes. The input, tools and techniques, and outputs required to craft the project management plan are addressed. Project knowledge areas such as integration, scope, quality, human resource, communication, risk, and procurement management. Approaches for time and cost management are introduced.  
Prerequisite: PM210  
Credit: 4

**PM320 Project Scheduling and Resource Allocation**  
This course covers approaches, methods, and systems used to improve management success under demanding schedule constraints. Tools and techniques for decomposition of major tasks, determining task duration, sequencing, and resource allocation are covered. Tasks are integrated into a detailed project schedule with identified milestones, resources, and cost. Critical path determination, resource leveling, earned value analysis, and schedule compression are also discussed.  
Prerequisite: PM210  
Credit: 4

**PM330 Project Cost Estimating and Control**  
This course will explore the principles of project cost estimating and control. Various methods and techniques needed to effectively plan, estimate, baseline, control, evaluate, and report project costs will be studied. Identification of recurring and non-recurring

expense and capital expenditures; allocation of costs to elements of the project plan; and the relationship of costs between estimates, scope, and resources will be analyzed. Return on Investment (ROI), Net Present Value (NPV) and cash flow analysis techniques are evaluated.  
Prerequisite: PM210  
Credit: 4

**PM410 Project Risk and Quality**  
Project quality is a key element in ensuring that project performance goals are met. This course will explore the principles and techniques of quality management and how they are applied in a project context. Various methods of quality and process improvement will be studied to include contractual aspects of quality, statistical process control, continual process improvement, business process reengineering, and quality audits. Cost of quality conformance and non-conformance are discussed. Additionally, quality methods and techniques will be analyzed as to how they can be successfully integrated throughout the project life-cycle.  
Prerequisite: PM210  
Credit: 4  
Replaces: PMGT466

**PM415 HR Project Management**  
This course builds on the foundations of HR management and project management and covers the three areas in the PMBOK® body of knowledge for project HR managers: organizational planning, staff acquisition and team development. Within these areas, emphasis is given to management and behavioral theories that impact change, communication, motivation, stress, conflict, negotiation, leadership and politics in a project management environment.  
Prerequisite: PM210  
Credit: 4  
Replaces: PMGT410

**PM420 Program and Portfolio Management**  
This course expands the concept of project management to the program and enterprise level. Techniques for aligning projects and portfolios of projects with organization strategic goals are covered. Use of enterprise-level project management software in the allocation and control of resources across projects are addressed. Use of enterprise-level dashboard or cockpit systems to monitor the portfolio of programs and projects are covered. Issues related to complex program management and project/program interactions are also detailed.  
Prerequisite: PM210  
Credit: 4

**PM430 Program Management Capstone**  
As the capstone course in the PM program, this course requires the student to demonstrate how to synthesize and apply the concepts, tools, and techniques covered throughout this degree program to a real world scenario program. They must also demonstrate the ability to work in a team environment, use project management software, and deal with project stakeholders. Writing and presentation skills are also assessed. This course may be implemented incrementally at specific campuses.  
Prerequisite: All undergraduate PM courses except PM415  
Credit: 4

**PM499 Special Topics in Project Management**  
This course addresses issues of current interest in project management. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6  
Replaces: PMGT499

**PM600 Project Management Processes in Organizations**  
This course emphasizes the development and integration of project management in organizations. The following subjects are examined from the project management perspective: history and development of project management as a discipline, integrating project management into various organizational systems, strategic planning, competitive technology, joint ventures and human resources. This course provides a theoretical and conceptual foundation for the remainder of the project management courses.  
Credit: 4  
Replaces: PMGT600

**PM610 Project Planning, Execution and Closure**  
Offers a practical approach emphasizing the project phases and processes presented by such organizations as the Project Management Institute (PMI®) in their Guide to the Project Management Body of Knowledge (PMBOK®). This course will provide an overview of aspects related to the project life cycle and project management techniques that are used to manage projects that are on schedule, within budget and meet performance criteria. The student will learn the basic project management framework as well as the preparation of a basic project plan. Subsequent courses will focus on project management processes such as scheduling, cost control, procurement and contracting, and risk management.  
Prerequisite: PM600  
Credit: 4  
Replaces: PMGT605

### **PM620 Schedule and Cost Control Techniques**

This course emphasizes a hands-on approach to using project management tools to facilitate scheduling, estimating, tracking and controlling the schedule, and costs of the project. A project baseline will be set so that actual schedule and cost variances can be compared to the project baseline, and corrective actions can be developed to address the variances. Specific topics include Gantt, PERT and milestone charts, critical path methods, earned value techniques, present value and internal rates of return. Topics including ways to communicate project status and develop contingency planning will be discussed. This course also covers incorporating risk and quality factors into project cost and schedule.

Prerequisite: PM600

Credit: 4

Replaces: PMGT610

### **PM630 Contracting and Procurement in Project Management**

This course includes writing, negotiating and adhering to contracts, as well as legal and ethical considerations. Procurement, including writing, clarifying and communicating specifications, is covered. There is an emphasis on contract administration and dealing with subcontractors. Topics include bidding; types of bids (e.g., RFQs, IFBs, and RFPs); types of contracts (e.g., fixed price, cost plus, fixed fee, and time and materials), their respective purposes and their impact on risk; and project contract negotiation. Changes in contracts, methods to resolve disputes, and writing clear Statements of Work (SOW) are discussed.

Prerequisite: PM600

Credit: 4

Replaces: PMGT615

### **PM660 Project Management Capstone**

As the capstone course in the graduate PM program, this course requires the student to integrate all project management knowledge areas and processes into a synergistic project approach. Students shall apply appropriate tools and techniques to a real world or scenario project to establish and control the project cost, schedule and performance baseline. Contracting and procurement techniques shall be integrated where appropriate. Techniques for handling project risk and ensuring quality are also included. Students must demonstrate the ability to work in a physical or virtual team environment, use project management software, and deal with project stakeholders. Writing

and presentation skills are also assessed. This course may be implemented incrementally at specific campuses.

Prerequisite: PM600, PM610, PM620, PM630 or Approval

Credit: 4

### **PM699 Special Topics in Project Management**

This course addresses issues of current interest in project management. Course content will vary as determined by student interest and evolution of the discipline.

Credit: 1-6

Replaces: PMGT699

### **PN100 Personal and Vocational Concepts I**

This course addresses the role of the practical nurse as a member of the healthcare team, manager, and provider of care within the nursing profession. Responsibilities of the practical nurse regarding legal issues, sociocultural factors, religious preferences and patient teaching duties will be reviewed from a healthcare perspective. Concepts related to healthcare delivery models, delegation of duties, communication, and decision-making are explored.

Credit: 1

### **PN101 Fundamentals of Nursing I**

The emphasis of this course is on learning conceptual and psychomotor skills fundamental to providing quality nursing care. Experiences in the nursing laboratory will include demonstrations and return demonstrations of basic nursing skills. Medical terminology will be incorporated into this course. Human Growth and Development concepts and theories will be introduced in this course.

Credit: 4

### **PN102 Fundamentals of Nursing II**

The goal of this course is to provide theory and state-of-the-practice clinical skills that are vital to quality nursing care. The steps of the nursing process will be used to plan the client's care.

Prerequisite: PN101, BIO141

Credit: 4

### **PN103 Protective Function Throughout the Lifespan**

The emphasis of this course is on using the nursing process to plan and provide nursing care to individuals with alterations in immune and integumentary function. The influence of culture, spirituality, nutrition, and nursing interventions on pain perception will be

investigated. Effective communication in client teaching is highlighted.

Prerequisite: PN100, PN101

Credit: 4

### **PN104 Medical-Surgical Clinical I**

This is the beginning clinical experience for the practical nurse student. The purpose of the clinical is to allow the student to practice the role of the practical nurse in the healthcare environment while under the supervision of a nursing instructor. Faculty will provide opportunities for the assessment and documentation of subjective and objective client data. Basic nursing skills are demonstrated in the acute, long-term, or rehabilitation care setting. Therapeutic communication with the client, family, and healthcare team is emphasized. Confidentiality, time management, and the role of the practical nurse as a care provider are practiced.

Prerequisite: PN100, PN101, BIO141

Credit: 3

### **PN105 Pharmacology for Practical Nurses**

This course is an introduction to the administration of medications in the management of physiological and psychological disorders. Major drug classifications, nursing implications, and representative drugs are discussed. Principles of medication administration, dosage calculations, ethical/legal implications, and patient teaching needs are explored. Laboratory experiences provide opportunities to practice the principles of safe medication administration.

Prerequisite: PN102, BIO142

Credit: 4

### **PN106 Respiratory & Cardiovascular Function Throughout the Lifespan**

The emphasis of this course is on using the nursing process to plan the nursing care of clients with alterations in their respiratory or cardiovascular system. Influencing factors such as culture, spirituality, nutrition, and growth and development are examined. Effective communication and health teaching are emphasized.

Prerequisite: PN102, BIO142

Credit: 4

### **PN107 Medical-Surgical Clinical II**

This clinical course provides opportunity for practical nurse students to provide nursing care to clients with respiratory and cardiovascular disorders. Assignments include the provision and documentation of

nursing care. Use of the nursing process to assess, deliver, and evaluate nursing care will be emphasized. Students will role model the practical nurse as provider of care.

Prerequisite: PN102, PN104, BIO142

Credit: 3

### **PN108 Mental Health Nursing Throughout the Lifespan**

This course has as its primary focus the identification and treatment of clients experiencing alterations in mental functioning. Models of stress and illness outcomes are examined. Common mental health disorders, medications, and treatment modalities are explored. Listening skills and therapeutic communication techniques are emphasized.

Prerequisite: PN102

Credit: 3

### **PN109 Mental Health Clinical**

The mental health clinical experience allows the practical nurse student to observe clients in a mental health treatment setting. In this context, students will observe the circumstances occurring to people with a mental health disorder and the vulnerable position in which they find themselves. Students will demonstrate therapeutic communication, ensure confidentiality, and understand the limited role of the practical nurse in the mental health setting.

Prerequisite: PN102, PN108

Credit: 1

### **PN110 Regulatory Functions Throughout the Lifespan**

This course enables the practical nurse student to understand nursing care needs of individuals with alterations in regulatory/endocrine, and reproductive function. Care of the diabetic client is a primary area of study. Effective communication and health teaching is emphasized.

Prerequisite: PN105, PN106

Credit: 4

### **PN111 Musculoskeletal, Cognition & Sensory Throughout the Lifespan**

In this course, students learn to adapt the nursing process to clients with alterations in musculoskeletal, cognitive and sensory function. The increasing number of elderly in the U.S. raises important concepts taught in this course. Therapeutic communication, health promotion, and client teaching are promoted.

Prerequisite: PN105, PN106

Credit: 4



### **PN112 Nutrition & Diet Therapy**

Nursing students learn to explore and apply nutrition principles and medical nutrition therapy for their clients. Nurses begin to develop a thorough background in the personal and clinical application of nutrition. The role of the Practical Nurse in health promotion for individuals and communities and the socioeconomic, religious, cultural, and developmental influence on nutrition is highlighted.  
Credit: 2

### **PN113 Medical-Surgical Clinical III**

This clinical experience will provide opportunities for Practical Nurse students to utilize the nursing process in caring for clients with alterations in regulatory, musculoskeletal, cognitive, and sensory function. Students become involved in the management of client needs for a safe environment, health promotion, growth and development, prevention of complications, effective coping, pharmacological therapies and quality nursing care.  
Prerequisite: PN105, PN106, PN107  
Credit: 4

### **PN114 IV Therapy for the Practical Nurse**

This course is designed to prepare Practical Nurse students to perform limited intravenous fluid therapy utilizing approved infection control procedures and guidelines set forth by the Missouri Rule 4 CSR 200.6010.  
Prerequisite: PN105, PN106  
Credit: 4

### **PN115 Maternal-Newborn Nursing**

In this course, Practical Nurse students will explore nutrition requirements and health promotion of the pregnant mother and newborn. Metabolic, anatomic, hormonal, psychological, and physiological changes that take place in the pregnant mother will be discussed. Emphasis is given to normal pregnancy, labor, and delivery as part of family development. The structure and functioning of the male and female reproductive systems, as well as sexual development, is explained.  
Prerequisite: PN110, PN114  
Credit: 3

### **PN116 Maternal-Newborn Clinical**

The goal of this course is to enable the Practical Nurse student to prepare the new mother to become knowledgeable and responsible for her own health and the well being of her infant. Future responsibilities of the father and family are explained. The role of the PN in the post-partum care of the mother and newborn is discussed.  
Prerequisite: PN110, PN114  
Corequisite: PN115  
Credit: 1

### **PN117 Digestion & Elimination Throughout the Lifespan**

Disorders of digestion and elimination are the main topics in this course. Growth and development changes related to digestion and elimination are explored. Nursing care of clients with digestive and elimination problems and client teaching responsibilities are explained.  
Prerequisite: PN110  
Credit: 4

### **PN118 Medical-Surgical Clinical IV**

Practical Nurse students in this course will provide hands on nursing care to clients with an alteration in their digestive or elimination system. The nursing process will be utilized to provide individualized care for each client.  
Prerequisite: PN113, PN114  
Credit: 2

### **PN119 Personal & Vocational Concepts II**

This course addresses personal and interpersonal relationships within the nursing profession, including the role of the Practical Nurse as a manager and provider of care. Concepts related to healthcare delivery models, delegation, communication, and decision-making are explored. Resume development and career building will be discussed.  
Prerequisite: PN110, PN111, PN114  
Credit: 2

### **PN120 Leadership Clinical**

This is an introductory clinical course that provides Practical Nurse students an opportunity to observe and become involved in leadership. The course addresses issues that include team building, communication, delegation, time management, legal dimensions, decision-making, prioritization, planning, staffing, role transition and ethical behavior.  
Prerequisite: PN113, PN114  
Corequisite: PN119  
Credit: 1

### **PN121 NCLEX-PN Review**

This course offers a structured review of the main areas covered by the NCLEX-PN: Care of the Adult, Psychiatric, Maternal-Neonatal clients, and Care of the Child. A variety of interactive teaching-learning techniques provide questions, answers, rationales and client needs information. Test taking skills are reviewed to prepare the student for the actual exam. Students must successfully complete a mock NCLEX-PN testing requirement.  
Prerequisite: Completion of all PN Courses through Quarter 4 and approval by PN Program Chair  
Credit: 1

### **PSY105 Psychology**

This course surveys major areas of psychological science, including human social behavior, personality, psychological disorders, learning, memory, and biological influences.  
Credit: 4

### **PSY336 Abnormal Psychology**

Abnormal Psychology is a general survey of the principle forms of mental abnormalities with particular attention to the functional disorders, causes, symptoms, course and treatment so far as the individual may control the restoration and prevention of these abnormalities.  
Credit: 4

### **PSY435 Forensic Behavior Analysis**

This course is intended to acquaint students with the analysis of behavioral evidence. The course will cover topics such as offender profiling, crime scene reconstruction, applied victimology, distinguishing between modus operandi and signature aspects of a crime, as well as the use of psychological evidence in criminal litigation. This course will prepare students to understand and cope with the use of forensic psychology in law enforcement and the court room.  
Prerequisite: PSY336  
Credit: 6

### **PSYC100 Introduction to Psychology**

By taking this course, it will enable the student to have a better understanding of the basic principles of human behavior. The course also includes a foundation in the background of the field of Psychology, the workings of the human mind and senses, the disciplines and modes of treatment, and the way that Psychology affects our everyday lives. Additional emphasis will be in the areas of perception, emotion, learning, motivation and development.  
Credit: 4

### **PSYC199 Special Topics in Psychology**

This course addresses issues of current interest in psychology. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **PSYC299 Special Topics in Psychology**

This course addresses issues of current interest in psychology. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **PSYC300 Child and Adolescent**

**Psychopathology**  
Students will explore the assessment and treatment of child and adolescent psychopathologies and discuss evidence-based treatments. Case studies will provide an opportunity to analyze case formulations and the complexities in the nature of childhood disorders.  
Prerequisite: PSY105 or PSYC100  
Credit: 4

### **PSYC336 Abnormal Psychology**

During this course the student will explore mental disorders primarily within a forensic context. Students will analyze different psychopathologies and the interaction between criminal behavior and distinct crime scene indicators. Major clinical disorders and personality disorders of forensic interest will have special emphasis. Additionally, the course will address psychological/psychiatric testimony, evaluations and reports, as well as the evaluation of different treatment modalities as they relate to the forensic environment and the criminal justice system.  
Prerequisite: PSYC100  
Credit: 4

### **PSYC346 Forensic Psychology**

This course is intended to provide an in-depth analysis of behavioral evidence. Topics include offender profiling, crime scene reconstruction, applied victimology, distinguishing between modus operandi and signature aspects of a crime, as well as the use of psychological evidence in criminal litigation. The course prepares students to understand and cope with the use of forensic psychology in law enforcement and the courtroom.  
Prerequisite: CJUS450, PSYC336  
Credit: 4

### **PSYC399 Special Topics in Psychology**

This course addresses issues of current interest in psychology. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **PSYC436 Introduction to Criminal Profiling**

This course will introduce students to the basic concepts behind criminal profiling or behavioral evidence analysis. Students will analyze the interaction between criminal behavior and distinct crime scene indicators through the use of deductive reasoning and critical thinking skills with the goal of helping them to create investigative strategies for the detection, apprehension and prosecution of perpetrators.

Students will also be familiarized with forensically significant mental disorders and the interaction between those disorders and crime. Prerequisite: PSY336 or PSYC336  
Credit: 4

#### **PSYC499 Special Topics in Psychology**

This course addresses issues of current interest in psychology. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

#### **RADG101 Radiographic Procedures of the Appendicular Skeleton**

This course is an in-depth study in the concepts and principles of radiographic positioning and procedures involving the appendicular skeleton. Content will include, but is not be limited to: body habitus, regions, planes and lines. Radiographic positioning terminology will be utilized. A review of anatomy and physiology of the appendicular skeleton will be included. The laboratory portion of this course will include hands-on positioning of the upper and lower extremities as well as the chest and abdomen. Radiographs will be produced utilizing the radiographic phantoms. These radiographs will be evaluated and critiqued for diagnostic quality. The presentation and discussion of pathological conditions affecting the appendicular skeleton will be included. Prerequisite: BIO141  
Credit: 4

#### **RADG102 Radiographic Clinical Education I**

This portion of clinical training is used to orientate the student with the organization and function of the healthcare facility. The students will be introduced to the clinical setting and begin to develop proficiency in order to complete clinical competencies. Students will perform, under the supervision of an assigned clinical instructor, basic radiographic procedures, equipment manipulation, room maintenance and patient care. This clinical rotation will be the practical application of the principles and theories presented in the didactic portion of the program. The learner should start to make a transition from the passive mode of observation to a more active mode in assisting the radiographer perform patient care competencies and perform examinations of the chest, abdomen, upper and Lower extremities. Prerequisite: RADG101  
Credit: 4

#### **RADG103 Radiographic Image Production and Evaluation I**

This course presents the study of film, image receptors, film processing and introduces the basic principles of radiographic exposure techniques used in the production of radiographs. Basic principles of digital image production will be discussed. The laboratory portion of the course is designed for the investigation and study of theoretical concepts associated with the production of quality diagnostic radiographs. Prerequisite: MATH143  
Credit: 4

#### **RADG104 Radiographic Procedures of the Axial Skeleton**

This course is a continuation of radiographic positioning and procedures and includes: bony thorax, shoulder girdle, pelvis, hip and the entire vertebral column. Anatomy and physiology of the axial skeleton will be included. Radiographic positioning terminology will be utilized and enhanced. The laboratory portion of this course will include hands-on positioning of the axial skeleton and the production of radiographs on the radiographic phantoms. Radiographs will be evaluated and critiqued for diagnostic quality. Pathological conditions that affect the axial skeleton will be discussed. Prerequisite: RADG101  
Credit: 4

#### **RADG105 Radiographic Clinical Education II**

In this course, the student will continue to develop skills for proficiency in the clinical setting. The student will investigate upper and lower extremities, shoulder girdle, spine work, bony thorax, pelvis and Hip. The student should now be assisting with most examinations and have the abilities to start doing procedural competencies that have been reviewed within the didactic portion. The student should be making the transition from a passive mode to a more active mode of performing extremity, thoracic, abdominal, appendicular skeletal, and spine. The focus will be on meeting the necessary requirements for mandatory competencies. Prerequisite: RADG102  
Credit: 4

#### **RADG106 Radiographic Image Production and Evaluation II**

In this course, characteristics of quality radiographs will be presented, including: density, contrast, detail, distortion, and technical factors. A comprehensive review of

basic and common pathology of all systems of the human body and their effects on radiographic images will be discussed. The laboratory portion of this course is designed for the investigation and study of theoretical concepts associated with the production of quality diagnostic radiographs. Prerequisite: RADG103  
Credit: 4

#### **RADG107 Radiographic Equipment Operation and Maintenance**

The focus of this course is on principles of radiation physics as they relate to the production of x-radiation and the operation of the radiographic unit. Topics will include: fluoroscopy, tomography, mobile radiography, digital imaging, and the advanced modalities. In addition, the student will be instructed in the various diagnostic imaging quality assurance programs and quality control procedures. Students will have the opportunity to perform tests in the energized lab setting. Prerequisite: MATH143  
Credit: 4

#### **RADG108 Radiographic Procedures of the Soft Tissues, Viscera & Other Systems**

This course covers radiographic positioning and procedures of the GI, biliary and urinary tracts, Reproductive system, long bone measurement, foreign body localization, salivary gland and the anterior neck region. Anatomy and physiology of the above systems will be reviewed. Pathological conditions that affect these systems and regions of the body will be presented. The effect of basic radiopharmaceuticals on each system will be presented. Credit: 4

#### **RADG111 Radiobiology**

This course presents the theories and concepts associated with the utilization of radiation and its effect on biological systems. Radiation interactions, radiosensitivity, radiation dose/response relationships, early and late radiation effects, radiation detection, instrumentation, radiation protection and health physics are presented. Credit: 2

#### **RADG112 Registry Review**

This course presents an overview of all program objectives. Students will review various content areas and complete mock examinations in preparation for the registry examination. Credit: 4

#### **RADG115 Radiographic Procedures of the Cranium, Central Nervous and Circulatory Systems**

This course covers radiographic anatomy, positioning and procedures of the skull. In-depth discussion will focus on trauma radiography positioning and procedures of the skull, facial bones, paranasal sinuses and temporal bones. Pathological conditions that affect the skull will be presented. Credit: 2

#### **RADG119 Radiographic Clinical Education III**

This clinical course provides an opportunity for students to continue to perform radiographic procedures and patient care skills required for proficiency in the clinical setting. Students should be putting emphasis on contrast studies, skull radiography, trauma, mobile, surgical radiography and special procedures. Students may rotate through various advanced modality areas in order to gain an understanding of advanced technologies. The focus will be on meeting the necessary requirements for mandatory competencies. Prerequisite: RADG105  
Credit: 4

#### **RADG121 Introduction to Radiologic Science and Patient Care**

This course introduces students to the skills required for a career in Radiological Sciences. Course content includes an introduction to healthcare systems, professional organizations and cultural diversity. Students will discuss and relate the differences between the needs of patients along with proper history taking techniques and gain knowledge of infection control. Students will also identify the basis of pharmacology and contrast media administration. Credit: 4

#### **RADG122 Patient Care and Radiographic Sciences Clinical Lab**

This course introduces students to the clinical skills required for a career in Radiological Sciences. Course content includes promotion of safety, first aid, and CPR certification. Students will also learn to demonstrate proper patient transfer, immobilization, aseptic and non-aseptic techniques. This course will also introduce medical emergencies and situational training for students within the radiology department. The student will also review basic radiology terminology and positioning concepts that prepare them to transition into the core curriculum. Prerequisite: RADG121  
Credit: 4

### **RADG123 Advanced Modalities**

This course encompasses the concepts and applications within the advanced modality areas of radiology, including: Mammography, Computed Tomography, Bone Densitometry, MRI, Nuclear Medicine, PET, and Radiation Therapy.  
Credit: 4

### **RADG211 Radiographic Clinical Education IV**

In this course, the student will continue to develop proficiency in the clinical setting. Students should be performing all radiographic procedures and patient care at the clinical site to meet mandatory competencies. An emphasis should be placed on special procedures, additional diagnostic procedures and advanced modalities. All students will rotate through advanced modality areas to gain an understanding of these advanced technologies. Students should also be utilizing image production and evaluation, quality assurance/quality control, equipment operation and maintenance and proper radiation protection.  
Prerequisite: RADG119  
Credit: 4

### **RADG212 Radiographic Clinical Education V**

In this course, the student will continue to develop proficiency in skills used in the clinical setting. Students will continue to perform radiographic procedures and patient care on the clinical site to meet mandatory competencies. All students will rotate through advanced modality areas to gain an understanding of advanced technologies.  
Prerequisite: RADG211  
Credit: 4

### **SCI105 Environmental Science**

This course introduces environmental issues that are directly related to global populations. Students will explore the identification and classification of environmental problems, and how they relate to the laws of nature.  
Credit: 4

### **SCI120 The Impact of Science and Technology on Society**

This course traces the history, philosophy, methods, and consequences of science and technology in society during the twentieth century and during significant periods in history. To help student to understand the promises and limitations of modern science and engineering, the course will examine the historical development of science from the time of the ancient Greeks through modern

quantum mechanics and genetic engineering. It will provide an understanding of the scientific method as the cornerstone of a way to understanding the natural world. And, it will clarify the differences between science and religion, science and pseudo-science, and science and engineering. Finally, the course will go beyond theory and technique to examine science and engineering as a social function with moral and qualitative consequences far outside the laboratory.  
Credit: 4

### **SCI205 Environmental Science**

This course introduces environmental issues that are directly related to global populations. Students will explore the identification and classification of environmental problems, and how they relate to the laws of nature.  
Credit: 4

### **SCM210 Introduction to Logistics/Supply Chain Management**

Logistics and supply chain management are introduced as an integrated discipline practiced in the private and public sectors. This course provides an overview of logistics functions and their application to supply chain management. Emphasis is on the total integration of the supply chain from raw material production through end customer support and final disposal.  
Credit: 4  
Replaces: LOG205

### **SCM220 Transportation and Distribution Management**

The course concentrates on the commercial aspects of delivering raw materials and finished products. Included are an analysis of packaging techniques, transportation modes, distribution optimization, storage and warehousing. Also covered is an overview of transportation problems and policies, carrier services and transportation regulation policy. Current commercial concepts such as transportation links in the supply chain and cross docking operations are covered.  
Prerequisite: SCM210  
Credit: 4  
Replaces: LOG325

### **SCM299 Special Topics in Logistics**

This course addresses issues of current interest in logistics. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **SCM310 Material and Inventory Management**

In this course you will examine current principles and techniques employed in managing inventories as an integral part of a company's supply chain. Emphasis is on developing the right mix of inventory locations and levels to minimize cost and maximize profit. Impact of supply chain disruptions and ways to mitigate them are also covered.  
Prerequisite: SCM210  
Credit: 4  
Replaces: LOG345

### **SCM320 Contracts and Procurement**

This course covers proposal preparation from pre-proposal groundwork to the client's final analysis of the finished proposal. This course is based on actual day-to-day operating experiences. Key areas covered include how to develop a proposal preparation manual and how to construct a realistic proposal budget and schedule. Practical guidance is included on the selection and organization of the proposal team, evaluation of the relationship between contracts and proposals, differences between government and private bidding, and technical aspects of designing and publishing the proposal.  
Prerequisite: SCM210  
Credit: 4  
Replaces: PMGT427 and LOG430

### **SCM330 Contract Pricing and Negotiation**

This course provides an understanding of concepts and techniques used to develop pricing proposals and negotiation of supply contracts in the government and commercial sectors. The emphasis is on structuring contracts to allow needed flexibility in managing supply chain levels. Negotiation strategies and techniques employed in various situations are also covered.  
Prerequisite: SCM210  
Credit: 4  
Replaces: LOG465

### **SCM399 Special Topics in Logistics**

This course addresses issues of current interest in logistics. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **SCM410 Contract Management**

This course is an in-depth examination of the issues associated with managing contracts. It covers the contract life cycle from contract formation through contract closeout. Emphasis is on proper contract

structure to handle contractor mal-performance and prevent contract litigation. Differences between government and commercial contract management are examined.  
Prerequisite: SCM210  
Credit: 4  
Replaces: LOG455

### **SCM430 Logistics/Supply Chain Management Capstone**

In this course you will explore the integration of logistics functions into a global supply chain management system. Emphasis is on the application and synergistic integration of transportation, physical distribution and inventory management functions into an optimized supply chain. International issues in supply chain management are explored.  
Prerequisite: SCM210 or Approval  
Credit: 4  
Replaces: LOG475

### **SCM499 Special Topics in Logistics**

This course addresses issues of current interest in logistics. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

### **SCM610 Logistics/Supply Chain Management Inventory and Distribution**

This course presents systems approach to the supply chain from raw materials through delivery to the end customers. Emphasis is on achieving efficient customer response (ECR) while minimizing inventory costs and improving cash flow. Supply chain management (SCM) in today's global e-Business environment is covered in detail.  
Prerequisite: SCM620  
Credit: 4  
Replaces: LOG630

### **SCM620 Design and Production Considerations**

Presents study of aspects of the production process that impact the total logistics system. This course covers the concepts total quality management, production planning and control, concurrent engineering and the strategic approach to total manufacturing management.  
Credit: 4  
Replaces: LOG620

### **SCM630 Supply Chain/Logistics Cost Analysis**

This course presents an in-depth analysis of costs relative to system and product life cycle phases, including concept definition, design, production,



modification, support and retirement. Topics include a study of cost in relation to risk, time value of money, cost breakdown structure and total elements of cost analysis. It addresses the use of logistics cost analysis in making strategic and operational decisions, including product and supply chain design.

Prerequisite: SCM620

Credit: 4

Replaces: LOG640

### **SCM660 Global Supply Chain Management Capstone**

This capstone course synergistically integrates logistics engineering, process design, inventory management, forecasting, and distribution planning concepts/techniques in the development of a global supply chain strategy. It is a systems approach to the supply chain from raw materials through delivery to the end customers, domestically and across the globe. It covers transportation, outsourcing, reverse logistics, support after sales, and disposal. Emphasis is on achieving supply chain management operational excellence through current techniques in lean manufacturing, six sigma, value chain management and other strategies. Global supplier management issues of negotiations, supplier selection, strategic alliances, and supply chain planning are also included.

Prerequisite: SCM620, SCM630, SCM640 or

Approval

Credit: 4

### **SCM661 Supply Chain Capstone 1**

This is a capstone course integrating logistics engineering, process design, inventory management, forecasting, distribution planning, with global supply chain issues and techniques. It takes a systems approach to the supply chain from raw materials through delivery to the end customers and includes reverse logistics and follow-on support considerations. It takes a global perspective to supply chain planning, strategic alliances, contract negotiations and supplier selection. It explores transportation and outsourcing strategies from domestic, international and global perspectives. Emphasis is on achieving supply chain management operational excellence through application of industry current day techniques.

Credit: 4 (2 – 2 credit courses)

### **SCM662 Supply Chain Capstone 2**

This is a capstone course integrating logistics engineering, process design, inventory management, forecasting, distribution

planning, with global supply chain issues and techniques. It takes a systems approach to the supply chain from raw materials through delivery to the end customers and includes reverse logistics and follow-on support considerations. It takes a global perspective to supply chain planning, strategic alliances, contract negotiations and supplier selection. It explores transportation and outsourcing strategies from domestic, international and global perspectives. Emphasis is on achieving supply chain management operational excellence through application of industry current day techniques.

Credit: 4 (2 – 2 credit courses)

### **SCM699 Special Topics in Logistics**

This course addresses issues of current interest in logistics. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

### **SE500 Fundamentals of Systems Engineering**

This course provides an overview of relevant systems skills and topics required for the MSSE program. Topics include modeling and control of systems with noise or uncertainty and the use of modeling and simulation software (MATLAB), especially with numerical methods, optimization, and linear programming.

Prerequisite: MATH500

Credit: 4

### **SE600 Systems Engineering I**

This course introduces the discipline of systems engineering and addresses the design and analysis of complex systems. It includes a survey of the quantitative methods employed in the discipline. Examples are drawn from large multi-disciplinary engineering projects and from the field of software engineering.

Credit: 4

### **SE610 Systems Engineering II**

This course continues the study of systems engineering, including developing system requirements, life-cycle management, examining alternative solutions, selecting and defending a selection, design and analysis, requirements traceability, manufacturability, integration, verification, risk management, configuration management and documentation. It includes case studies and quantitative methods where applicable.

Prerequisite: SE600

Credit: 4

### **SE620 System Dynamics, Modeling and Simulation**

This course examines in depth the quantitative methods used in systems engineering for design, analysis and verification of complex systems. It includes linear and non-linear systems analysis, mathematical models of complex systems, continuous-time and discrete event simulation, a survey of operations research methods, and optimization techniques.

Prerequisite: MATH500, SE500 or Approval

Credit: 4

### **SE630 Systems Acquisition Processes and Standards**

This course addresses systems engineering requirements that flow from the Federal Acquisition Regulations (FARs), to include standards that govern all phases of a system life-cycle that a government contractor needs to understand to engineer, manufacture, support and verify a complex system intended for government procurement. It includes liberal use of case studies.

Credit: 4

### **SOC205 Sociology**

This course will introduce students to the concepts, theory, and method of sociology. Students will develop a better understanding of society, culture, social institutions, social behavior, and other general social processes that operate in the social world.

Credit: 4

### **SOCL099 Special Topics in Sociology**

This course addresses issues of current interest in sociology. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.

Credit: 4

### **SOCL101 Introduction to Sociology**

During this course the student will study the organization of social behavior and the relationship of society and social conditions. Emphasis will be placed on culture, norm, stratification, systems, structure, social institutions and social change in different cultures.

Credit: 4

### **SOCL199 Special Topics in Sociology**

This course addresses issues of current interest in sociology. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

### **SOCL299 Special Topics in Sociology**

This course addresses issues of current interest in sociology. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

### **SOCL325 Licit and Illicit Drugs**

This course provides a survey of the use, abuse, and addictive nature of mood-altering chemicals outside of alcohol use and abuse. The student will gain a working knowledge of facts and research into the abuse of a wide variety of legal and illegal drugs, along with approaches to prevention and treatment.

Prerequisite: SOCL101

Credit: 4

### **SOCL350 Social Psychology**

During this course the student will study examples of individual persons interacting with the social environment. Specific topics include conformity, aggression, prejudice and interpersonal attraction.

Prerequisite: SOCL101

Credit: 4

### **SOCL356 American Diversity**

This course explores the topics of race, class and gender in a global context with a special emphasis on American society and the American Indian experience. Descriptions and analysis of relevant historical context, along with discussion of pertinent societal events, are included in the weekly course meetings. Included in these discussions, the student will be introduced to principal terms, concepts and theories in the field.

Prerequisite: SOCL350

Credit: 4

### **SOCL399 Special Topics in Sociology**

This course addresses issues of current interest in sociology. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

### **SUR102 Introduction to Surgical Technology**

This course is an introduction to the principles and practices of surgical technology. Professionalism and standards of conduct will be reviewed. The student will demonstrate the techniques of opening and preparing supplies and instruments needed for operative procedures with emphasis on asepsis.

Prerequisite: BIO121

Credit: 4

### **SUR105 Surgical Pharmacology**

Fundamentals of pharmacology provides the knowledge needed by students to function safely, accurately, and efficiently at the surgical field. Discusses the actions and usage of commonly used drugs and solutions and the methods by which they are administered. Hands on experience is provided with mixing, measuring, and calculating medication dosages. Prerequisite: MATH143  
Credit: 4

### **SUR110 Surgical Techniques**

This is an introduction to fundamental surgical procedures. An emphasis will be placed on preoperative care concepts for general and specific procedures. Preoperative patient care, non-sterile responsibilities, sterile responsibilities, immediate surgical interventions, and advanced surgical interventions will be examined. Prerequisite: SUR102, BIO141, BIO142  
Credit: 4

### **SUR120 Microbiology and Infection Control**

This course will examine microbiology and the infection process. Control of infectious agents and universal precautions will be examined. Prerequisite: BIO121, BIO141, BIO142  
Credit: 4

### **SUR150 Introduction to Pathophysiology**

Pathophysiology is the study of abnormal function in living tissue. Physiological principles underlying the causes, signs, symptoms, and pattern of development of human disease processes will be examined. Credit: 4

### **SUR205 Surgical Procedures I**

This course covers basic surgical interventions. The student will learn the procedures through classroom study and practical experience in the mock operating room lab. Prerequisite: SUR110, SUR120  
Credit: 4

### **SUR210 Surgical Procedures II**

This course covers the intermediate and advanced surgical procedures. The student will learn the procedures through classroom study and lab practice. Prerequisite: SUR205  
Credit: 4

### **SUR235 Surgical Clinical Practicum I**

This phase of clinical practicum is designed as a transitional and observational period for the student. The student will primarily become acclimated to the surgical

environment and observe the routines and duties of the surgical technologist. Prerequisite: SUR210  
Credit: 4

### **SUR245 Surgical Clinical Practicum II**

In this course, the student will become involved in the surgical technologist role while under the supervision of the surgical team. Students will assist with the preoperative and postoperative duties of the surgical team. Each student will participate in 125 surgical procedures in five different specialty areas. Prerequisite: SUR235  
Credit: 4

### **SUR255 Surgical Clinical Practicum III**

This course provides opportunity for the student to participate in surgical procedures in a more advanced surgical technologist role. The student will meet with their clinical group to discuss observations, experiences, and prepare for their final case presentation. Prerequisite: SUR245  
Credit: 4

### **SWE311 The Software Engineering Profession**

This course introduces the student to the breadth of the software engineering profession. The importance of communication among a variety of stakeholders, the role of standards, and professional ethics are emphasized. Students investigate the historical and current practices in the software engineering discipline and explore its future directions. Credit: 4

### **SWE323 Introduction to Game Design and Development**

This course introduces students to game design and development terminology, principles, tools, and techniques. Students will examine the history and theories of game design, and will explore a variety of game genres and software applications that are used in the creation of digital media. Business principles, legal and ethical issues, and technological developments are discussed in relation to the creation of computer games. Prerequisite: CS265 and junior standing  
Credit: 4

### **SWE345 Survey of Programming Languages**

In this course students are introduced to a variety of contemporary programming languages and programming techniques. Each language and technique is placed into its historical context, its programming paradigm and style are examined and each language's strengths and weaknesses are explored.

Students will work in small teams to solve problems by exploring the various language tradeoffs introduced. Prerequisite: CS230, CS376  
Credit: 4

### **SWE400 Software Construction**

In Software Construction, students will cover such topics as the Application Program Interface environment, configuration management, and software reliability. Students will be introduced to a variety of software construction techniques and tools and will be applying these skills toward a course project. Prerequisite: CS230  
Credit: 4

### **SWE410 Software Processes**

This course gives the student an overview of the software process using the most common development methodologies currently used in industry. Students are introduced to IEEE standards for software processes. The relationship between software quality and process is emphasized with the benefits of process improvement. Prerequisite: CS230, SWE311  
Credit: 4

### **SWE420 Distributed Systems and Concurrency**

This course introduces the student to the development of systems with multiple threads and distributed systems. Topics include thread scheduling and synchronization, mutual exclusion, interrupt handling and deadlock prevention. Other topics are distributed algorithms for systems without a global clock. These include logical clocks, leader election and group communication. Students work in teams to design simple distributed or concurrent software. Prerequisite: CS381, CS382, CS383  
Credit: 4

### **SWE423 Designing for Games**

Game design incorporates game theory, system theory and storytelling. The foundation studies in SWE323 are expanded in this course with the focus on designing a simple game. The emphasis in the design will be on how the game functions to create experiences, rule design, play mechanics, the human-computer interaction, design documentation, and play testing. Implementation feasibility is investigated. Prerequisite: CS265, CS346, SWE323 and junior status  
Credit: 4

### **SWE440 Software Project Management**

Software Project Management covers the fundamentals of project management adapted to account for the unique aspects of software projects that differentiate these projects from other kinds of projects (manufacturing, R&D, business operations). Methods, tools, and techniques for planning and estimating, measuring and controlling, leading and directing, and managing risk in software projects are covered. Prerequisite: SWE410  
Credit: 4

### **SWE441 Human Elements in Projects and Organizations**

This course focuses on issues of productivity, quality of work, motivation, morale, communication, and coordination within computer science, software engineering, and business data processing projects and organizations. Communication and coordination among the layers of individuals, teams, projects, organizations, and business milieus are addressed. Emphasis can be placed on particular topics in the course, depending on the interests of the students, their sponsors, and the instructor. During each session, students will compile lists of action items for improving the topics covered. For students with work experience, their lists will reflect their experiences; students without work experience will prepare lists that reflect typical strengths, weaknesses, and best practices based on the presentations, readings, and experiences of their classmates and the instructor. Prerequisite: CS104 or Approval  
Credit: 4

### **SWE443 Game Programming and Production**

Game theory and software engineering principles are used to implement and evaluate an educational game. Game design provides students the opportunity to address specific programming challenges, and address economic and manufacturing considerations vital to success. Prerequisite: CS265, CS346, SWE423 and junior/ senior status  
Credit: 4

### **SWE481 Software Engineering Capstone I**

Software Engineering Capstone I is the first course in a two course sequence that involves the development of a software product from conception through deployment. Working in teams, students design and develop a software system based on user requirements. This course reinforces the principles of requirements engineering and software design. It includes the analysis and design of a software product and a plan for the overall project. Prerequisite: CS376, SWE440  
Credit: 4



**SWE482 Software Engineering Capstone II**  
Software Engineering Capstone II continues the software product development that began in SWE481. Working in teams, students use their requirement and design specifications to develop and test a software product. This course requires the development and test of the product following the project plan.  
Prerequisite: SWE481  
Credit: 4

**TMGT481 Technology Management Capstone I**

This course represents the first half of a two-course capstone in technology management. Students will be mentored in a real-world project that integrates technology skills with management principles to solve a technical business problem.  
Prerequisite: Approval (See the BSTM degree program description)  
Credit: 4

**TMGT482 Technology Management Capstone II**

This course represents the second-half of a two-course capstone in technology management. Students will be mentored in a real-world project that integrates technology skills with management principles to solve a technical business problem.  
Prerequisite: TMGT481  
Credit: 4

**TLC600 Systems Approach to Instructional Design**

This course examines the systems approach to instructional design and its impact on the ethical and equitable delivery of instructional materials for K-16 educational programs and training programs for various types of organizations.  
Credit: 4

**TLC605 Instructional Technology Delivery Systems and Platforms**

This course introduces students to the wide range of technologies, delivery systems, and platforms available for use in instructional and/or training programs delivered by schools, colleges, and other organizations. Particular attention is given to the effective use and integration of instructional technologies into learning and communication programs.  
Credit: 4

**TLC610 Basic Learning Materials Production**

This "hands on" course allows students to acquire, develop, and utilize the basic knowledge and skills necessary to produce

multi-media learning materials for effective integration into individual, classroom, virtual, and/or online environments. Students can learn to design, produce, edit, implement, and evaluate effective learning materials that meet specific instructional and/or training needs, and prepare these materials for direct use, access through a classroom management platform, or utilization through multi-media adaptation.  
Credit: 4

**TLC620 Organizational Training and Development**

This course examines training and development programs in organizations, the role of training and development within organizations, and the processes and procedures for the development of training programs. Particular attention is given to the design, development, implementation, and evaluation (assessment) of training and development programs for adult learners. Students will utilize various strategies, technologies and instructional options to produce a transportable training element (topic, lesson, and workshop) suitable for use in an active training or development program.  
Credit: 4

**TLC625 Online Learning: Theory and Practice**

This course is a learner-focused examination of online education. It explores the characteristics, demographics, and needs of online students. Practical concerns, issues, and strategies for working with the virtual student, including student orientation, time, commitment, assessment and evaluation, and associated legal issues are addressed. Students are exposed to recognized "best practices," tools, and techniques used in online teaching and learning. An emphasis is placed on measures to increase instructional effectiveness, improve retention, and promote student success in the online environment.  
Credit: 4

**TLC635 Assessment and Evaluation**

This course examines assessment and evaluation approaches (including those requiring compliance with standards and those required for accrediting/funding Agencies) at the program, course, and lesson levels and their impact on both K-12 and corporate educational programs.  
Credit: 4

**TLC690 Issues, Problems, and Research in Learning Technology**

This capstone course enables students to integrate the professional and academic aspects of the e-learning and instructional technology program with current trends, practices, and research in e-learning and instructional technology. Students use the knowledge, skills, and deliverables produced during their program as a foundation for creating a technology integrated and delivered instructional/training package. This final and comprehensive project will serve as a model for future projects that utilize an integrated systems design format.  
Credit: 4

**VC099 Special Topics in Visual Communications**

This course addresses issues of current interest in visual communications. Course content will vary as determined by student interest and evolution of the discipline. This course cannot be used to satisfy any degree requirements.  
Credit: 4

**VC110 Drawing I**

This course is an introduction to the tools and techniques of both representational and non-representational drawing. Principles of composition, balance, rhythm, color, line, texture and light are introduced in a series of studio assignments. Pencil, charcoal, and colored art materials such as markers, pencils, watercolors, pastels, and/or oil crayons are explored as expressive art media. Assignments are given to provide the student with a foundation in how hands-on (non-computer) drawing relates to the planning and execution of graphic designs for print or electronic illustration and advertising. This course includes an introduction to One Point and Two Point Perspective Drawing using a variety of exercises and technical tools such as T-square and ellipse templates to create accurate renderings. Students will explore a variety of hands-on (non-computer) media and will create both realistic and abstract drawing assignments.  
Credit: 4

**VC120 Design Fundamentals**

Elements of two- and three-dimensional design are introduced through the exploration of various media in the design studio. Topics include line, form, texture, color, balance, scale, and proportion as they apply to working and finished design projects.  
Credit: 4

**VC125 Visual Thinking and Layout Techniques**

This is a traditional tools and techniques class that will familiarize the student with fundamental layout and comprehensive techniques including: hand-comprehensive techniques, marker renderings, storyboarding, cutting, measuring, mounting and construction. The basics of professionalism and creative thinking will also be covered.  
Prerequisite: VC120  
Credit: 4  
Replaces: VC215

**VC130 Typography I**

This course is an introduction to the aesthetics, mechanics, history, terminology, specifications, and use of type in design. Typefaces will be evaluated and rendered in a variety of studio assignments using both hand written and computer techniques.  
Prerequisite: VC120  
Credit: 4

**VC150 Theory and History of Design**

This course introduces students to the ideologies and elements of art and design as illustrated throughout history. Students will study sociological, political, religious, aesthetic and cultural issues related to the evolution of art and design.  
Prerequisite: ENGL111, VC120  
Credit: 4  
Replaces: VC250

**VC199 Special Topics in Visual Communications**

This course addresses issues of current interest in visual communications. Course content will vary as determined by student interest and evolution of the discipline.  
Prerequisite: Approval  
Credit: 1-6

**VC210 Drawing II**

This course is an introduction to the tools and techniques of figure drawing. Students will render faces, hands, and the entire human figure working from both live models and photographic reference materials. Students will explore figure drawing using a variety of hands-on (non-computer) media and will explore both realistic and creative drawing assignments. This is a studio course that is designed to refine drawing skills through the study of linear perspective, anatomy, and various illustrative techniques. Emphasis is placed on developing creative, illustrative solutions to commercial design problems.  
Prerequisite: VC110  
Credit: 4

### **VC221 Advertising Principles**

This course will establish a broad understanding of the importance of marketing and advertising in today's world. Market research, consumer behavior and a variety of advertising techniques will be discussed. Communication skills and design techniques that are necessary for creating promotional materials and advertising campaigns will be explored. Case studies are used to demonstrate how to develop advertising strategies. Students will learn how to apply advertising concepts. Individual and team activities will be an important part of this course. Prerequisite: ENGL111, BADM101, VC120  
Credit: 4  
Replaces: VC330

### **VC225 Computer Illustration I**

This course introduces vector-based computer illustration and type layout techniques. Software, terminology, and illustration techniques are learned through the completion of both print and Web design projects. Prerequisite: VC120, VC130, VC210  
Credit: 4

### **VC230 Typography II**

Advanced typographic issues are explored through the completion of a variety of advertising/marketing projects. The appropriate use of fonts, styles and compositional techniques within diverse layouts are discussed and applied. Components of digital typography, including font libraries, font types and styles, and their divergence from traditional typography are also presented. Prerequisite: VC120, VC130  
Credit: 4

### **VC242 Digital Imaging and Photography I**

This course provides basic knowledge related to digital image editing and photography. Students will be required in other degree related courses to create, edit and enhance a variety of images and this course will provide the necessary skills. Students will learn about software-based digital image generation and editing techniques. Digital camera terminology & technology, camera settings, and file formats will be covered in the course. It is important that students have an appreciation and understanding of the characteristics that are required to produce quality digital images. Students will apply both digital photography and digital image editing techniques through the completion of projects, tutorials, and hands-on practice. Students will be required to take digital photographs throughout the course and to present their photographs during critique sessions. Credit: 4  
Replaces: VC240

### **VC243 Digital Imaging and Photography II**

Advanced techniques in digital image editing are explored through the completion of computer design projects. Cross-platform, hardware and import/export issues are discussed. Prerequisite: VC242  
Credit: 4  
Replaces: VC241

### **VC270 Desktop Publishing I**

This course is an introduction to desktop publishing software and procedures as used by the graphic design industry. Printing options, color management systems, page layout techniques and software integration are discussed. Text editing and electronic typography are also emphasized in studio projects. A professional graphic design studio environment is emulated in order for the student to explore industry related issues. These issues include: Computer equipment, budgeting, project management and industry standards for printing intellectual property. This course focuses on learning software, CG, and print theory and terminology to ready the student for VC370. Design is not emphasized in this class. Prerequisite: ENGL111, VC120, VC130  
Credit: 4

### **VC290 Portfolio Development**

This course offers instruction in the final preparation and presentation of an individual portfolio. Resume preparation, job search procedures, interviewing skills, marketing strategies, aesthetic principles, presentation techniques, and portfolio critique and revision will be emphasized. Prerequisite: Approval  
Credit: 4

### **VC296 Internship**

The internship is designed to provide an opportunity to work with clients on graphic design/Web related projects. Students will gain valuable work experience and have the opportunity to apply career related skills. Prerequisite: Approval  
Credit: 4

### **VC297 Capstone**

This course allows the student to research, plan, and implement a detailed project that covers the main concepts in the degree. Each student will be assigned a mentor to assist with project scope, deliverables and timelines. The capstone project will be incorporated into the student's portfolio. Prerequisite: Approval  
Credit: 4

### **VC299 Special Topics in Visual Communications**

This course addresses issues of current interest in visual communications. Course content will vary as determined by student interest and evolution of the discipline. Prerequisite: Approval  
Credit: 1-6

### **VC301 Foundations in 3D Computer Graphics**

This course provides an introduction to 3D computer graphics. This is an overview course to the world of 3D computer generated graphics using state of the practice software and related technologies. Students will explore both the technical side and creative of computer graphics, industry standard terminology, history of computer graphics, character creation, and basic animation concepts. Prerequisite: VC210, VC225, VC242 or Approval for CS/IT related students  
Credit: 4

### **VC310 Corporate Identity Development**

This course investigates the development and use of corporate logos, letterhead, style sheets, marketing materials and advertising techniques to effectively establish and promote corporate identity, both internally and externally. Case studies are examined and discussed. Individual and group projects are required. Research, Corporate Identity briefs and understanding the client are an integral part of this course. Prerequisite: VC221, VC225, VC242, VC270  
Credit: 4

### **VC322 Production Standards**

Methods used to successfully transfer images from the computer to print and digital media are explored in depth. This is a process-based course that concentrates on the numerous technical design choices that need to be made to produce well-crafted page layouts. Students will complete a variety of projects and print mock-ups. Prerequisite: VC225, VC242, VC370  
Credit: 4

### **VC325 Computer Illustration II**

Advanced techniques in computer illustration are explored through the completion of integrated design projects. Prerequisite: VC225  
Credit: 4

### **VC340 Branding and Packaging**

This course explores the use of product branding to promote corporate identity and the sale of manufactured goods. Students are introduced

to advanced techniques for the design of various packaging materials and the application of these techniques toward the development of product identity and consumer recognition. Prerequisite: VC310  
Credit: 4

### **VC370 Desktop Publishing II**

This course continues to explore properties of electronic publication, including printing options, file conversion and distribution procedures, font management, master pages and templates, and creative page layout techniques. A professional design studio environment will be emulated during the completion of individual and group projects. This course will address researching target audience, budgeting, project management, and industry standards for printing and intellectual property. A focus on quality craftsmanship and attention to detail is emphasized, as this is critical to the success of projects and is a defining characteristic of excellent designers. Students are expected to understand terminology and programs. Design is an integral part of this course. Prerequisite: VC270, ENGL112, VC230  
Credit: 4

### **VC371 Desktop Publishing III**

This course focuses on advanced desktop publishing techniques in the production of a variety of digital media. This course continues to explore budgeting, project management, and industry standards for printing and intellectual property. Students will create high quality work that is ready for press and various other digital media. An emphasis on professionalism in design, research, budgeting, intellectual property and project management is encouraged. Advanced topics such as paper properties, preflighting, working with professionals, how to improve oneself and get work, licensing and contracts are addressed. Prerequisite: VC370  
Credit: 4

### **VC375 Digital Video Editing**

This course examines photography and post-production technology and techniques used to deliver quality digital video. Projects will include capturing and editing Mini-DV footage using video editing software. Students will learn project planning and design, photography, importing digital video and stills, sound tracks, and special effects. Students will author a DVD project of their work. Prerequisite: VC120, VC230, VC225, VC242  
Credit: 4

**VC399 Special Topics in Visual Communications**

This course addresses issues of current interest in visual communications. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6

**VC415 Advanced Graphic Design**

Advanced graphic design issues are explored through the completion of individual design projects. This course includes the development of style sheets that outline color, type and printing specifications for graphic design projects. Solutions to common file format, distribution and printing problems are discussed.

Prerequisite: VC225, VC242, and VC370

Credit: 4

**VC430 Promotional Design**

This is an advanced course that focuses on the creation of promotional material to effectively convey specific messages to target audiences. Visual materials will be constructed for a variety of print, Web, television and multimedia sources using innovative advertising and marketing strategies. Budgeted business plans that include analysis of client needs, targeted market research, estimates of resource and labor costs, and multiple presentation concepts will also be developed.

Prerequisite: VC2225, VC242, VC370

Credit: 4

**VC450 Corporate Design Strategies**

This course focuses on the development and management of corporate communication, identity, packaging and advertising material for a specific marketing project. Research will be conducted relating to the organization, products and marketing strategies of an existing corporation, and students will redesign its material based on forecasted market trends.

Prerequisite: VC430

Credit: 4

**VC465 Editorial Design**

This course explores in depth the design issues related to the publishing industry, such as magazine, catalog, newspaper and other various editorial uses. The focus in Editorial Design is on brand identity, editorial presentations, content and the necessary production requirements. Students will discuss budgetary and structural concerns related to the digital design process. The course will include print and web-based

approaches to this specific industry.

Prerequisite: VC371

Credit: 4

**VC480 Senior Design Project**

Under faculty art direction, students will complete an independent design project that demonstrates their theoretical and technical proficiency in relation to the total design process.

Prerequisite: Approval

Credit: 4

**VC485 Supervised Studio Projects**

This course will provide real-time experience in producing marketing materials. Emphasis will be placed on customer requirements, budgets, and deadlines, using a variety of skills gained throughout the digital media design program.

Prerequisite: Approval

Credit: 4

**VC495 Advanced Research and Study in Visual Communications**

This course presents topics of special interest to the visual communication design student.

Prerequisite: Approval

Credit: 1-6

**VC496 Internship**

The internship is designed to provide students with an opportunity to gain industry experience/work with clients and to assist in the development of skills necessary to be successful in a chosen career field.

Prerequisite: Approval

Credit: 4

**VC497 Capstone**

Students will apply knowledge gained in their degree program. Each student will create one or more professional portfolio quality projects under the direction of an instructor. Students will focus on their desired areas of interest.

Prerequisite: Approval

Credit: 4

**VC499 Special Topics in Visual Communications**

This course addresses issues of current interest in visual communications. Course content will vary as determined by student interest and evolution of the discipline.

Prerequisite: Approval

Credit: 1-6



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## ADMISSIONS INFORMATION

Prospective students are encouraged to visit one of several conveniently located campuses (or call to learn about the university's 100% online degrees) and speak with an admission's advisor to learn about the application process and about the academic programs best suited for them. After making an application to the university, most students receive an admissions decision within one week.

CTU offers a number of academic programs leading to the associate's, bachelor's, master's or doctoral degrees. All of the university's regional campuses and divisions provide unique opportunities for students to learn in a challenging and rewarding environment.

Colorado Technical University strives to provide students with learning experiences that will prepare them for careers in tomorrow's world. CTU has a tradition of providing students with excellence in education. The university does not discriminate on the basis of race, national origin, sex, marital status, veteran status, or disabilities when making admissions decisions.

While Colorado Technical University makes every effort to accommodate every student who applies (see above), some program areas limit admissions or have additional criteria that might be program specific. CTU does not guarantee admission to all programs of study. Occasionally factors such as test scores, supplemental documents, personal character, experience and/or other criteria may be taken into consideration for individual program areas.

## UNDERGRADUATE ADMISSIONS

Requirements for admittance to the university at the undergraduate level are minimal. CTU encourages students who have the motivation and interest to pursue and complete a post-secondary degree to apply. A primary factor for undergraduate admission is high school graduation or its equivalent, and the desire to be successful.

### Application Procedure

1. Participate in an admissions interview with an admission's advisor (phone or in-person).
2. Submit a complete Colorado Technical University application for admission.
3. Submit \$50.00 application fee (\$100.00 for international students).

4. Submit attestation of high school graduation or equivalency. Falsification of the attestation will result in dismissal from the university.
5. Take the Accuplacer exam as part of the enrollment process (does not apply to students pursuing degrees that are offered 100% online). All new students are required to take this exam to ensure proper placement in math and English courses. The score is not an admissions criterion, but rather an opportunity for the University to provide the best possible education for incoming students.

## GRADUATE ADMISSIONS

Graduate programs at CTU are professional degrees designed for students desiring an advanced, comprehensive, graduate-level education commensurate with the needs of industry. To assure a foundation of education that assists students in maximizing this educational experience, certain prerequisite knowledge is required. These prerequisites may be satisfied by prior academic course work, life experience, and/or by taking the courses. The prerequisite knowledge required for each master's degree program is discussed in the program description. Specific course prerequisites are also found in the catalog course listings.

### Admission to the Master's Program

1. Participate in an admissions interview with an Admission's Advisor.
2. Submit a complete Colorado Technical University application for admission.
3. Submit \$50.00 application fee (\$100.00 for international students).
4. Proof of Bachelor's degree or equivalent from a regionally accredited college or university is required to enter the CTU master's program. Submit official transcript from the bachelor's degree-granting institution. Exceptions to the accreditation requirement stated here must be approved by an academic officer (Dean, Chair, etc.). Foreign transcripts must be translated into English, if necessary, and must be evaluated for equivalency to U.S. degrees by an approved agency; including a copy of the non-English original (see information on "International Transcripts" elsewhere in this section).
5. The MS in Computer Science requires an entrance essay. A handout outlining this essay requirement will be provided by the Program Dean. The essay must be submitted to Admissions and approved by the appropriate academic officer (Dean, Chair, etc.) by the end of the first session.



6. The MS in Computer Science also requires submission of a current resume outlining relevant work experience.

## Master's Advantage

Students enrolled in a bachelors program at Colorado Technical University have the option of entering the Master's Advantage Program. This program allows students to substitute two graduate courses for two undergraduate courses. These courses count both for graduate and undergraduate credit.

Because graduate courses have demanding content and pacing, a minimum overall GPA of 3.0 in the undergraduate program at the time of entering the two graduate courses is required. To count as master's credit, a course grade must be a "C" or better.

Ground students need to check with a campus Dean or Advisor for additional information. Students enrolled in the university's 100% online degree program must choose this option at the time of their enrollment in a bachelor's program and select the graduate program they wish to pursue. Other restrictions may apply. Please check with your Dean or Advisor.

## Admission to the Executive Master of Business Administration Program (EMBA)

This program is coordinated by the Institute for Advanced Studies (IAS).

1. Participate in an admissions interview with an admissions advisor.
2. Set up an interview (phone or in-person) with a representative from the Institute for Advanced Studies.
3. Submit a complete Colorado Technical University application for admission along with a current resume.
4. Submit a \$50.00 application fee (\$100 for international students).
5. A bachelor's degree from a regionally accredited college or university is required to enter the Executive Master of Business Administration program. A cumulative GPA of 3.0 on a 4.0 scale is required for admission.
6. Submit a copy of your resume. The resume should highlight a minimum of three years of related employment experience and your education history.
7. Submit a brief essay (3 single spaced pages) relating to a topic provided by the Institute for Advanced Studies.

## Admission to the Doctoral Program

This program is coordinated by the Institute for Advanced Studies (IAS).

1. Participate in an admissions interview with an admission's advisor.
2. Set up an interview (phone or in-person) with a representative from the Institute for Advanced Studies.
3. Submit a complete Colorado Technical University application for admission.
4. Submit \$50.00 application fee (\$100 for international students).
5. A master's degree from a regionally accredited college or university is required to enter the CTU doctoral program. Official transcripts of ALL undergraduate and graduate work are required. Foreign transcripts must be translated into English, if necessary, and must be evaluated for equivalency to U.S. degrees by an approved agency, including a copy of the non-English original [see section on "International Transcripts" (i.e., page 30) for additional information]. Only one copy of each official transcript is required.
6. Submit a copy of your resume. The resume should highlight a minimum of five years of related employment experience and your education history.
7. Submit a brief essay (1800-3000 words) discussing a topic or issue in your field of interest.

## TRANSFER STUDENTS

Colorado Technical University welcomes students who are transferring in from other institutions.

### Application Procedure

1. Participate in an admissions interview with an admission's advisor.
2. Submit a complete Colorado Technical University application for admission.
3. Submit \$50.00 application fee (\$100.00 for international students).
4. Submit an attestation of high school graduation or equivalency (for undergraduate transfer students).
5. Submit official transcripts for evaluation (graduate level only). Students transferring into a master's program are only allowed to transfer two program related courses [see "Academics Policies and Regulations" section for additional information].

## Non-degree Seeking Students

Colorado Technical University welcomes students who might not be actively pursuing a degree. This includes guest or visiting students who might not have graduated from a secondary school, but are eligible to take CTU courses.

### Application Procedure

1. Participate in an admissions interview with an admission's advisor. High school students will need to be accompanied by a parent or guardian for this interview.
2. Submit a complete Colorado Technical University application for admission.
3. Submit \$50.00 application fee (\$100.00 for international students).
4. Submit an attestation of high school graduation or equivalency, or in the case of a student who is currently in high school, a letter of recommendation from a school official. Falsification of an attestation will result in dismissal from the university.

### International Students

Students that are not permanent residents of the United States or its territories, or not in the U.S. on a valid work visa, are classified as international students.

In order to ensure completion of a meaningful education at the university and to comply with United States Immigration and Naturalization Service (INS) policies, all international students are expected to complete their degree requirements with little or no interruption to their studies. International students must register full time and attend a full academic year (3 quarters/9 months). International students not residing in the U.S. that are pursuing a degree from CTU that is offered 100% online do not need to meet the above requirements.

CTU is committed to ensuring that international students receive a meaningful and successful American educational experience. To achieve that objective, CTU requires that all F-status international students adhere to the following procedures.

- Students submit a certified English translation and evaluation of equivalency of their education transcripts for the appropriate level of admission being sought.

- Students provide a statement of financial support explaining that tuition will be paid in advance of each academic term and that a sponsor will provide all necessary living expenses for the international applicant or provide a letter of financial guarantee from a sponsoring entity. The guarantee letter must cover the total projected educational expenses for at least one full academic year.
- Students provide evidence of satisfaction of the English proficiency requirement given below.
- Students meet the admission requirements listed in the admissions section of the catalog and declare an academic major. Students may change this major at a later date, but an initial declaration allows students to set up an education plan with their advisors.
- CTU's published refund policy will apply. Form I-20 AB is issued after acceptance and receipt of student's deposit. (See the Financial Policies insert to this catalog for additional information.) Students pursuing degrees that are offered 100% online do not need an I-20 form.
- International students pursuing a graduate degree are required to submit proof of a Bachelor's degree or equivalent.

### International Transcripts

International institutions must be licensed or officially recognized by the Education Department or Ministry of the country where the institution is in operation to be eligible for transfer of credit or degree status. Students enrolled at CTU are required to have on file within 30 days of their program start date all official transcripts for any institutions of higher education previously attended. This is required for all transcripts, including transcripts from international secondary schools and/or institutions of higher education. The Registrar's office will ultimately verify and/or certify the institutions' eligibility for transfer credit or degree equivalency. Several transcript evaluation services are available to students. Acceptable evaluations may only come from evaluation services that are a member of NACES (National Association of Credential Evaluation Services, Inc.). CTU will consider evaluations and/or recommendations directly from AACRAO (Association of Collegiate Registrars and Admissions Officers). Contact the Registrar's office for a listing of such organizations. Students are responsible for all applicable fees.

### Additional Stipulations for International Students

1. In certain circumstances and on a case-by-case basis, exceptions may

be made to the admissions policy with the approval of the President, Vice President of Admissions or the Vice President for Academic Affairs.

2. Due to space limitations, CTU reserves the right to select applicants most likely to benefit from the programs.
3. International transcripts must be translated to English and may need to be officially evaluated by an accepted agency at the student's cost. A list of accepted official evaluators is available from the Registrar's Office or the International Admissions department.
4. The baccalaureate requirement for graduate admissions may be accepted from any United States institution that is regionally accredited by an agency recognized by the U.S. Secretary of Education or equivalent agency of a foreign government.
5. Colorado Technical University will accept official college transcripts from any United States institution that is regionally accredited by an agency recognized by the U.S. Department of Education, or from internationally recognized foreign institutions of higher education. International institutions must be licensed or officially recognized by the Education Department or Ministry of the country where the institution is in operation to be eligible for transfer of credit or degree status.

## English Proficiency Requirements

Non-native speakers of English are required to provide proof of English proficiency prior to admission. Accepted methods for the demonstration of English proficiency at CTU include the following:

- A TOEFL\* score of 500 for undergraduate students or 550 for nursing and graduate students; or 213 for the computer based exam. For the Internet Based Test of English as a Foreign Language (TOEFL iBT) an aggregate score of 82 for graduate programs and 80 for undergraduate programs is required. In addition to the aggregate score requirement for the internet based test, the following minimum scores must also be met:
  - Writing – 18 for graduate, 17 for undergraduate
  - Speaking – 18 for graduate, 17 for undergraduate
  - Reading – 17 for graduate, 16 for undergraduate
  - Listening – 16 for graduate, 15 for undergraduate
- A grade of "C" or better in an ESL or college-level English course taken at an accredited English-speaking postsecondary institution.

- Graduation from an English-speaking postsecondary institution.
- Graduation from an English-speaking secondary institution.

\* Some programs may have different entrance requirements for the TOEFL. Please check with your program.

**Note:** Information on transfer of credit, advanced placement, CLEP exams, block transfers, credit by course challenge, military credit, and credit for life experience is in the section on Academic Policies and Regulations.

## SPECIALIZED ADMISSION AND GRADUATION REQUIREMENTS

### College of Criminal Justice

Students may be required to complete a criminal background investigation or background check in order to participate or attend class activities at certain sites. Students may also be required to complete a background investigation or check to qualify for some types Internships. **A criminal record may disqualify the student from certain class activities, internships, or career choices.**

Additionally, there are age restrictions that apply to certain Federal criminal justice career choices. Students should contact their campus dean / chair, the Career Services/Placement office, or the agency of interest for more specific information on the qualifications and requirements of specific career options in criminal justice.

### College of Health Sciences

Health Science Programs often find students experiencing financial, time and personal constraints while participating in their respective program. For example, clinical/externship experiences may need to be completed based on the location and needs of the hospital or clinical site. Students will be required to purchase textbooks, uniforms, and equipment necessary for the specific program. Graduation from health science programs does not guarantee licensure/certification in the specific profession. Graduates should qualify to apply to take the appropriate licensure/certification exam.

### Grades and Credits

Students enrolled in a health science program must pass science, algebra and core

courses with a “C+” (76%) or better. Failure to obtain a “C+” will result in the student having to repeat the course. A required course can only be repeated one time and the student may repeat no more than two required courses.

### **Attendance**

Given the high risk nature of the healthcare environment and the importance of a safe and well educated healthcare professional, Health Science (Nursing, Medical Assistant, Radiology, Surgical Technology, and Medical Billing & Coding) students who miss any 3 sessions (class, lab, clinical or externship) will receive a “W” for the class.

### **Health standards**

Administrative personnel at clinical agencies and in the all the health science programs believe that health science students and the public with whom they come in contact must be protected against communicable diseases and unsafe practice. Each health science student must assume responsibility for meeting the health and safety requirements.

1. Students must submit a completed immunization and vaccination policy form.
2. An annual TB skin test must be documented. In the event the TB (Mantoux) test is positive, a negative chest x-ray must be documented.
3. Healthcare facilities may require that health science students have a drug screening test completed prior to attending clinical experiences. In addition, students may not be allowed to participate in clinical experiences if they test positive for illegal drugs or prescription drugs without physician authorization. Moreover, positive drug tests may prevent the health science graduate from taking certain national certification or licensing exams. Finally, healthcare facilities may not hire students or graduates who have a record of illegal drug use or abnormal drug tests.
4. Students are required to have a complete physical exam prior to participation in clinical/externship experiences.

### **Criminal Background Checks**

Students will be required to complete a criminal background check prior to program admission or participation in clinical/externships. Students may not be allowed to participate in clinical experiences if they have a pending or prior conviction. Certain criminal convictions may prevent the health science graduate from taking national certification or licensure exams. Healthcare facilities may not hire students or graduates who have

a prior criminal conviction. Students with prior convictions should contact licensure/certification agencies to determine eligibility for testing.

### **Dress Code**

To ensure the health and safety of health science students and the patients that they care for, students are not permitted to wear tongue rings, multiple or dangling earrings, bracelets, necklaces, artificial nails, perfume or cologne in the laboratory or clinical areas. In addition, tattoos and piercings must be covered during laboratory and clinical experiences. Students may wear a wristwatch with a second-hand, a wedding band and 1 set of post earrings. Students will not be allowed to remain in the laboratory or on the clinical area if the dress code is not followed and the day will be considered a missed clinical. Students will be required to use institutionally approved uniforms during clinical/externship experiences.

### **Admission requirements**

- A personal interview with the specific health science committee
- Basic computer skills (word, internet searching, and email)
- Current CPR certification in basic life support
- International students must demonstrate proficiency in the English Language, as measured by a TOEFL score of 550 or above; 213 or higher on the computer based exam
- Testing success with the Accuplacer test (not required for BSN or BSHSA)
- Students with no computer experience will take HIT080 Introduction to Computing for HealthCare Professionals as a prerequisite. A computer skills competency test will be administered to prospective students to determine their level of proficiency and potential need for computer training
- Approved Criminal Background Check

### **MASTER OF BUSINESS ADMINISTRATION (MBA) DEGREES**

The MBA is a professional degree intended for those who aspire to increasing levels of responsibility in business and industry. An MBA is an investment in the graduate's future. This degree program is designed to provide each student with a breadth of skills ranging from accounting to project management. The program revolves around managerial skills required in planning, organizing and controlling work in organizations, and focuses on directing, coaching and motivating people for effective performance. In addition, this program is designed to help the student understand various management theories, essential management functions and their interrelationships, and the global environment of today's business.

NOTES:

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One of the most important decisions individuals will make in their lifetime is the one related to education. This decision, and subsequent follow-through, will have a great impact on career choices, advancement opportunities, and lifetime income. Colorado Technical University is a private, tax-paying institution of higher education funded solely by the tuition and fees of its students. The cost of the educational service is based on the operational expenses incurred by the institution to provide industry-standard career-based educational programs, facilities, equipment, faculty and student support services.

### **Cost of Education**

A list of the tuition costs and fees may be found in the *Financial Policies Insert* to this catalog. Due to the non-refundable nature of these fees, students are encouraged to discuss their educational and financial plans in advance with their financial advisor.

### **Financial Assistance**

Colorado Technical University participates in a variety of financial aid programs for the benefit of students. Students must meet the eligibility requirements of these programs in order to participate. Colorado Technical University administers its financial aid programs in accordance with prevailing federal and state laws and its own institutional policies. Students are responsible for providing all requested documentation in a timely manner. Failure to do so could jeopardize the student's financial aid eligibility. In order to remain eligible for financial aid, a student must maintain satisfactory academic progress as defined in this catalog.

It is recommended that students apply for financial aid as early as possible in order to allow sufficient time for application processing. Financial aid must be approved, and all necessary documentation completed, before the aid can be applied toward tuition and fees. Financial aid is awarded on an academic year basis; therefore it is necessary to re-apply for aid for each academic year. Students may have to apply for financial aid more than once during the calendar year, depending on their date of enrollment. Students who need additional information and guidance should contact the Financial Aid Office.

### **How to Apply**

Students must complete a Free Application for Federal Student Aid (FAFSA) each year. This application is available on-line at The Federal Student Aid website ([www.fafsa.ed.gov](http://www.fafsa.ed.gov)). Applications are processed through the Financial Aid Office and all information is confidential. Students must be accepted at Colorado Technical University before financial aid applications can be processed.

## **FINANCIAL AID PROGRAMS**

### **Federal Pell Grant**

The Federal Pell Grant is available to undergraduate students who have not earned a bachelor's or a professional degree. Unlike a loan, the Pell Grant does not have to be repaid. To determine if a student is eligible financially for a Pell Grant, the U.S. Department of Education uses a standard formula, established by Congress, to evaluate information reported on the FAFSA.

### **Federal Supplemental Educational Opportunity Grant (FSEOG)**

The Federal Supplemental Educational Opportunity Grant (FSEOG) is available to undergraduates who have not earned a bachelor's or professional degree. Unlike a loan, the FSEOG does not have to be repaid. In determining the priority order in which students will be awarded FSEOG funds, Colorado Technical University will award this grant to those students with exceptional financial need who will also be receiving the Federal Pell Grant. This is a limited pool of funds and the school will determine to whom and how much it will award based on federal guidelines. Often, due to limited funding, grants are awarded on a first-come, first-served basis.

### **Federal Stafford**

Federal Stafford loans, available through the Federal Family Education Loan Program (FFELP), are low-interest loans that are made to the student by a lender, such as a bank, credit union, or savings and loan association. The loan must be used to pay for direct and/or indirect educational expenses. Subsidized loans are need based while unsubsidized loans are not. Repayment begins six months after the student graduates, withdraws from school, or falls below half-time enrollment status. Please refer to the table below for the annual and aggregate loan limits.

## FFELP Annual Loan Limits:

|                                   | <u>Annual Limits</u> | <u>Aggregate Limits</u> |
|-----------------------------------|----------------------|-------------------------|
| <b>Dependent Undergraduate:</b>   |                      | <b>\$23,000</b>         |
| 1st Year                          | \$3,500              |                         |
| 2nd Year                          | \$4,500              |                         |
| 3rd, 4th, & 5th Year              | \$5,500              |                         |
| <b>Independent Undergraduate:</b> |                      | <b>\$46,000</b>         |
| 1st Year                          | \$7,500              |                         |
| 2nd Year                          | \$8,500              |                         |
| 3rd, 4th, & 5th Year              | \$10,500             |                         |
| <b>Graduate Students:</b>         |                      | <b>\$138,500</b>        |
|                                   | \$20,500             |                         |

## Entrance and Exit Interviews/Loan Counseling

The U.S. Department of Education requires that any student receiving a Federal Stafford Loan must be informed concerning their loans. Colorado Technical University counsels each student regarding loan indebtedness and advises each student how to complete an entrance interview regarding the loan program to ensure that the student understands the amount borrowed and his/her rights and responsibilities regarding repayment. Students are contacted by the Financial Aid Department for online student loan counseling at the time of withdrawal, graduation or leave of absence. The purpose of this session is to inform the student of the total loans received while in attendance at the University and any refunds that may have been made, as well as to provide the student with an estimated payment schedule. The exit interview is completed electronically.

## Federal Parent Loan for Undergraduate Students (PLUS)

The Federal PLUS loan, another FFELP loan program, is available to parents of dependent undergraduate students. These loans are not based on need but when combined with other resources, cannot exceed the student's cost of education. A credit check is required and either or both parents may borrow through this program. Repayment begins within 60 days of final disbursement of the loan within a loan period.

## Federal Plus Loan for Graduate Students

The Federal PLUS loan, another FFELP loan program, is available to graduate students. These loans are not based on need, but when combined with

other resources, cannot exceed the student's cost of education. A credit check is required by the student. Repayment begins within 60 days of final disbursement of the loan within a loan period. Students may defer the repayments while in an enrolled status.

## Academic Competitiveness Grant (ACG)

The Academic Competitiveness Grant is available during the first and second years of undergraduate study to full-time students who are eligible for the Federal Pell Grant who have completed a "rigorous secondary school program of study" as defined by the Secretary of Education. Second year students must have a cumulative GPA of at least 3.0 on a 4.0 scale. Students will be identified by the Financial Aid office. Students may contact the campus financial aid office for more information.

## National "Science and Mathematics Access to Retain Talent" (SMART)

The National SMART Grant Program is available during the third and fourth years of undergraduate study to full-time students who are eligible for the Federal Pell Grant and who are majoring in the physical sciences, life, computer sciences, mathematics, technology, and engineering as well as in a foreign language determined critical to national security. The student must also have maintained a cumulative grade point average (GPA) of at least 3.0 in coursework required for the major. This grant is in addition to the student's Federal Pell Grant award.

## Federal Work Study (FWS)

*(not available to students enrolled in 100% online degree programs)* FWS is a financial aid program designed to assist students in meeting the cost of their education by working part-time while attending school. Positions may either be on-campus, off-campus, or community service related. A candidate must demonstrate financial need to be awarded FWS. The number of positions available through the FWS program may be limited depending upon the institution's annual funding allocation from the federal government.

## Colorado Student Grant Program (CSG)

*(Colorado Springs, Denver and Pueblo campuses only)* The Colorado Student Grant program is designed as an undergraduate need-based program funded by annual Colorado state appropriations. In order to receive the CSG, students must meet the following eligibility criteria:

- be a Colorado resident, as determined by the institution's tuition classification officer in accordance with applicable State law;
- be an undergraduate student;

- be in good standing and demonstrate academic progress according to the institution's policy regarding Standards of Academic Progress for financial aid purposes;
- must complete current FAFSA.

This is a limited pool of funds and the school will determine to whom and how much it will award a Colorado Student based on federal guidelines. Often, due to limited funding, grants are awarded on a first-come, first-served basis. For more information, contact the campus Financial Aid office.

### Private Loans

Various lending institutions offer loans to help cover the gap between the cost of education and the amount of federal eligibility. A co-signer may be required to meet the program's credit criteria. Interest rates are variable and are typically based on the prime rate or the Treasury Bill. Contact the Financial Aid office for more information.

### Use of Financial Aid Funds

Financial aid funds are made available for purposes directly related to obtaining an education at Colorado Technical University. First and foremost are tuition, fees, books and supplies. Financial aid funds are limited and may not cover all expenses. The student is responsible for any unpaid balances. Funding for living expenses is not normally available at Colorado Technical University due to limited funding and a prioritization of educational expenses.

## SCHOLARSHIPS AND GRANTS

### Advantage Grant

The purpose of the Colorado Technical University Advantage Grant is to recognize students who face extreme personal and/or financial hardships in pursuit of a degree from Colorado Technical University. Current students must be in good academic standing at Colorado Technical University. Newly enrolled students must have been in good academic standing at their last institution. This grant typically awards up to \$500 per academic program and will be applied against outstanding current or future charges at the University's discretion. The conditions are as follows:

- This grant is used exclusively toward program charges
- To be eligible, students must be in attendance during the applicable session

- Candidates must apply and be accepted for admission to be eligible to receive the grant
- Candidates must submit a minimum 500 word essay on how they intend to use the skills learned at Colorado Technical University to benefit others and society

### Agency Benefits and Matching Grants

(*North Kansas City campus only*) For students sponsored by various federal, state and local governmental and non-profit training and rehabilitation agencies (e.g. WIA, Vocational Rehabilitation, Displaced Workers), the North Kansas City campus of Colorado Technical University makes available a limited number of matching grants. Agency matching grants are made to facilitate career studies for individuals who meet admissions requirements and are sponsored by governmental and non-profit organizations dedicated to sponsoring education and training for economically, physically or socially disadvantaged citizens.

Current or prospective students may not apply directly for Colorado Technical University agency matching grants, rather, the decision to award an agency matching grant is made by the President as a result of staff recommendations and a requirement by the sponsoring agency to make such a grant. The number of such grants varies depending upon outside agency sponsorship and the availability of budgeted funds.

The matching grant given by North Kansas City is the lesser of the following:

- \$1,745 per term;
- the agency payment authorization;
- tuition charges less the agency authorization and any other grants or scholarships.

### Alpha Phi Alpha Scholarship

(*Colorado Springs campus only*) The Colorado Springs Campus of Colorado Technical University has established the Alpha Phi Alpha, Iota Omicron Lambda Chapter Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. To be eligible for the Alpha Phi Alpha scholarship a candidate must:

- have a minimum of GPA of 3.0;
- apply for and be selected by the Alpha Phi Alpha, Iota Omicron Lambda Chapter;

- be accepted for enrollment at Colorado Technical University, and meet University guidelines for academic progress.

### **Better Business Bureau Scholarship (BBB)**

*(Colorado Springs campus only)* A scholarship is available to full time BBB employees, spouses, and children through Colorado Technical University, Colorado Springs campus. A 50% tuition reduction is available for individual course, certificate programs, undergraduate, master's, and doctorate degrees. Colorado Technical University requires a letter from the CEO/Executive Director verifying employment or qualification for this scholarship program.

### **Career Education Scholarship Fund (CESF)**

In order to assist students attending Colorado Technical University and other Career Education Corporation ("CEC") schools, the Career Education Scholarship Fund ("CESF") has been established. CESF is a non-profit 501(c)(3) foundation dedicated to providing grants to CEC students with financial need. CESF raises money through various means to provide these grants. The CESF Board of Directors will determine periodic grant allocations of the general grant fund to each CEC Division. The CESF Board of Directors has established the following criteria for each grant award.

- Grants will have a minimum award amount of \$500 and a maximum award amount of \$2,000 per academic year.
- For new students, the grant will be awarded for the student's first academic year only.
- For current students, the grant will be awarded for their next academic year only.
- Grant funds must be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student.

If a student drops out or otherwise terminates his/her attendance at the school prior to the academic year, any unused portion of the grant reverts back to CESF pursuant to the conclusion of an STET refund policy.

### **Education Partner Grant**

Colorado Technical University has established grants in the name of CTU Education Partners for corporations, organizations, and military bases/groups in order to assist eligible students and their immediate families with the opportunity to attend a degree program of study at Colorado Technical University. To be eligible for the Education Partner Grant and waived application fee, a candidate must be accepted for enrollment and allow for verification of employment (or the relationship to the employee) of the Education Partner and sign the education partner attestation form.

The Education Partner Grant conditions are as follows:

- the Education Partner Grant is used exclusively toward program charges;
- the grant is awarded proportionately over each session in the program;
- qualifying students are employees or immediate family members of an eligible institution;
- students must sign the Education Partner attestation form;
- students must attend the qualifying session prior to the grant being awarded;
- candidates must apply and be accepted for admission to Colorado Technical University to be eligible to receive the grant;
- candidates must enroll in an undergraduate (associate's or bachelor's degree) program available at the campus of enrollment;
- all grants are applied as a credit to the student's account, and no cash payments will be awarded to the student.

The grant is non-transferable and non-substitutable. Interested candidates should contact the Colorado Technical University Admissions or Financial Aid Departments for additional application information.

Note: Geographical restrictions may apply.

### **Destiny Scholarship**

*(except North Kansas City, students pursuing degrees 100% online, and Sioux Falls campuses)* The purpose of this scholarship is to provide tuition assistance to full-time, undergraduate, day time students who attend Colorado Technical University. The applicant must satisfy the following criteria and requirements to be considered:

- full time (minimum of 12 credit hours), undergraduate student attending DAY classes only;
- an essay is required. For more information on essay content, contact the campus Admissions office;
- the funds provided by the Destiny Scholarship are intended to be used by the student to complete a degree within four years. To ensure four year completion, it is required that Destiny recipients will take off no more than one quarter per calendar year. Absence of more than one quarter will result in the loss of the Destiny Scholarship;
- in order to receive these benefits, the recipient agrees to attend the normal course sequence as identified in the catalog. Night courses will not be taken unless academic scheduling conflicts are unavoidable. These exceptions must be approved by the appropriate dean;



- the student agrees to comply with all of the terms and conditions, policies and procedures in the current and subsequent revisions of official University publications (i.e., financial aid policies are outlined in the catalog, etc.).

A maximum of \$3000 may be awarded by the campus, distributed at \$500 per quarter for the first six quarters. There may also be a limited number of scholarship awards available in a given quarter at each campus. For more information, contact campus Admissions.

Note: Exceptions to the above criteria or requirements must be approved by the campus President.

### **FIRST Robotics Scholarship**

(*Denver campuses only*) FIRST Robotics Scholarship Program will assist FIRST Robotics or FIRST Vex Challenge team members who plan to continue their education beyond high school. Scholarships are offered for full-time, undergraduate study at either of Denver's accredited Campuses. The applicant must satisfy the following criteria and requirements to be considered.

- Students must have participated at least one year on a FIRST Robotics Competition (FRC) or FIRST Vex Challenge (FVC) team in high school.
- High school seniors who plan to enroll in a full-time undergraduate course of study (at least 12 credit hours per quarter, or 8 credit hours in a mini-term).
- Students must attend at least three of the four quarters for a twelve month period.

A maximum of \$3000 may be awarded by the campus, distributed at \$500 per quarter for the first six quarters. For more information, contact campus Admissions.

### **Jump Start Scholarship**

(*Sioux Falls campus only*) The purpose of this scholarship is to provide tuition assistance to full-time, undergraduate Colorado Technical University students who graduated from high school within 12 months of application. This scholarship is only offered to students matriculating in July. The applicant must satisfy the following criteria and requirements to be considered:

- full time (minimum of 12 credit hours), undergraduate degree-seeking student;

- an essay is required. For more information on essay content, contact the campus Admissions office;
- a maximum of \$3000 may be awarded by the campus, distributed at \$500 per quarter for the first six quarters. For more information, contact campus Admissions.

Note: Exceptions to the above criteria or requirements must be approved by the campus president.

### **Freedom Alliance Scholarship**

The purpose of this scholarship is to provide financial assistance to the dependent children of an active duty service member who was killed or permanently disabled in the line of duty, or who is currently classified as POW or MIA. The applicant must be a senior in high school or a high school graduate. Scholarship applications and rules can be found at [www.freedomalliance.org](http://www.freedomalliance.org) or requested by writing:

Freedom Alliance  
22570 Markey Court, Suite 240  
Dulles, VA 20166-6915

### **Liberty Grant**

(*North Kansas City, Denver, Denver North and students pursuing degrees 100% online only*). Colorado Technical University has established a 10% grant for active and active reserve military personnel, part time Reserve, National Guard members and Veterans and their immediate families. To be eligible for the Liberty Grant, a candidate must be accepted for enrollment and allow for verification of his or her military status (or for family members, the relationship to the enrolled student).

The Liberty Grant conditions are as follows:

- the Liberty Grant is used exclusively toward program charges;
- the grant is awarded proportionately over each session in the program;
- qualifying students are active military personnel and part time Reserve and National Guard members or their immediate family members;
- students must attend the qualifying session prior to the grant being awarded;
- candidates must apply and be accepted for admission to Colorado Technical University to be eligible to receive the grant;



- candidates must enroll in an undergraduate (associate's or bachelor's degree) program available at the campus of enrollment;
- all grants are applied as a credit to the student's account, and no cash payments will be awarded to the students.

The grant is non-transferable and non-substitutable. Interested candidates should contact the Colorado Technical University Financial Aid Department for additional application information.

*Immediate family member: Spouse (life partner) or dependant children only. Siblings, cousins, etc. are not considered immediate family members.*

Note: Geographical restrictions may apply.

### **Military Scholarship**

(Colorado Springs, Denver and Pueblo campuses only) In order to assist Colorado based service personnel and their immediate family members complete their undergraduate degree at Colorado Technical University, the Colorado On-Ground campuses are offering a scholarship to all active duty service personnel; including Reservists and Guard members that are on active duty orders and their immediate family members. The scholarship includes reduced tuition rates, books, application fees, student fees and lab fees. Tuition will be locked for up to 6 years (3 years for Associates and 6 years for Bachelors). The scholarship may only be used for the cost of education and will be spread throughout the length of the degree program. The scholarship may not be combined with any other CTU grant or scholarship.

In order to qualify for the scholarship, the candidate must:

- provide a copy of their military ID card and demonstrated active status;
- provide a Military Statement of Residency signed by the Education Service Office;
- qualify and enroll in a qualified undergraduate degree program (limited enrollment programs do not qualify);
- maintain good standing and demonstrate academic progress according to the institution's policy regarding Standards of Academic Progress.

CTU online will honor the tuition and degree if an individual leaves Colorado and finds it necessary to switch to CTU Online to complete their degree.

**(Some degrees have on ground classes that are needed.)**

*Immediate family member: Spouse (life partner) or dependant children only. Siblings, cousins, etc. are not considered immediate family members.*

### **Undergraduate Project Management Scholarship**

*(Colorado Springs campus only)*

The Project Management Institute Educational Foundation (PMIEF) has established a tuition scholarship program to assist qualified students in obtaining degrees from accredited academic institutions of higher learning in the field of project management. CTU is supporting this effort by funding this undergraduate level project management scholarship.

The purpose of this scholarship is to provide tuition assistance to a full-time, undergraduate Colorado Technical University student at the Colorado Springs campus enrolled in the Bachelor of Science in Project Management degree program. Selection is based on merit. Merit is determined from an application package that consists of basic information, three recommendation forms, transcripts, photograph, a one page essay on "Why I Want to be a Project Manager" (500 words or less). All scholarship applications are required to submit a one page essay on "Why a Code of Ethics is Important to Project Management" (250 words or less), and a resume. Applications must be submitted by the published deadline.

- Scholarship awardees must meet admission requirements, maintain full-time status, comply with university standards of conduct and maintain satisfactory academic progress with a cumulative GPA of 2.5 or greater.
- Total scholarship amount is \$10,000 and is applied as a tuition credit spread out over the prescribed program length.
- Applications are submitted through the PMIEF website at <http://www.pmi.org/pmief/>.

### **Graduate Project Management Scholarship**

*(Denver and 100% online degree seeking students)* The Project Management Institute Educational Foundation (PMIEF) has established a tuition scholarship program to assist qualified students in obtaining degrees from accredited academic institutions of higher learning in the field of project management. CTU is supporting this effort by funding this graduate level project management scholarship.

The purpose of this scholarship is to provide tuition assistance to a full-time graduate Colorado Technical University student enrolled through the Online Division (CTU Online) in a Master's degree level program with a concentration in Project Management.

Selection is based on merit. Merit is determined from an application package

that consists of basic information, three recommendation forms, transcripts, photograph, and a one page essay on “Why I Want to be a Project Manager” (500 words or less). All scholarship applications are required to submit a one page essay on “Why a Code of Ethics is Important to Project Management” (250 words or less), and a resume. Applications must be submitted by the published deadline.

- Scholarship awardees must meet admission requirements, maintain full-time status, comply with university standards of conduct and maintain satisfactory academic progress with a cumulative GPA of 3.0 or greater.
- Total scholarship amount is \$2,000 and is applied as a tuition credit spread out over the prescribed program length.
- Applications are submitted through the PMIEF website at <http://www.pmi.org/pmief/>.

### **Hispanic Education Foundation of Pueblo**

*(Colorado Springs and Pueblo campuses only)* The Hispanic Education Foundation of Pueblo offers scholarships to low-to-moderate income students, Hispanics and minorities, and non-traditional age students who meet acceptable academic requirements. Colorado Technical University will provide additional scholarships to these students to attend either the Pueblo or Colorado Springs campuses.

### **Sons of Italy**

*(Colorado Springs and Pueblo campuses only)* The Order of the Sons of Italy of Southern Colorado promotes Italian heritage, language and culture; while enhancing the image of Italian Americans and creating stronger Italian families and community. The Sons of Italy Southern Colorado lodge offers scholarships each year to high school seniors and current college students. Scholarship recipients must be of Italian decent and related to a member of the Sons of Italy in America Lodge #2738. Recipients will be judged based on the following criteria: academic performance, extracurricular activities, Italian heritage essay, and letters of recommendation. Colorado Technical University will provide additional scholarships to these students to attend either the Pueblo or Colorado Springs campuses.

### **Lifelong Learning Grant**

The purpose of the Colorado Technical University Lifelong Learning Grant is to recognize Colorado Technical University alumni who have achieved degree completion at the associate and/or baccalaureate level and intend

to pursue a bachelor or graduate degree. Colorado Tech Online alumni enrolled in a baccalaureate program who have previously completed an associate degree with the University will be eligible for a grant of \$2,000. Colorado Technical University alumni enrolled in a graduate program who have previously completed a baccalaureate degree with the University will be eligible for a grant of \$2,000. The grant award will be applied against outstanding current or future charges at the University’s discretion.

The conditions are as follows:

- the Lifelong Learning Grant is used exclusively toward program charges;
- the grant is awarded proportionately over each session in the program;
- students must attend the qualifying session prior to the grant being awarded;
- candidates must apply and be accepted for admission into a baccalaureate or graduate degree program to be eligible to receive the grant;
- all grants are applied as a credit to the student’s account, and no cash payments will be awarded to the student;
- students who have been determined eligible for a dual concentration program are not eligible for the Colorado Technical University Lifelong Learning Grant.

The grant is non-transferable and non-substitutable. No portion is refundable. Interested candidates should contact the Financial Aid Department for additional application information.

Students who take a term off must reapply for the grant when they return to have it reinstated.

## **OTHER FORMS OF ASSISTANCE**

### **Veterans Benefits**

Colorado Technical University currently maintains an Office of Veterans Affairs at the Colorado Springs campus. This office provides forms, information and a point of contact to assist students in receiving Veterans benefits. In addition, the office serves a liaison role with the Department of Veteran Affairs (V.A.), providing time and space for periodic visits of V.A. officials to Colorado Technical University.

All degree programs in this catalog are approved for the training of veterans and eligible persons under Title 38 U.S. Code at the appropriate campuses where they are offered. Please check with our Admissions Department for information relating to the approval process and current status. Colorado Technical University will assist veterans in applying for benefits under appropriate governing regulations at the Veterans Affairs office or through the VA representative at each campus.

## Other Assistance

All students are encouraged to research outside assistance that may be offered through other organizations such as your company's human resources department. The Colorado Technical University library and most public libraries provide publications listing educational benefits offered by agencies throughout the United States.

## Student Financial Policies for F1 Visa Status Students

Colorado Technical University is committed to ensuring that all international students receive a meaningful and successful educational experience. To achieve that objective, Colorado Technical University requires that all international students provide evidence of financial resources necessary to start and complete the educational program offered at Colorado Technical University. One of the following criteria must be met:

- prepayment of all educational cost prior to the start of each term (or)
- provide a document of financial guarantee and support from a recognized sponsoring entity which allows the university to direct bill for educational costs incurred by the student.

NOTE: Applicants should be aware that they are not eligible for financial aid and cannot work legally in the United States without Immigration and Naturalization Service permission. The same obligations exist for international students as for all other students. Prospective students should read the entire catalog carefully to ensure that they understand the administrative, academic and financial requirements of an educational program at Colorado Technical University.

Assistance under federal, state or institutional financial aid programs is usually limited to U.S. citizens. This is due to the use of U.S. tax funds that partially or fully support such aid. International students are, therefore, encouraged to check with the appropriate authorities within their country for

assistance programs that may exist for their benefit. International students are required to prearrange coverage for all their educational and living expenses prior to acceptance at Colorado Technical University.

## REFUND POLICY

A student who cancels his/her Enrollment Agreement within 72 hours (until midnight of the third day excluding Saturdays, Sundays, and legal holidays) after signing the Agreement will receive a refund of all monies paid. A student who cancels after 72 hours but prior to the student's first day of class attendance will receive a refund of all monies paid, except for the nonrefundable Application Fee. If the Enrollment Agreement is not accepted by Colorado Technical University or if Colorado Technical University cancels the Agreement prior to the first day of class attendance, all monies, including the Application Fee, will be refunded. All requests for cancellation by the student must be made in writing and mailed or hand delivered to the campus.

After the last day of the drop and add period for each term, as stated on the academic calendar, no refunds or adjustments will be made to students dropping individual classes but otherwise enrolled at Colorado Technical University. Refunds are made for students who withdraw or are withdrawn from Colorado Technical University prior to the completion of their program and are based on the tuition billed for the term in which the student withdraws, according to the schedule set forth in the Financial Policies insert. Refunds will be based on the total charge incurred by the student at the time of withdrawal, not the amount the student has actually paid. Tuition and fees attributable to any term beyond the term of withdrawal will be refunded in full. Any books, equipment, and/or uniforms that have been issued are nonrefundable. When a student withdraws from the institution, he/she must complete a student withdrawal form with the campus Registrar. The date from which refunds will be determined is the last date of recorded attendance. Refunds will be made within 30 calendar days of the notification of an official withdrawal or date of determination of withdrawal by the institution. Credit balances less than \$5 will not be refunded to the student/lender unless requested by the student.

## Financial Refund Schedule (See Financial Policies Insert)

### **Return of Title IV Funds**

A recipient of federal Title IV financial aid who withdraws or is dismissed from school during a payment period or period of enrollment in which the student began attendance will have the amount of Title IV funds he/she did not earn calculated according to federal regulations. This calculation will be based on the student's last date of attendance and the date the school determines that the student has withdrawn from school (see withdrawal policy), or the date of dismissal for a student who is dismissed by the institution.

The period of time for which Title IV financial aid is earned for a payment period or period of enrollment is the number of calendar days the student has been enrolled for the payment period or period of enrollment up to the day the student withdrew divided by the total number of calendar days in the payment period or period of enrollment. That percentage is multiplied by the amount of the student's Title IV financial aid for the payment period or period of enrollment for which the Title IV financial aid was awarded to determine the amount of Title IV financial aid that has been earned. The amount of Title IV financial aid that has not been earned for the payment period or period of enrollment, and which must be returned, is the complement of the amount earned. The amount of Title IV financial aid earned and the amount of Title IV financial aid not earned will be calculated based on the amount of Title IV financial aid that was disbursed or could have been disbursed for the payment period or period of enrollment upon which the calculation was based. A student will have earned 100% of the Title IV financial aid disbursed for the payment period or period of enrollment if the student withdrew or was dismissed after completing more than 60% of the payment period or period of enrollment.

Once the amount of Title IV financial aid that was not earned has been calculated, federal regulations require that the school return Title IV funds disbursed for the payment period or period of enrollment and used for institutional costs in the following order:

1. Unsubsidized Federal Stafford Loans;
2. Subsidized Federal Stafford Loans;
3. Unsubsidized Direct Stafford Loans (other than PLUS loans);
4. Subsidized Direct Stafford Loans;
5. Federal Perkins Loans;
6. Federal PLUS Loans;
7. Direct PLUS Loans;
8. Federal Pell Grants;
9. Federal SEOG.

If the amount of unearned Title IV financial aid disbursed exceeds the amount that is returned by the school, then the student (or parent, if a Federal PLUS Loan) must return or repay, as appropriate, the remaining grant and loan funds. The student (or parent, if a Federal PLUS Loan) will be notified of the amount that must be returned or repaid, as appropriate.



Degree programs (associate's, bachelor's, master's and doctorate) at Colorado Technical University are organized under the Colleges of Business and Management, Criminal Justice and Public Administration, Engineering and Computer Science, Health Sciences, and Information Systems and Technology. Each of these colleges offers programs in a number of different areas. Some degree programs have courses that might be shared by two or more colleges. Many of the degree programs are also available in the university's online program. This program allows students to complete degrees 100% online through the university's online division (CTU Online) without having to attend courses at a physical location. Programs are offered entirely over the internet through CTU's Virtual Campus.

In addition, the University's Institute for Advanced Studies (IAS) offers executive doctoral degrees in Management, Computer Science and Computer Science with a concentration in Enterprise Information Systems. IAS also offers executive programs at the Master's level in Business and Management.

### **CTU PROFESSIONAL LEARNING MODEL (PLM)**

CTU's Professional Learning Model is founded on the idea that students learn best by working on real-world, professional projects related to their chosen career fields. By working with hands-on, industry-related projects and experiences, students develop the expertise to apply conceptual knowledge to get effective results. Through professional learning, students experience the complexity of real world problems and learn to select an appropriate approach to a problem that has more than one solution. Assessment is integrated into the learning by defining the professional standards of performance.

### **GRADUATE DEGREES OFFERED**

**[Doctorate (D), Master of Science (MS), Master of Science in Management (MSM), Master of Business Administration (MBA)]**

#### **Doctoral and Executive Master's Degrees Institute for Advanced Studies (IAS)**

Colorado Technical University's Institute for Advanced Studies was established in Colorado Springs to foster applied research as well as innovation in graduate education. The redesigned doctoral programs combine applied research in the form of multiple publishable projects with an accessible executive format, requiring a limited number of short residential sessions. A parallel revolutionary design has been completed for an Executive MBA that integrates globalization, ethics, innovation, entrepreneurship, and decision making across the curriculum. The institute also sponsors a series

of distinguished lecturers, brought in from around the world to speak to cohorts of doctoral students and to enrich the University community. We also recognize applied scholarly research through the naming of faculty, students and alumni from across the University as Fellows of the Institute.

Colorado Technical University has been an innovator in the field of higher education for more than 40 years and has offered doctoral degrees for 12 years. In 2004, in order to better serve both students and the organizations that employ them, we redesigned the doctoral programs and now offer executive format doctoral degrees in Management, Computer Science and Computer Science with a concentration in Enterprise Information Systems. The programs are no less rigorous than the traditional dissertation-based programs, but we believe that the six projects and executive format will help our students achieve success and produce publishable papers in a shorter period of time. We also believe that this approach will enable our students to more quickly move their ideas from theory to application.

What is the difference between a doctoral (applied) degree and a Ph.D. (philosophical) degree? The main distinction is that the Colorado Technical University (CTU) doctorates – applied degrees – focus on preparing graduates to make a distinctive contribution to their professional fields versus the Ph.D. which focuses on theory and research. To understand the difference, consider this example: In the medical field, you may complete either a Doctor of Medicine (M.D. – applied) or the Doctor of Philosophy (Ph.D. – philosophical). Both develop and use medical theory and treatment (problem solving) knowledge as a base. The M.D., however, applies that knowledge to solve medical problems while the Ph.D. uses the knowledge for speculative inquiry (a theoretical approach) into the field of medicine. Doctors of both degrees carry out research, publish in journals, and further their professions. The Institute for Advanced Studies offers several doctoral degrees and an Executive MBA degree in collaboration with the following colleges within CTU:

#### **College of Business and Management**

Management (D)

Business Administration (Executive MBA)

#### **College of Engineering and Computer Science**

Computer Science (D)

#### **College of Information Systems and Technology**

Computer Science/Enterprise Information Systems (D)



## Master's Degree Programs

Colorado Technical University master's degree programs are designed to provide additional breadth and depth beyond the bachelor's level in focused areas of study. Degrees can be completed in as little as 16-1/2 months, taking one course at a time. Some degrees offer concentrations that allow students to have even more focus on specific areas of knowledge and to support a variety of individual career goals.

The program content and structure have been developed in conjunction with CTU Advisory Boards and are designed to accommodate the working adult and to graduate productive, successful leaders. Program outcomes include:

- Demonstrate an understanding of effective leadership strategies and skills
- Conduct professional, scholarly applied research
- Demonstrate a depth of knowledge and understanding in their chosen fields
- Utilize analytical and critical thinking skills in order to synthesize, evaluate and integrate concepts and knowledge for effective decision analysis and problem solving
- Communicate information professionally, both in oral and written forms

The requirements for each program are listed in this catalog. By using the annual schedule of class offerings published by the university and the quarterly schedule of classes, students can develop a program to meet their needs in terms of academic work load, time scheduling, and courses selected. Degrees that are offered 100% online begin every 5 1/2 weeks.

### College of Business and Management

Accounting (MBA/MS)

Business Administration (MBA, Executive MBA)

Business Management (MSM)

Criminal Justice (MSM) – cross listed with the College of Criminal Justice and Public Administration

Finance (MBA)

Health Care Management (MBA) – cross listed with the College of Health Sciences

Human Resource Management (MBA)

Information Systems Security (MSM) (shared degree with the College of Information Systems and Technology)

Information Technology Management (MSM)

Information Technology/Project Management (MSM) (shared degree with the College of Information Systems and Technology)

Insurance and Risk Management (MBA)

Logistics/Supply Chain Management (MBA)

Management (DM)

Marketing (MBA)

Mediation and Dispute Resolution (MBA)

Operations Management (MBA)

Project Management (MBA/MSM)

Technology Management (MBA)

### College of Criminal Justice and Public Administration

Criminal Justice (MSM) – cross listed with the College of Business and Management

### College of Engineering and Computer Science

Computer Engineering (MS)

Computer Science (D, MS)

Database Systems (MS)

Electrical Engineering (MS)

Security (MS)

Software Engineering (MS)

Systems Engineering (MS)

### College of Health Sciences

Health Care Management (MBA) – cross listed with the College of Business and Management

### College of Information Systems and Technology

e-Learning and Instructional Technology (M, MS)

Information Technology Management (MSM)

Information Technology/Project Management (MSM) (shared degree with the College of Business and Management)

Information Systems Security (MSM) (shared degree with the College of Business and Management)

## UNDERGRADUATE DEGREES OFFERED

[Bachelor of Science (B.S.), Associate of Science (A.S.), and Associate of Applied Science (A.A.S.)]

### General Education

All associates and baccalaureate degrees include general education requirements. These requirements help provide graduates with an understanding of the world around them. They provide students with a

foundation in English, mathematics, science, communication, interdisciplinary studies, information technologies, ethics, and the social sciences. CTU is committed to providing graduates with an understanding of diverse cultures, and a well developed ability to think critically and solve problems, and with an appreciation of the value of learning. General education objectives common to all undergraduate programs are that graduates possess the following characteristics:

- An ethical framework that guides both professional and personal decisions
- An appreciation of the diverse national and global cultural environments in which they work
- A breadth of knowledge in the sciences, technology, and humanities
- Professional communication skills
- The ability to work effectively as problem-solving team members
- The ability to formulate and resolve complex problems independently and creatively
- The ability to access, evaluate and use information to create knowledge
- A sense of community responsibility and partnership
- The tools to sustain continuous personal and professional growth
- Competence in their fields of choice

General education objectives are achieved by a combination of courses in general education and through in-depth study in the degree area.

### **Stonecliffe College**

In addition, Colorado Technical University's online division delivers some instruction and degree programs at the associate's level under Stonecliffe College. Stonecliffe College is an academic division of CTU and is built around the innovative traditions that founded Colorado Technical University. It is designed to offer a learning environment customized specifically for the associate-degree learner in a 100% online environment.

#### **College of Business and Management**

Accounting (AAS/ AS/BS/BSBA)  
 Business Administration (AS)  
 Finance (BS/BSBA)  
 Healthcare Management (BSBA)  
 Human Resource Management (BSBA)  
 Information Technology (BSBA)  
 International Business (BSBA)  
 Logistics/Supply Chain Management (BSBA)  
 Management (AAS/BSBA)

Marketing (AS)  
 Marketing Management (BSBA)  
 Marketing and Sales (AAS)  
 Marketing Management (BSBA)  
 Project Management (BS/BSBA)  
 Technology Management (BS)

#### **College of Criminal Justice and Public Administration**

Criminal Justice (AAS/ AS/BS)  
 Cybercrime Investigation (AS/BS)  
 Public Administration (BS)

#### **College of Engineering and Computer Science**

Computer Engineering (BS)  
 Computer Science (BS)  
 Computer Systems Security (AS, BS)  
 Electronics Technology (AS)  
 Electrical Engineering (BS)  
 Software Engineering (BS)

#### **College of Health Sciences**

Healthcare Management (BS)  
 Health Services Administration (BS)  
 Medical Assisting (diploma, AAS/ AS)  
 Medical Billing and Coding (AS)  
 Nursing (A/BS)  
 Practical Nursing (diploma)  
 Radiologic Technology (AAS, BS)  
 Surgical Technology (AAS/AS)

#### **College of Information Systems and Technology**

Advertising and Digital Media Design (BS)  
 Digital Media Design (AS/BS)  
 Enterprise Information Management (BS)  
 Information Systems Management (BS)  
 Information Technology (AS/BS)

#### **Interdepartmental Degrees Offered**

General Studies (AAS/AS)

Colorado Technical University awards academic certificates to students who successfully complete a series of courses within a specified topic area. Certificates are awarded at the undergraduate and the graduate level. Courses required for undergraduate certificates must be completed with a grade of "C" or better. Courses required for graduate certificates must be completed with a grade of "B" or better. Transfer credit, life experience credit or the waiving of prerequisites will be evaluated on a case-by-case basis.

Certain courses required for receiving a certificate may have prerequisites. Please check the course listing in this catalog to determine if a course requires this prerequisite. These prerequisites may be waived by the University Dean, Program Dean or Program Chair.

All certificates are included in their respective degree programs, but may also be taken individually.

## **GRADUATE ACADEMIC CERTIFICATES**

### **Advanced Systems Engineering (8 credits)**

#### **Required Courses**

SE620 System Dynamics, Modeling and Simulation (4)  
SE630 Systems Acquisition Processes and Standards (4)

### **Business Administration (16-18 credits)**

#### **Required Courses**

ACCT614 Applied Managerial Accounting (4)  
ECON616 Applied Managerial Economics (4)  
or  
MGM626 Economics for Decision-Making (5)  
FINC615 Applied Managerial Finance (4)  
or  
MGM625 Applied Finance for Decision-Making (5)  
MGMT600 Applied Managerial Decision-Making (4)

### **Business Administration (18-19 credits - 100% Online)**

#### **Required Courses**

ACC614 Applied Managerial Accounting (4)  
or  
MGM624 Applied Accounting for Decision-Making (5)  
MGM626 Economics for Decision-Making (5)  
MGM625 Applied Finance for Decision-Making (5)  
MGM600 Applied Managerial Decision-Making (4)

### **Business Management (16 credits)**

#### **Required Courses**

IT600 Information Technology Management (4)  
MGMT604 Organizational Behavior (4)  
MKTG630 Applied Managerial Marketing (4)  
PM600 Project Management Processes in Organizations (4)

### **Business Management (17 credits - 100% Online)**

#### **Required Courses**

IT600 Information Technology Management (4)  
MGM604 Organizational Behavior (4)  
MGM630 Applied Managerial Marketing (4)  
MPM650 Project Management Processes in Organizations (5)

### **Computer Engineering (16 credits)**

#### **Required Courses**

CE605 Modern Computer Architecture (4)  
CS651 Computer Systems Security Foundations (4)  
CS671 Software Systems Engineering Process (4)  
CE660 Modern Computer Design (4)

### **Computer Systems Architecture (12 credits)**

#### **Required Courses**

CS630 Modern Operating Systems (4)  
CS635 Computer Networking (4)  
CS644 Computer Systems Architecture (4)

### **Criminal Justice (16 credits)**

#### **Required Courses**

CJUS610 Crime Lab/Evidence Management (4)  
CJUS620 Court Services Management (4)  
CJUS630 Law Enforcement Management (4)  
CJUS640 Corrections Management (4)

### **Criminal Justice (16 credits - 100% Online)**

#### **Required Courses**

CJUS610 Crime Lab/Evidence Management (4)  
CJUS620 Court Services Management (4)  
CJUS630 Law Enforcement Management (4)  
CJUS640 Corrections Management (4)

CS654 Security Management (4)

### **Information Systems Security Management (8 credits)**

#### **Required Courses**

CS651 Computer Systems Security Foundations (4)  
CS654 Security Management (4)

### **Instructional Technology and Design (12 credits)**

#### **Required Courses**

IT600 Information Technology Management (4)  
TLC600 Systems Approach to Instructional Design (4)  
TLC605 Instructional Technology Delivery Systems and Platforms (4)

### **(ISC)2 CISSP / SSCP Exam Prep (8 credits)**

#### **Required Courses**

CS651 Computer Systems Security Foundations (4)  
CS661 Software Information Assurance (4)

### **IT / Business Transformation (16 credits)**

#### **Required Courses**

INTD607 Creative Leadership (4)  
MGMT608 Managing e-Business (4)  
MKTG628 Marketing in the Digital Age (4)  
MGMT638 Transforming the Enterprise with IT (4)

### **IT / Business Transformation (16 credits - 100% Online)**

#### **Required Courses**

INTD670 Leadership and Ethical Decision-Making (4)  
MGM608 Managing E-Business (4)  
MGM628 Marketing in the Digital Age (4)  
MGM638 Transforming the Enterprise with IT (4)

### **Learning Materials Production (12 credits)**

#### **Required Courses**

IT600 Information Technology Management (4)  
TLC600 Systems Approach to Instructional Design (4)  
TLC610 Basic Learning Materials Production (4)

### **Logistics / Supply Chain Management (12 credits)**

#### **Required Courses**

SCM620 Design and Production Considerations (4)  
SCM610 Logistics/Supply Chain Management Inventory and Distribution (4)  
SCM630 Supply Chain/Logistics Cost Analysis (4)

### **Logistics / Supply Chain Management (12 credits - 100% Online)**

#### **Required Courses**

SCM620 Logistics/Supply Chain Management: Impact on Design and Production (4)  
SCM610 Inventory and Distribution (4)  
SCM630 Logistics Cost Analysis in Logistics/Supply Chain Management (4)

### **Management Accounting and Control (12 credits)**

#### **Required Courses**

ACCT624 Advanced Cost Accounting (4)  
ACCT634 Accounting Information Systems (4)  
ACCT644 Management Control and Auditing (4)

### **Management Accounting and Control (14 credits - 100% Online)**

#### **Required Courses**

ACC624 Advanced Cost Accounting (5)  
ACC634 Accounting Information Systems (5)  
ACC644 Management Control and Auditing (4)

### **Marketing Management (13 credits)**

#### **Required Courses**

MKTG618 Marketing Research Methods (5)  
MKTG628 Marketing in the Digital Age (4)  
MKTG638 International Marketing (4)

### **Marketing Management (13 credits - 100% Online)**

#### **Required Courses**

MKT618 Marketing Research Methods (5)  
MKT628 Marketing in the Digital Age (4)  
MKT638 International Marketing (4)

### **Networking and Telecommunications (8 credits)**

#### **Required Courses**

IT640 Networking and Telecommunications (4)  
IT642 Network Administration (4)

### **Operations Management (16 credits)**

#### **Required Courses**

MGMT640 Operations Management (4)  
MGMT646 Managing Service Operations (4)  
MGMT647 Operations Strategy (4)  
PM610 Project Planning, Execution and Closure (4)



## **Operations Management (17 credits - 100% Online)**

### **Required Courses**

MGM640 Operations Management (4)  
 MGM646 Managing Service Operations (4)  
 MGM647 Operations Strategy (4)  
 MPM655 Project Planning, Execution and Closure (5)

## **Organizational Training (12 Credits)**

### **Required Courses**

IT600 Systems Approach to Instructional Design (4)  
 TLC600 Systems Approach to Instructional Design (4)  
 or  
 TLC610 Basic Learning Materials Production (4)  
 TLC620 Organizational Training and Development (4)

## **Project Management (16 credits)**

### **Required Courses**

PM600 Project Management Processes in Organizations (4)  
 PM610 Project Planning, Execution and Closure (4)  
 PM620 Schedule and Cost Control Techniques (4)  
 PM630 Contracting and Procurement in Project Management (4)

## **Project Management (20 credits - 100% Online)**

### **Required Courses**

MPM650 Project Management Processes in Organizations (5)  
 MPM655 Project Planning, Execution and Closure (5)  
 MPM660 Schedule and Cost Control Techniques (5)  
 MPM665 Contracting and Procurement in Project Management (5)

## **Public Administration (16 credits)**

### **Required Courses**

INTD607 Creative Leadership (4)  
 HRMT640 Strategic Human Resource Management (4)  
 MGMT604 Organizational Behavior (4)  
 MGMT623 Public Administration (4)

## **Public Administration (16 credits - 100% Online)**

### **Required Courses**

ID612 Leadership (4)  
 HRM620 Managing Organization Development and Change (4)  
 MGM604 Organizational Behavior (4)  
 MGM623 Managing e-Business (4)

## **Security Certification and Accreditation (4 credits)**

### **Required Course**

CS662 System Security Certification and Accreditation (4)

## **Software Development (12 credits)**

### **Required Courses**

CS640 Software Project Management (4)  
 CS649 Software Design (4)  
 CS675 System Integration and Test (4)

## **Software Systems Engineering (16 credits)**

### **Required Courses**

CS640 Software Project Management (4)  
 CS644 Computer Systems Architecture (4)  
 CS671 Software Systems Engineering Process (4)  
 CS672 Systems Engineering Methods (4)

## **Systems Analysis and Integration (8 credits)**

### **Required Courses**

IT660 Information Technology Systems Development (4)  
 IT662 Information Technology Systems Implementation (4)

## **Systems Engineering (8 credits)**

### **Required Courses**

SE600 Systems Engineering I (4)  
 SE610 Systems Engineering II (4)

## **Systems Engineering (Advanced) (8 credits)**

### **Required Courses**

SE620 System Dynamics, Modeling and Simulation (4)  
 SE630 Systems Acquisition Processes and Standards (4)

## **Technology Management (16 credits)**

### **Required Courses**

IT600 Information Technology Management (4)  
 IT610 Relational Database Management Systems (4)  
 IT640 Networking and Telecommunications (4)  
 PM600 Project Management Processes in Organizations (4)

### **Technology Management (17 credits - 100% Online)**

#### **Required Courses**

IT600 Information Technology Management (4)

IT610 Relational Database Management Systems (4)

IT640 Networking and Telecommunications (4)

MPM650 Project Management Processes in Organizations (5)

### **UNDERGRADUATE ACADEMIC CERTIFICATES**

#### **Accounting Fundamentals (12 credits - 100% Online)**

##### **Required Courses**

ACC201 Accounting I (4)

ACC202 Accounting II (4)

ACC203 Accounting III (4)

#### **Advanced Computer Illustration (8 credits)**

##### **Required Courses**

VC225 Computer Illustration I (4)

VC325 Computer Illustration II (4)

#### **Advanced Desktop Publishing (16 credits)**

##### **Required Courses**

VC270 Desktop Publishing I (4)

VC370 Desktop Publishing II(4)

VC371 Desktop Publishing III (4)

VC465 Editorial Design (4)

#### **Advanced Financial Management (20 Credits - 100% Online)**

##### **Required Courses**

FIN354 Risk Management (4)

FIN356 International Finance (4)

FIN412 Money and Capital Markets (6)

FIN434 Corporate Finance (6)

#### **Advanced Marketing Techniques (12 credits)**

##### **Required Courses**

BADM475 Small Business Management and Entrepreneurship (4)

MKTG410 International Marketing (4)

MKTG420 Product Service Planning (4)

### **Advertising and Marketing Principles (12 credits)**

#### **Required Courses**

BADM100 Introduction to Business (4)

MKTG210 Introduction to Marketing (4)

VC221 Advertising Principles (4)

### **Associate in Project Management (12 credits)**

#### **Required Courses**

PM210 Introduction to Project Management (4)

PM220 Project Management Tools (4)

PM310 Project Planning (4)

### **Basic Financial Management (16 credits)**

#### **Required Courses**

FIN220 Financial Statement Analysis (4)

FIN310 Financial Management Principles (4)

FIN322 Investments (4)

ACC341 Financial Accounting (4)

### **Basics of Accounting (12 credits)**

#### **Required Courses**

ACCT201 Accounting I (4)

ACCT202 Accounting II (4)

ACCT203 Accounting III (4)

### **Basics of Accounting (8 credits - 100% Online)**

#### **Required Courses**

ACC350 Managerial Accounting (4)

FIN310 Financial Management Principles (4)

### **Basics of Accounting and Finance (16 credits)**

#### **Required Courses**

ACCT201 Accounting I (4)

ACCT202 Accounting II (4)

ACCT203 Accounting III (4)

FINC400 Financial Management (4)

### **Basics of Accounting and Finance (16 credits - 100% Online)**

#### **Required Courses**

ACC201 Accounting I (4)

ACC202 Accounting II (4)

ACC203 Accounting III (4)

FIN310 Financial Management Principles (4)

### **Business Concepts (18 credits – 100% Online)**

#### **Required Courses**

ACC201 Accounting I (4)  
MGM105 Professional Communication (4)  
MGM110 Principles of Business (4)  
MGM260 Fundamentals of Management (6)

### **Business Fundamentals (16 credits)**

#### **Required Courses**

HRMT210 Introduction to Human Resource Management (4)  
IT190 Introduction to IT (4)  
BADM100 Introduction to Business (4)  
MKTG210 Introduction to Marketing (4)

### **Business Fundamentals (16 credits - 100% Online)**

#### **Required Courses**

HRM315 Managing Human Resources (4)  
MGM310 e-Business (4)  
MGM330 Business Decision Making (4)  
MKG305 Marketing and the Virtual Marketplace (4)

### **Business in the Global Environment (16 credits)**

#### **Required Courses**

BADM100 Introduction to Business (4)  
BADM150 Contemporary Business Trends (4)  
HIST210 World History and Culture I (4)  
BADM350 International Business (4)

### **Business in the Global Environment (12 credits - 100% Online)**

#### **Required Courses**

ECO305 Global Managerial Economics (4)  
MGM335 International Business Practices (4)  
MKT305 Marketing and the Virtual Marketplace (4)

### **C++ Programming (12 credits)**

#### **Required Courses**

CS115 Programming with C++ (4)  
CS215 Intermediate C++ Programming (4)  
CS230 Data Structures (4)

### **C++ Programming (Advanced) (8 credits)**

#### **Required Courses**

CS265 Algorithms (4)  
CS325 Advanced C++ Programming (4)

### **Cisco CCNA™ Fundamentals (8 credits)**

#### **Required Courses**

IT200 Introduction to Networking (4)  
ITM321 Certified Network Associate Prep (4)

### **Client Java Programming (8 credits)**

#### **Required Courses**

IT115 Java Programming (4)  
IT215 Intermediate Java Programming (4)  
or  
CS245 Programming Languages: Java for C++ Programmers (4)

### **Client Java Programming (8 credits – 100% Online)**

#### **Required Courses**

IT170 Introduction to Object Oriented Programming I (2)  
IT171 Introduction to Object Oriented Programming II (2)  
IT270 Intermediate Object Oriented Programming I (2)  
IT271 Intermediate Object Oriented Programming II (2)

### **CompTIA A+™ Fundamentals (4 credits)**

#### **Required Course**

IT180 Introduction to Computer Technology (4)

### **CompTIA Network+™ Fundamentals (4 credits)**

#### **Required Course**

IT200 Introduction to Networking (4)

### **CompTIA Network+™ Fundamentals (6 credits - 100% Online)**

#### **Required Courses**

IT242 Operating Systems and Practical Networking (3)  
IT382 Systems Administration (3)

### **CompTIA Security+™ Fundamentals (8 credits)**

#### **Required Courses**

CSS150 Introduction to Computer Security (4)  
CSS200 Principles of Network Security (4)

**Computer Forensics (4 credits)****Required Course**

CSS350 Computer Forensics I (4)

**Computer Forensics (Advanced) (4 credits)****Required Course**

CSS351 Computer Forensics II (4)

**Computer Network Telecommunications (8 credits)****Required Courses**

IT200 Introduction to Networking (4)

IT300 Computer Networks and Communications (4)

**Computer Network Telecommunications (10 credits - 100% Online)****Required Courses**

IT242 Operating Systems and Practical Networking (3)

IT382 Systems Administration (3)

IT301 Computer Networks and Communications (4)

**Computer Security Methods (12 credits)****Required Courses**

CSS300 Vulnerability Assessment and Management (4)

CSS320 Process Engineering (4)

CSS380 Business Continuity and Disaster Recovery Planning (4)

**Computer Systems Architecture (8 credits)****Required Courses**

CE242 Computer Architecture (4)

IT400 Information System Architecture (4)

**Contract Management (16 credits)****Required Courses**

SCM320 Contracts and Procurement (4)

SCM330 Contract Pricing and Negotiation (4)

SCM410 Contract Management (4)

BADM415 Quality and Six Sigma (4)

**Corrections Technician (12 credits)****Required Courses**

CJUS201 Law Enforcement Operations and Report Writing (4)

CJUS263 Community Corrections (4)

BADM305 Organizational Behavior (4)

**Corrections Technician (14 credits - 100% Online)****Required Courses**

CJUS201 Law Enforcement Operations and Report Writing (4)

CJUS263 Community Corrections (4)

CJUS277 Security Management (6)

**Crime Scene Investigation (16 credits)****Required Courses**

CJUS440 The Laws of Evidence (4)

CJUS448 Criminal Investigation (4)

CJUS450 Forensic Criminology (4)

PSYC436 Forensic Psychology (4)

**Crime Scene Investigation (16 credits - 100% Online)****Required Courses**

CJUS440 The Laws of Evidence (4)

CJUS448 Criminal Investigation (4)

CJUS450 Forensic Criminology (4)

PSYC436 Forensic Psychology (4)

**Design Principles (12 credits)****Required Courses**

VC125 Visual Thinking and Layout Techniques (4)

VC120 Design Fundamentals (4)

VC150 Theory and History of Design (4)

**Desktop Publishing (8 credits)****Required Courses**

VC270 Desktop Publishing I (4)

VC370 Desktop Publishing II (4)

**Digital Imaging Techniques (12 credits)****Required Courses**

VC242 Digital Imaging and Photography I (4)

VC243 Digital Imaging and Photography II (4)

VC375 Digital Video Editing (4)

**Disaster Planning and Recovery (4 credits)****Required Course**

CSS380 Bus. Continuity and Disaster Recovery Planning (4)

### **Domestic Violence (16 credits)**

#### **Required Courses**

CJUS201 Law Enforcement Operations and Report Writing (4)  
 CJUS300 Victimology (4)  
 CJUS343 Criminology (4)  
 CJUS365 Criminal Law (4)

### **Domestic Violence Interventions (12 credits)**

#### **Required Courses**

CJUS201 Law Enforcement Operations and Report Writing (4)  
 CJUS300 Victimology (4)  
 CJUS365 Criminal Law (4)

### **Domestic Violence Interventions (16 credits - 100% Online)**

#### **Required Courses**

CJUS201 Law Enforcement Operations and Report Writing (4)  
 CJUS302 Victimology (6)  
 CJUS367 Criminal Law (6)

### **Drawing (8 credits)**

#### **Required Courses**

VC110 Drawing I (4)  
 VC210 Drawing II (4)

### **e-Business Management (12 credits)**

#### **Required Courses**

EBUS308 Introduction to e-Business (4)  
 MKTG301 Introduction to Marketing (4)  
 PM210 Introduction to Project Management (4)

### **Electr onic System Design (Advanced) (16 credits)**

#### **Required Courses**

EE472 Advanced Digital System Design (4)  
 EE490 Product Design I (4)  
 EE491 Product Design II (4)  
 PM210 Introduction to Project Management (4)

### **Financial Accounting (12 credits)**

#### **Required Courses**

ACCT341 Intermediate Accounting I (4)  
 ACCT342 Intermediate Accounting II (4)  
 ACCT421 Advanced Accounting (4)

### **Financial Accounting (12 credits - 100% Online)**

#### **Required Courses**

ACC345 Intermediate Accounting I(4)  
 ACC346 Intermediate Accounting II (4)  
 ACC355 Advanced Accounting (4)

### **Financial Management (16 credits)**

#### **Required Courses**

FINC210 Financial Management Principles (4)  
 FINC220 Financial Statement Analysis (4)  
 FINC410 Corporate Finance (4)  
 FINC420 International Finance (4)

### **Financial Statement Analysis (12 credits)**

#### **Required Courses**

ACCT341 Intermediate Accounting I (4)  
 ACCT342 Intermediate Accounting II (4)  
 FINC400 Financial Management (4)

### **Financial Statement Analysis (12 credits - 100% Online)**

#### **Required Courses**

ACC345 Intermediate Accounting I (4)  
 ACC346 Intermediate Accounting II (4)  
 FINC220 Financial Statement Analysis (4)

### **Fundamentals of Computer Illustration (12 credits)**

#### **Required Courses**

VC120 Design Fundamentals (4)  
 VC210 Drawing II (4)  
 VC225 Computer Illustration I (4)

### **Fundamentals of Digital Imaging (8 credits)**

#### **Required Courses**

VC242 Digital Imaging and Photography I (4)  
 VC243 Digital Imaging and Photography II (4)

### **Help Desk Support (4 credits)**

#### **Required Course**

IT225 IT Support Systems (4)



### **Human Resource Development (16 credits)**

#### **Required Courses**

HRMT210 Introduction to Human Resource Management (4)  
HRMT300 Managing Employee Performance (4)  
HRMT325 Compensation and Benefits (4)  
HRMT410 Training and Employee Development (4)

### **Human Resource Development (20 credits - 100% Online)**

#### **Required Courses**

MGM260 Fundamentals of Management (6)  
HRM350 Workforce Effectiveness (4)  
HRM345 Building Effective Teams (4)  
HRM460 Employee Training and Development (6)

### **Human Resource Management (16 credits)**

#### **Required Courses**

HRMT210 Introduction to Human Resource Management (4)  
HRMT220 Staffing the Organization (4)  
HRMT330 HRM Legal Environment (4)  
HRMT420 Managing Labor Management Relations (4)

### **Human Resource Management (20 credits - 100% Online)**

#### **Required Courses**

HRM335 Legal Issues in HRM (4)  
HRM450 Organizational Change (6)  
HRM355 Labor Relations (4)  
HRM415 Compensation and Benefits (6)

### **Income Tax (8 credits)**

#### **Required Courses**

ACCT361 Tax Accounting I (4)  
ACCT362 Tax Accounting II (4)

### **Income Tax (12 credits - 100% Online)**

#### **Required Courses**

ACC455 Tax Accounting I (6)  
ACC456 Tax Accounting II (6)

### **International Business (16 credits)**

#### **Required Courses**

BADM210 Introduction to International Business (4)  
BADM220 International Business Communication (4)  
MKTG410 International Marketing (4)  
FINC420 International Finance (4)

### **International Business (20 credits - 100% Online)**

#### **Required Courses**

FIN356 International Finance (4)  
MGM336 Management in International Business (4)  
MGM456 Trade in International Business (6)  
MKT446 Marketing Concepts in International Business (6)

### **Investments (16 credits)**

#### **Required Courses**

FINC220 Financial Statement Analysis (4)  
FINC310 Money and Capital Markets (4)  
FINC320 Investments (4)  
FINC330 Risk Management (4)

### **Juvenile Delinquency and Victim Services (12 credits)**

#### **Required Courses**

CJUS300 Victimology (4)  
CJUS342 Juvenile Delinquency (4)  
SOCL356 American Diversity (4)

### **Juvenile Delinquency and Victim Services (16 credits - 100% Online)**

#### **Required Courses**

CJUS302 Victimology (6)  
CJUS344 Juvenile Delinquency (6)  
SOCL356 American Diversity (4)

### **Law Enforcement Skills (16 credits)**

#### **Required Courses**

CJUS201 Law Enforcement Operations and Report Writing (4)  
CJUS365 Criminal Law (4)  
CJUS375 Criminal Procedure (4)  
CJUS448 Criminal Investigation (4)

### Law Enforcement Skills (18 credits - 100% Online)

## Required Courses

CJUS201 Law Enforcement Operations and Report Writing (4)  
CJUS367 Criminal Law (6)  
CJUS375 Criminal Procedures (4)  
CJUS448 Criminal Investigation (4)

### Legal Studies and Court Process (12 credits)

**Required Courses**  
CJUS365 Criminal Law (4)  
CJUS375 Criminal Procedures (4)  
CJUS440 The Laws of Evidence (4)

### Legal Studies and Court Process (14 credits - 100% Online)

**Required Courses**  
CJUS367 Criminal Law (6)  
CJUS375 Criminal Procedures (4)  
CJUS440 The Laws of Evidence (4)

**Logistics / Supply Chain Management (12 credits)**

**Required Courses**  
SCM210 Introduction to Logistics/Supply Chain Management (4)  
SCM220 Transportation and Distribution Management (4)  
SCM310 Material and Inventory Management (4)

### Management Essentials (12 credits)

**Required Courses**  
 HRMT210 Human Resource Management (4)  
 BADM100 Introduction to Business (4)  
 BADM305 Organizational Behavior (4)

**Management Essentials (20 credits - 100% Online)**

**Required Courses**  
ACC201 Accounting I (4)  
HRM450 Organizational Change (6)  
MGM335 Organizational Behavior Principles (4)  
MGM465 Business Strategy (6)

### Marketing Research (16 credits)

### Required Courses

BADM440 Research Design Methods and Applications (4)  
MKTG320 Consumer Behavior (4)  
MKTG330 Marketing Research (4)  
MKTG410 International Marketing (4)

## Marketing Research (20 credits - 100% Online)

## Required Courses

MKT250 Marketing (6)  
MKT350 Marketing Research Practices (4)  
MKT460 Integrated Marketing Strategies (6)  
MGM330 Business Decision Making (4)

## Object-Oriented Methods (4 credits)

**Required Course**  
CS376 Object-Oriented Methods (4)

## Object-Oriented Methods (4 credits - 100% Online)

**Required Course**  
CS475 Object-Oriented Methods (4)

## Organizational Systems Improvement (12 credits)

**Required Courses**  
 HRMT440 Managing Organizational Change (4)  
 BADM360 Operations Management (4)  
 BADM480 Business Strategy and Policy (4)

**Organizational Systems Improvement (18 credits - 100% online)**

**Required Courses**  
 HRM450 Organizational Change (4)  
 MGM340 Operations Management Principles (4)  
 MGM335 Organizational Behavior Principles (4)  
 MGM465 Business Strategy (6)

**Personal Financial Planning (24 credits)**

**Required Courses**  
FINP310 Taxation in Financial Planning (4)  
FINP315 Principles of Risk Management and Insurance (4)  
FINP320 Investments (4)  
FINP420 Employee Benefits and Retirement Planning (4)  
FINP430 Estate Planning (4)  
FINP450 Financial Planning Capstone (4)

### Professional Communication (8 credits)

**Required Courses**  
ENGL200 Professional Writing (4)  
ENGL210 Professional Speaking (4)

**Professional Communication (10 credits - 100% Online)**

**Required Courses**

ENG202 Professional Writing and Composition (6)  
MGM105 Professional Communication (4)

**Programmer Analyst (16 credits)**

**Required Courses**

CS265 Algorithms (4)  
CS340 Operating Systems (4)  
CS366 Software Engineering Methods (4)  
CS383 Software Testing (4)

**Project Control (16 credits)**

**Required Courses**

PM320 Project Scheduling and Resource Allocation (4)  
PM330 Project Cost Estimating and Control (4)  
PM410 Project Risk and Quality (4)  
PM420 Project Program and Portfolio Management (4)

**Project Quality and Control (20 credits - 100% Online)**

**Required Courses**

MPM434 Project Scheduling and Cost (6)  
MPM344 Project Risk Management (4)  
MPM357 Project Performance and Quality Assurance (4)  
MPM401 Project Management Theory (6)

**Project Management Fundamentals (20 credits - 100% Online)**

**Required Courses**

MPM401 Project Management Theory (6)  
MPM332 Organizational Leadership (4)  
MPM346 Contracts and Procurement (4)  
MPM466 HR Project Management (6)

**Quality Management (8 credits)**

**Required Courses**

BADM370 Quality Management (4)  
PMGT466 Project Performance and Quality Assurance (4)

**Risk and Legal Environment (12 credits)**

**Required Courses**

BADM410 Business Law I (4)  
BADM420 Business Law II (4)  
FINP315 Principles of Risk Management and Insurance (4)

**Sales and Marketing (16 credits)**

**Required Courses**

MKTG210 Introduction to Marketing (4)  
MKTG220 Advertising and Media Practices(4)  
MKTG310 Sales Management (4)  
MKTG320 Consumer Behavior (4)

**Sales and Marketing (18 credits - 100% Online)**

**Required Courses**

MKT305 Marketing and the Virtual Marketplace (4)  
MKT325 Consumer Behavior Fundamentals (4)  
MKT355 Principles of Advertising and Public Relations (4)  
MKT430 Personal Selling and Customer Focus (6)

**Security Risk Management (8 credits)**

**Required Courses**

CSS200 Principles of Network Security (4)  
CSS250 Security Risk Management (4)

**Security System Management (8 credits)**

**Required Courses**

CSS300 Vulnerability Assessment and Management (4)  
CSS440 Security Policy and Leadership (4)

**Server Java Programming (4 credits)**

**Required Course**

IT315 Advanced Java (4)

**Small Business Management and Entrepreneurship (12 credits)**

**Required Courses**

BADM475 Small Business Management and Entrepreneurship (4)  
FINC400 Financial Management (4)  
HRMT210 Introduction to Human Resource Management (4)

**Software Engineering Application (8 credits)**

**Required Courses**

CS481 CS Capstone I (4)  
CS482 CS Capstone II (4)  
or  
IT481 IT Capstone I (4)  
IT482 IT Capstone II (4)

or

IT491 IT Capstone I (2)

IT492 IT Capstone II (2)

IT493 IT Capstone III (2)

IT494 IT Capstone IV (2)

or

SWE481 Software Engineering Capstone I (4)

SWE482 Capstone Engineering Capstone II (4)

### **Software Engineering Process (8 credits)**

#### **Required Courses**

CS366 Software Engineering Methods (4)

CS376 Object-Oriented Methods (4)

### **Typography (8 credits)**

#### **Required Courses**

VC130 Typography I (4)

VC230 Typography II (4)

### **UNIX Network Administration (8 credits)**

#### **Required Courses**

IT200 Introduction to Networking (4)

IT340 Client/Server System and Network Administration (4)

### **UNIX Network Administration (9 credits - 100% Online)**

#### **Required Courses**

IT242 Operating Systems and Practical Networking (3)

IT362 Network and Systems Administration (3)

IT382 Systems Administration (3)

### **UNIX Programming (8 credits)**

#### **Required Courses**

CS146 Introduction to UNIX (4)

CS345 UNIX System Programming (4)

### **Visual Basic Programming (8 credits)**

#### **Required Courses**

EBUS115 Visual Basic Programming (4)

EBUS215 Intermediate Visual Basic Programming (4)

### **Web Page Development (8 credits)**

#### **Required Courses**

EBUS208 Fundamentals of Web Publishing (4)

EBUS218 Multimedia for the Web (4)

### **Web Page Development (8 credits - 100% Online)**

#### **Required Courses**

IT208 Web Portfolio Publishing (4)

IT218 Multimedia for the Web (4)

### **Web Page Development (Advanced) (4 credits)**

#### **Required Course**

EBUS228 Advanced Web Publishing (4)

### **Windows® Programming (Advanced) (8 credits)**

#### **Required Courses**

CS320 Computer Graphics (4)

CS360 Windows Programming (4)

## ATTENDANCE

The University posts attendance for each course every week (100% online degree programs may differ). The nature of the learning environment and the special needs of adult students require a revised definition of “present” if one of the following conditions applies:

- The student is physically in the classroom and participating, or
- The student has participated in the learning environment (turned in required work, requested and received course content missed in class, participated in an online discussion/ chat group, has communicated with the professor and made adequate progress in the course to date).

Although attendance alone should not be used as a percentage of the overall grade, participation may be evaluated by the professor as a percentage of the course grade.

## ATTENDANCE IN HEALTHCARE PROGRAMS

Given the high risk nature of the healthcare environment and the importance of a safe and well educated healthcare professional, Health Science (Nursing, Medical Assistant, Radiology, Surgical Technology and Medical Billing and Coding) students who miss any 3 sessions (class, lab, clinical or externship) will receive a “W” for the class. Students enrolled in healthcare programs delivered 100% online will have different criteria for attendance.

## ACADEMIC ADVISING

Your first advisor at CTU is your Admission’s Advisor. Your advisor will help you with advice on academic degree selection and initial registration of courses. An Academic Advisor is available to help you throughout your program at Colorado Technical University. This includes registering for classes, evaluation of transfer credit, arranging credit for life experience and course challenges, as well as any other issues that may come up.

For help with a specific class, start with your Professor. Colorado Technical University’s professors are eager to help you learn. Your professor can also help you understand the career field you are entering and will give you advice for achieving your career goals.

## ADDING COURSES

Students may add courses to their registration up to the end of the first week of classes in a term. Adding a course after the first week will require permission

from an academic official. Students taking classes at CTU’s ground campuses cannot add a course offered in the 100% online program during the first week. Those students wanting to take 100% online program courses need to add classes two weeks prior to the beginning of the online course.

## ADMINISTRATIVE (AUTOMATIC) DROPS

Attendance will be reviewed at the end of each week to determine whether a student is officially attending (see definition of “present”).

- 11 week course: students who are not posted as present for three consecutive weeks will be administratively dropped.
- 5 ½ week course: students who are not posted as present for 15 consecutive calendar days will be administratively dropped.
- Continuing students enrolled in a 100% online program will be administratively dropped if they do not participate in the first week.
- Students taking classes at any of CTU’s ground campuses and who do not participate within the first two weeks of a ground class will be administratively dropped.

## COURSE LOAD

The normal academic load for a full-time student varies by academic level:

Doctorate: 8 or more quarter credit hours per quarter

Master’s: 4 quarter hours per session, 8 per quarter or more

Undergraduate: 12 or more quarter credit hours per quarter

## PREPARATORY COURSES (000-099 LEVEL)

Colorado Technical University offers additional courses in math and English for those students who need assistance in developing their skills in these particular areas. Preparatory courses are offered at a reduced charge, are NOT calculated in the student’s maximum time frame of attendance, but are included on the student’s transcript. The grades for these courses are NOT included in the student’s grade point average and will not be used to meet graduation requirements.

## GRADE LEVEL CLASSIFICATION

Undergraduate credit hours

Freshman.....0-35

Sophomore.....36-71

Junior.....72-108

Senior.....109+



## COURSE NUMBERING SYSTEM

Undergraduate preparatory courses are numbered 0 – 99 and do not count toward graduation.

Undergraduate credit courses are numbered 100 – 499.

Master's foundation courses (not counted toward the degree) are numbered 500 – 599.

Master's credit courses are numbered 600 – 699.

Doctorate credit courses are numbered 700 – 899.

## GRADING SYSTEM

Grade reports are available to students at the completion of each term/session.

Grades are based on the quality of work as indicated on the course syllabus.

Earned quality points are calculated for each course by multiplying the quality point value for the grade received for the course multiplied by the credit hour value of the course. For example, a 4.0 credit course with a grade of B would earn 12.0 quality points (credit value of course (4) times quality point value of B (3)). The Cumulative Grade Point Average (CGPA) is calculated by dividing the total earned quality points by the total credits completed.

The following is a breakdown of letter grades, description, percentage points, meaning and quality points.

### Undergraduate Grade Scale

| Letter Grades | Description    | Percent  | Included in Credits Earned | Included in Credits Attempted | Included in CGPA | Quality Points |
|---------------|----------------|----------|----------------------------|-------------------------------|------------------|----------------|
| A             | Excellent      | 94 – 100 | Yes                        | Yes                           | Yes              | 4.0            |
| A-            |                | 90 – 93  | Yes                        | Yes                           | Yes              | 3.7            |
| B+            |                | 86 – 89  | Yes                        | Yes                           | Yes              | 3.3            |
| B             | Good           | 83 – 85  | Yes                        | Yes                           | Yes              | 3.0            |
| B-            |                | 80 – 82  | Yes                        | Yes                           | Yes              | 2.7            |
| C+            |                | 76 – 79  | Yes                        | Yes                           | Yes              | 2.3            |
| C             | Fair           | 73 – 75  | Yes                        | Yes                           | Yes              | 2.0            |
| C-            |                | 70 – 72  | Yes                        | Yes                           | Yes              | 1.7            |
| D+            |                | 66 – 69  | Yes                        | Yes                           | Yes              | 1.3            |
| D             | Poor           | 63 – 65  | Yes                        | Yes                           | Yes              | 1.0            |
| D-            |                | 60 – 62  | Yes                        | Yes                           | Yes              | 0.7            |
| F             | Unsatisfactory | 0 – 59   | Yes                        | Yes                           | Yes              | 0.0            |
| P             | Passing        | A/R      | Yes                        | Yes                           | No               | --             |

|    |                 |    |     |     |    |    |
|----|-----------------|----|-----|-----|----|----|
| I  | Incomplete      | -- | No  | Yes | No | -- |
| W  | Withdraw        | -- | No  | Yes | No | -- |
| PR | Proficiency     | -- | Yes | Yes | No | -- |
| TC | Transfer Credit | -- | Yes | Yes | No | -- |
| AU | Audit           | -- | No  | No  | No | -- |

### Graduate Grade Scale

| Letter Grades | Description     | Percent  | Included in Credits Earned | Included in Credits Attempted | Included in CGPA | Quality Points |
|---------------|-----------------|----------|----------------------------|-------------------------------|------------------|----------------|
| A             | Excellent       | 94 – 100 | Yes                        | Yes                           | Yes              | 4.0            |
| A-            |                 | 90 – 93  | Yes                        | Yes                           | Yes              | 3.7            |
| B+            |                 | 86 – 89  | Yes                        | Yes                           | Yes              | 3.3            |
| B             | Good            | 83 – 85  | Yes                        | Yes                           | Yes              | 3.0            |
| B-            |                 | 80 – 82  | Yes                        | Yes                           | Yes              | 2.7            |
| C+            |                 | 76 – 79  | Yes                        | Yes                           | Yes              | 2.3            |
| C             | Fair            | 73 – 75  | Yes                        | Yes                           | Yes              | 2.0            |
| F             | Unsatisfactory  | 0 – 72   | Yes                        | Yes                           | Yes              | 0.0            |
| I             | Incomplete      | --       | No                         | Yes                           | No               | --             |
| W             | Withdraw        | --       | No                         | Yes                           | No               | --             |
| TC            | Transfer Credit | --       | Yes                        | No                            | No               | --             |
| AU            | Audit           | --       | No                         | No                            | No               | --             |

### Doctorate Grade Scale

| Letter Grades | Description    | Percent  | Included in Credits Earned | Included in Credits Attempted | Included in CGPA | Quality Points |
|---------------|----------------|----------|----------------------------|-------------------------------|------------------|----------------|
| A             | Excellent      | 94 – 100 | Yes                        | Yes                           | Yes              | 4.0            |
| A-            |                | 90 – 93  | Yes                        | Yes                           | Yes              | 3.7            |
| B+            |                | 86 – 89  | Yes                        | Yes                           | Yes              | 3.3            |
| B             | Good           | 83 – 85  | Yes                        | Yes                           | Yes              | 3.0            |
| B-            |                | 80 – 82  | Yes                        | Yes                           | Yes              | 2.7            |
| F             | Failing        | 0 – 79   | Yes                        | Yes                           | Yes              | 0.0            |
| I             | Incomplete     | --       | No                         | Yes                           | Yes              | --             |
| S             | Satisfactory   | --       | Yes                        | Yes                           | No               | --             |
| U             | Unsatisfactory | --       | Yes                        | Yes                           | No               | --             |
| W             | Withdraw       | --       | No                         | Yes                           | No               | --             |

## APPLICATION OF GRADES AND CREDITS

The charts above describe the impact of each grade on a student's academic progress. For calculating rate of academic progress (see next section), grades of F (failure), W (withdrawn), and I (incomplete) are counted as hours attempted but are not counted as hours successfully completed.

The student must repeat any required course in which the student receives a grade of F or W, or lower than a "C-" if the course is a prerequisite for another course in a degree program. If the course is no longer offered a substitute course may be used. In the case of a repeated course, the better of the two grades is calculated into the CGPA. The lower grade will include a double asterisk indicating that the course has been repeated. Both original and repeated credits will be counted as attempted credits in rate of progress calculations.

A maximum of two C grades may be used toward graduation in a CTU master's program.

TC (transfer credits) and PR (proficiency) credits are included in the maximum time to complete and the rate of progress calculations. However, they are not counted in the CGPA calculations.

Information on incomplete (I) grades can be found on page 34.

Preparatory courses are not counted as credits toward the fulfillment of degree requirements, nor are these courses included in Satisfactory Academic Progress (SAP) calculations (GPA, completion rate, and rate of progress).

\*Note: Specific programs may require higher academic standards for graduation and/or satisfaction of a prerequisite. If such standards exist, the academic department will provide a handout explaining these standards.

## DOCTORAL GRADING POLICY

Students enrolled in the CTU doctoral program are expected to maintain high academic standards. More information on grading standards for the doctoral program is available from the Chancellor of the Institute for Advanced Studies.

## GRADUATION REQUIREMENTS

### GPA

In order to graduate, a student must have earned a minimum of a 2.0 CGPA (associate's/bachelors), 3.0 CGPA (masters), or 3.3 CGPA (doctorate) and must have successfully completed all required credits within the maximum credits (or time for doctorate) that may be attempted. Students must also be current on all financial obligations in order to receive final transcripts.

### Residency Requirements

To earn a degree a certain number of credits must be taken at CTU. The University's residency requirement is 25% of total credit hours for associates and bachelor's degrees and enrollment at CTU at the time of degree completion.

Master's students may transfer up to two related courses. All other master's level requirements must be completed in residence, and the student must be enrolled at the time of degree completion.

All CTU doctoral requirements must be completed in residence at the University. Check with the Institute for Advanced Studies for exceptions.

## HONORS

### Undergraduate Graduation Honors

The following honors are awarded upon graduation in an undergraduate program:

| Degree       | Honor           | Cumulative GPA |
|--------------|-----------------|----------------|
| B.S.         | Summa Cum Laude | 3.9 – 4.0      |
|              | Magna Cum Laude | 3.75 – 3.89    |
|              | Cum Laude       | 3.5 – 3.74     |
| A.S. + A.A.S | Highest Honors  | 3.75 – 4.0     |
|              | Honors          | 3.5 – 3.74     |

## President's List

Full-time students who attain a grade point average of 4.0 for the quarter are eligible for the President's List.

## Dean's List

Full-time students who attain a 3.5 – 3.99 GPA for the quarter with no grade lower than a "C" are eligible for the Dean's List.

## Graduate Honors

Although students that demonstrate academic work at an exceptional level are honored at the undergraduate level, exceptional scholastic achievement is expected at the graduate level. The maintenance of high scholastic standards ensures that Colorado Technical University graduate students have a mastery of the subject matter contained in the graduate program.

## INCOMPLETE POLICY

Incompletes can be granted to students for circumstances beyond the student's control. To receive an incomplete (I), the student must meet all of the following conditions:

- Request the incomplete from the instructor in writing/email, including the reason(s) for the request
- The student must be satisfactorily passing completed assignments at the time the request is made
- An incomplete can only be granted by the faculty member if a student has completed at least six (6) assignments in a 5 ½ week 100% online degree course, or at the discretion of the faculty member in an 11 week course. If a student has not completed the required number of assignments they must request the incomplete from the Program Dean or the Department Chair
- Students must have submitted the completed assignments at least three (3) days prior to the end of the session
- The student must request an incomplete no earlier than the last two (2) weeks of the session, and no later than by 12 noon (Central time) on the last day of the session
- The student is allowed two (2) weeks after the term ends to complete unfinished assignments
- Requirements may differ for doctoral students. Check with the Institute for Advanced Studies

Incomplete grades that are not completed within two weeks after the end of the term will be converted to the letter grade the student will have earned. Instructors have three days at the end of the two week period to convert "I" grades to letter grades. Final grades will affect the student's CGPA.

Requests for exceptions to the incomplete policy must be made to the Program Dean or Chair and/or to [ctuacademicdean@ctuonline.edu](mailto:ctuacademicdean@ctuonline.edu) for those students pursuing degrees 100% online. Exceptions are only made for extenuating circumstances.

## GRADE APPEAL PROCEDURE/POLICY

Colorado Technical University seeks to ensure that academic evaluation is objective, fair and professionally performed. Assessment of a student's performance is one of the primary responsibilities of a faculty member and is solely his/her responsibility. It is essential that academic standards and the integrity of programs and degrees of the institution be the professional judgment of faculty. It is the responsibility of the instructor to explain and interpret the grading system to students. Grades are to be determined within accepted University standards. Guidelines for grading should be distributed at the beginning of each course.

A student who believes a course grade, or grades for select assignments within a course, have been assigned in error or capriciously (i.e., graded on something other than performance in the course, graded to more exacting standards than other students in the course, or graded outside of stated criteria distributed in the course) may take the following steps to seek resolution:

- Confer with the instructor. It is important to fully understand how the grade was determined. The student has an obligation to state the reason(s) why the grade is unjust.
- If a student cannot contact the instructor, the student should contact the appropriate Program Dean or Chair who will designate a faculty member to serve in the instructor's absence. This process should be done immediately after the grade has been posted.
- If resolution is not found, and the student continues to believe the grade has been awarded incorrectly or capriciously, the student can then confer with the Program Dean or Department Chair (or designee) to attempt to find a resolution. The Program Dean or Chair (or designee) will work with the instructor to attempt to find a resolution. The Program Dean or Chair is not authorized to review and/or change a grade unless they have the appropriate credentials for that particular course and/or topic.
- If the above does not resolve the appeal to the satisfaction of the student, the student can then elect to submit a petition in writing to the Grade Appeals Committee at their respective campus or division. This appeal needs to be submitted within two weeks of grade notification. The petition must include evidence demonstrating

how the grade was given incorrectly or was given capriciously. The Grade Appeals Committee will then review the petition, confer with the instructor and review any additional evidence that warrants consideration. After reviewing the petition the Grade Appeals Committee will make one of the following recommendations:

1. There is not a valid reason for the appeal, and the grade stands as assigned.
2. There may have been evidence the grade was assigned incorrectly or capriciously and will need to be reviewed again. If it is determined there is evidence the grade was assigned incorrectly or capriciously, the Program Dean, Chair or their designee will forward the assignments in question to be re-examined by another qualified faculty member.

It is important to note that a grade appeal could result in one of three decisions:

- The grade could remain the same,
- The grade could be raised, or
- The grade could be lowered.

Any late penalties assessed (or other grading policies not met) in awarding the original grade will continue to be applied during the review.

Please note: the University cannot change a reviewed grade back to the original grade if the original grade was better. That compromises the academic integrity of the University and cannot be done.

- Appeals, including individual assignments, will not be considered until final course grades are posted.
- The Chief Academic Officer (or designee) at each campus/division will resolve remaining disputes and will interpret the grade appeal policy.
- Students have the right to appeal any final grade decision to the Academic Appeals Committee. This committee will then review all evidence and make a final decision.

## LATE ASSIGNMENTS

In order to move quickly and successfully through CTU courses, specific deadlines for all assignments will be clearly stated in the course syllabus. Because of the university's learning model (PLM) that revolves around skill development and concept formation through collaborative learning, students are expected to meet due dates.

Should a student be unable to meet a deadline, it is expected the student will make arrangements in advance with the instructor to turn work in late. A penalty for late work will be assigned at the discretion of the faculty member. If a student does not make prior arrangements with the instructor and fails to turn individual work in on time, the following penalties will be applied:

For 5 ½ week courses the following applies:

- Work that is submitted 1 – 2 calendar days AFTER its due date will be graded down 5%
- Work that is submitted 3 – 6 calendar days AFTER its due date will be graded down 10%
- Work submitted more than 7 days past its due date, may or may not be accepted at the discretion of the instructor and if accepted will be graded down 20%
- Final course projects and end-of-term papers must be turned in no later than the last day of class UNLESS an "Incomplete" grade has been arranged in advance of the final course date

For 11 week courses the following applies:

- Work that is submitted 1 – 7 calendar days AFTER its due date will be graded down 10%
- Work that is submitted 8 - 14 calendar days AFTER its due date will be graded down 20%
- No work will be accepted more than 14 days past its due date unless prior approval of the instructor has been obtained. Otherwise the student will receive a zero for the assignment
- Final course projects and end-of-term papers must be turned in no later than the last day of class UNLESS an "Incomplete" grade has been arranged in advance of the final course date
- Incomplete grades must be completed within 14 days after the end of the term

*Exceptions:*

*Discussion Board Questions:* Courses requiring discussion board assignments are designed for maximum student participation and engagement. It is critical to the success of these courses that students contribute to the Discussion Boards in a timely manner. Therefore, no late postings to the Discussion Boards will be accepted without prior arrangement with the instructor.

*Group Projects:* Many CTU courses use small group projects. Because the completion of the project demands timely contributions from all team members, no late submissions of an individual team member will be accepted without prior arrangement with the instructor. Late penalties may be assessed to individual team members. The above stated late penalties will apply.

This policy is intended to promote communication between faculty members and students. We encourage students to work with their instructors to meet the course requirements while balancing their professional and personal obligations.

## ACADEMIC HONESTY

All students are expected to conform to the accepted standards of academic honesty. Any clear violations of these standards, such as cheating, violating copyright laws, or plagiarism are handled promptly, firmly, privately, and fairly by the Professor and may result in sanctions up to and including dismissal from the University. The Professor will promptly notify the University (Dean, Chair, or appropriate academic official) of the discovery of the incident.

First-time violations may result in an "F" being assigned for the course in which the violation occurs and the placement of a letter in the student's file. The faculty member reserves the right to assign the student an "F" for the assignment, and "F" for the course, or may request the student re-submit the assignment.

A second violation may result in dismissal from the University. The student may appeal any decision to the appropriate Appeals Board on the individual campus or division. This Appeals Board will render a final decision after appropriate investigation.

## Cheating

Cheating shall be defined as:

- copying to any extent the work of another;
- intentionally assisting another student during an examination;
- having access to material related to an examination during the examination;
- possessing or having access to unauthorized copies of an examination;
- departing from any stated examination conditions.

## Plagiarism

The New International Dictionary of the English Language, (Funk & Wagnalls, c2000, p. 965) defines Plagiarize as "to appropriate and pass off as one's own (the writings, ideas, etc., of another)".

Plagiarism involves:

- submitting another person's work as one's own;
- submitting work from any source that is not properly acknowledged by footnote, bibliography, or reference within a paper;
- submitting work pieced together from phrases and/or sentences from various sources without acknowledgment;
- submitting work with another person's phrase(s) rearranged without acknowledgement;
- submitting work that uses any phrase, sentence, or stylistic mannerism without acknowledgment;
- omitting quotation marks from any directly quoted material;
- failure to use three dots (...) to indicate omission of one or more words;
- any other actions deemed to be plagiarism by the faculty.

## STUDENT CONDUCT

CTU fosters an academic community that is committed to the educational and personal growth of each and every student and therefore, enrollment in Colorado Technical University obligates students to conduct themselves as responsible members of the University community. Behavior that discredits the individual or the University, as generally determined by University rules and regulations, may result in disciplinary action. CTU reserves the right to dismiss any student whose conduct is regarded as being in conflict with the best interests of the University or in violation of its rules and regulations.

Additionally, all students are expected to respect the rights of others and are held responsible for conforming to the laws of the national, state and local governments, and for conducting themselves in a manner consistent with the best interests of the University and of the student body. Colorado Technical University reserves the right to dismiss a student for any of the following reasons: failure to maintain satisfactory academic progress, failure to pay school fees and/or tuition by applicable deadlines, posing a danger to the health or welfare of students or other members of the CTU community, or failure to comply with the policies and procedures of CTU.



Any unpaid balance for tuition, fees and supplies becomes due and payable immediately upon a student's dismissal from the school. The institution will also determine if any Title IV funds need to be returned (see Financial Information Section of this catalog).

Examples of behavior patterns that are not in harmony with the educational goals of the University include the following:

1. academic or administrative dishonesty, such as cheating, plagiarizing, or knowingly furnishing false information to the University;
2. forgery, alteration, misuse, or mutilation of University documents, records, identifications, educational material, and/or University property;
3. obstruction or disruption of teaching, research, administration, disciplinary procedures, or any other authorized activities on University premises;
4. physical or verbal abuse of any University official as well as conduct which threatens or endangers the health or safety of any such person;
5. theft of or damage to property of the University or using, or attempting to use, University property in a manner inconsistent with its designed purpose;
6. unauthorized entry to, use of, or occupation of University facilities and resources;
7. intentional and unauthorized interference with right of access to University facilities, freedom of movement or speech of any person on campus;
8. disorderly, lewd, unwelcome sexual advances, unwanted requests for favors of a sexual nature, physical or verbal conduct of a sexual nature, and indecent or obscene conduct or expression;
9. unlawful possession, use, or distribution of illicit drugs and alcohol on campus or during any student activities;
10. violation of a federal, state, or local ordinance including, but not limited to, those covering alcoholic beverages, narcotics, dangerous drugs, gambling, sex offenses, or arson;
11. rioting or aiding, abetting, encouraging, or participating in a riot or inciting a riot;
12. failure to comply with the verbal or written directions of any University officials acting in the performance of their duties and in the scope of their employment;
13. aiding, abetting, or inciting others in committing any act of misconduct set forth in any of these behavior patterns;
14. conviction of a crime which is of a serious nature. Upon filing of charges in civil court involving an offense that is of a serious nature and when it is administratively determined that the continued

presence of the student would constitute a threat or danger to the University community, such student may be temporarily suspended pending disposition of the charges in civil court;

15. proven plagiarism or falsification of authenticity is a serious matter of significant ethical and legal concern; (Students are informed that if it is ever proven that there was significant misrepresentation or misattribution of material presented, any degrees or credit awarded by the University based on the material will be revoked.)
16. lack of academic achievement and/or suspension;
17. unauthorized solicitation of students, faculty or staff on campus or online for any product or service;
18. other behavior or actions that might constitute a threat to the University Community (i.e., weapons possession, alcohol or drug abuse, etc.) as determined by appropriate university authorities.

## **STANDARDS FOR ACADEMIC PROGRESS (SAP)**

All students must maintain satisfactory academic progress (SAP) in order to remain enrolled at the school. Additionally, satisfactory academic progress must be maintained in order to remain eligible to continue receiving federal financial assistance. Satisfactory academic progress is determined by measuring the student's cumulative grade point average (CGPA) and the student's rate of progress toward completion of the academic program. These are outlined below.

### **CGPA Requirements**

Students must meet minimum CGPA requirements at specific points during their enrollment in order to be considered making satisfactory academic progress. These requirements are noted below. These will be reviewed at the end of each quarter after grades have been posted to determine if the student's CGPA is in compliance.

### **Associate's and Bachelor's Degree Programs.**

A student enrolled in a CTU associate's or bachelor's degree program must maintain a CGPA of 2.0 (C equivalent) or better for his/her entire program of study.

### **Master's Degree Programs.**

A student enrolled in a CTU master's degree program must maintain a CGPA of 3.0 (B equivalent) for his/her entire program of study.

## Doctoral Degree Programs.

A student enrolled in a CTU doctorate degree program must maintain a CGPA of 3.3 (B+ equivalent) for his/her entire program of study.

## Rate of Progress Toward Completion

In addition to the CGPA requirements, a student must successfully complete at least two-thirds (66.67%) of the credits attempted in order to be considered to be making satisfactory academic progress. Credits attempted are defined as those credits for which students are enrolled in all terms and have incurred a financial obligation. As with the determination of CGPA, the completion requirements will be reviewed quarterly after grades have been posted to determine if the student is progressing satisfactorily.

## Maximum Time in Which to Complete

A student is not allowed to attempt more than 1.5 times, or 150%, the number of credits in their program of study. The requirements for rate of progress are to assure that students are progressing at a rate at which he/she will complete their program within the maximum timeframe. If a student transfers in no credits and needs to complete all credits required for the degree (i.e. 90), the student has 1.5 times those credits in which to complete the degree, or 135 total credits. If a student in the same 90 credit program transfers in 20 credits, the maximum allowable time would be 105 attempted credits (90 minus 20 equals 70 times 1.5 equals 105). The following table illustrates these examples.

| Program Length | Max Credits Allowed | Transfer Credit | Max Credits Allowed |
|----------------|---------------------|-----------------|---------------------|
| 90             | 135                 | 20              | 105                 |
| 180            | 270                 | 20              | 240                 |
| 60             | 90                  | none            | 90                  |

## Warning Status

At the end of each quarter, and after grades have been posted, each student's CGPA, rate of progress, and maximum timeframe are reviewed to determine whether the student is meeting the above requirements.

Students will be placed on warning status following the first quarter in which the CGPA or the rate of progress falls below the values specified in the tables above. At the end of the next term, the student will be removed from warning status and returned to regular status if the student meets or exceeds the minimum standards. The student will be placed on probation if the student continues to fall below the specified values.

## Probation

Students will be placed on probation if they fail to meet or exceed minimum standards while on warning status. Students on probation will be evaluated at the end of their second term of monitoring. A student who raises his/her CGPA and rate of progress to or above the minimums will be removed from probation.

## Dismissal

If a student does not meet the minimum CGPA or rate of progress requirements at the next review, the student will be dismissed from school. The university reserves the right to review the academic record and may elect to continue probation status. A student who has been dismissed may appeal for reinstatement using the appeals process located elsewhere in this section.

Additionally, if at any point it can be determined that it is mathematically impossible for the student to meet minimum requirements, the student may also be dismissed from the school.

Notification of academic dismissal will be made in writing. The Student Conduct Policy section of this catalog describes other circumstances that could lead to student dismissal for non-academic reasons.

As a dismissed student, a tuition refund may be due in accordance with the institution's stated refund policy.

During the periods of Warning and Probation, students are considered to be making satisfactory academic progress and remain eligible for financial aid.

Students on Warning and Probation must participate in academic advising as deemed necessary by the University.

## How Change of Program Affects SAP

Credit that has been transferred into the institution by the student has no effect on the rate of progress calculation, nor does it have any effect on the grade point average requirement. A student on Academic Probation may not change programs without approval from a University academic official. Transfer credit is considered when computing the maximum allowable credit attempt for a program of study.

When a student elects to change a program at Colorado Technical University (this does not include moving from an associate degree to a bachelor degree in the same program) the student's earned credits and grades will be transferred into the new program as applicable, including transfer credit. Credits earned at the school in the original program of study will be used when computing grade point average, rate of progress and maximum allowable credit attempts.

### **Reinstatement Procedure**

This procedure is for those students who were formally enrolled in the university, but were dismissed for academic reasons. Students who wish to return to the university must submit a written request for reinstatement to the Registrar's office. Students should explain what type of circumstances contributed to the dismissal and what plans the student has to eliminate those potential problems in the future. Students may be required to wait at least one grading period before he/she is eligible for reinstatement. The decision regarding readmission will be based on factors such as grades, attendance, student account balance, conduct and the student's commitment to complete the program. The appeal will be reviewed by an academic appeals committee with at least one member from the student's program area of study.

Students who are readmitted will be charged tuition consistent with existing published rates and will be eligible for federal financial aid. Students readmitted after being dismissed for failure to meet minimum SAP requirement will be reinstated on academic probation and must meet the minimum requirements by the end of the next session or may be dismissed again.

### **Appeal Procedure**

Students who have been dismissed from the university may appeal the determination if special or mitigating circumstances exist. Appeals must be submitted in writing (email is acceptable) and must be submitted to the Registrar's Office within 10 days of the date of dismissal notification. Appeals will then be reviewed by the Academic Appeals Committee. Students should explain what type of circumstances contributed to the dismissal and what plans the student has to eliminate those potential problems in the future. The decision of the committee is final and may not be appealed further. The Academic Appeals Committee will also take into consideration any federal regulations that may apply.

## **LEAVE OF ABSENCE (LOA)**

Students may submit a written request for a Leave of Absence to the campus academic official, or in the case of those students pursuing degrees 100% online to the Director of Resolution Services at [ctuacademicdean@ctuonline.edu](mailto:ctuacademicdean@ctuonline.edu).

The following are examples of conditions that may be considered for an LOA:

- Family Care (loss of family member or unexpected medical care of family)
- Jury Duty
- Medical (including pregnancy)
- Military Duty
- Temporary out (one session off, applies to ground students only)

The following conditions must be met in order for a student to be eligible for a LOA:

- The request must be submitted in writing (email is acceptable) 72 hours prior to the beginning of the leave and include the date of submission, the effective date the leave is to begin, when the student expects to return to school, the reason for the leave of absence, and supporting documentation.
- A student must have completed at least one quarter at the institution.
- A student must have completed his/her most recent quarter and received academic grades (A-F) for that quarter.
- A leave must begin on the first day of the session and end on the first day of a session.
- The total cumulative days of all leaves of absence in a 12-month period may not exceed 180 days.

Students on a leave of absence may be required to complete additional financial aid documents and failure to return from a leave of absence may affect a student's loan repayment obligations. A leave of absence may also affect the disbursement of financial aid. If a student on a leave of absence fails to return from the leave of absence, the official withdrawal date will be the last day of the grading period prior to the date the leave of absence began.

## **STANDARD PERIOD OF NON-ENROLLMENT (SPN)**

A CTU student electing to not take classes for the summer quarter may apply for a Standard Period of Non-Enrollment (SPN) status without formally withdrawing from the University. The student must apply for SPN status

through the office of the campus Registrar. Before the end of the SPN period, a student must register for classes to be reinstated at the University, or be automatically withdrawn by the Registrar.

## TRANSFER OF COLLEGE CREDIT

Colorado Technical University supports the philosophy that related courses, demonstrated proficiencies and life experience knowledge may be used to satisfy some course credit requirements. Credit granted for past experience, training, certification and testing may reduce the time required to obtain a degree.

In those academic programs that apply, transfer credit may be awarded from institutions accredited by an agency recognized by the U.S. Secretary of Education. Courses under consideration from another university or college must be relevant and considered equal to the course work at Colorado Technical University before transfer credit will be approved. Transfer of credit from other institutions will be accepted upon evaluation and the discretion of Colorado Technical University. No credit will be transferred for courses with a grade lower than a "C" at the undergraduate (associate's and bachelor's) level.

Up to two related master's level courses may be transferred. Only courses with a letter grade of "B" or 3.0 are considered for transfer of credit at the graduate (master's) level.

Grade point averages earned at other post-secondary institutions are not combined with grade point averages earned at CTU.

## TRANSCRIPT EVALUATIONS

Upon receipt of official documents and transcripts, all college-level course work from accredited colleges or universities is evaluated for transfer credit by the program dean or program academic advisor. The official transcript must be received by CTU by the end of the first session (this can mean 11 week or 5.5 week, as applicable) or the student may be withdrawn. Exceptions to this policy must be approved by the appropriate University academic official. Courses from non-accredited institutions or from vocational institutions are reviewed on a course-by-course basis. Transfer credit is not awarded for courses that are numbered below 100, remedial by definition of the transferring institution, or equivalent to remedial courses taught at CTU. Transcripts and records presented for evaluation become part of students'

permanent records. Because of the high standards and specialized nature of the programs offered at CTU, any additional transfer of credit must be pre-approved once the initial transfer of credit is completed.

The appropriate academic officer (Dean, Program Chair, etc.) will consider whether a student pursuing a graduate degree, who already has a master's degree from another accredited institution, is required to provide all other official transcripts as well (i.e. bachelor's).

## COURSE-BY-COURSE EVALUATIONS

Courses completed at accredited colleges or universities generally transfer if comparable courses are offered at CTU. If the courses in question do not have similar offerings at CTU, they may be considered for use as:

- a) Elective credit (depending on academic program of study) or
- b) General education credit, if the course work fulfills CTU's general education objectives.

## UNDERGRADUATE BLOCK TRANSFER (2+2)

A student possessing an earned associate's degree from another institution at the time of entrance may be eligible for a 2 + 2 block transfer of credits into selected Bachelor of Science degree programs at CTU. The block transfer allows for up to 92 quarter credit hours of a student's degree program. Depending upon the degree program of enrollment, prerequisite course requirements may need to be satisfied and additional courses may also be required. General education content of any earned associate's degree considered for block transfer may require evaluation by the campus before a block transfer can be awarded.

If an earned associate degree requires evaluation for the student's degree program of enrollment, the following credit evaluation guidelines shall apply:

- Associate of Science or Associate of Arts degrees from a regionally accredited institution normally provide sufficient general education for a block transfer.
- Associate degrees from nationally accredited institutions may be considered, based on the academic content of the degree. Course-by-course transfer of credit, up to 92 quarter hours, may also be used in this case. Please note that AA and AS degrees from nationally accredited institutions may be accepted for block transfer in certain CTU baccalaureate degree completion programs and under established articulation agreements.



- Associate of Applied Science (AAS) degrees, regardless of the institution at which they were earned, generally do not contain the general education content for a block transfer, however, course-by-course transfer of credit up to 92 quarter hours, may be awarded. Please note that AAS degrees may be accepted for block transfer in certain CTU baccalaureate degree completion programs and under established articulation agreements.

## **UNIT OF CREDIT**

The quarter credit hour is the unit of academic measurement used by Colorado Technical University.

## **QUARTER SEMESTER CONVERSION**

CTU operates on a quarter schedule. One semester hour is converted as 1.5 quarter credit hours. Transfer credit applied to any CTU course will not exceed the credit value of that course.

## **UNDERGRADUATE COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)**

The College Level Examination Program (CLEP) offers two types of tests: General Examinations and Individual Subject Examinations. A maximum of 18 quarter hours may be awarded for each subject examination successfully completed and applicable to CTU programs. The total number of CLEP credits applied to CTU degree programs may not exceed 45 quarter hours. Students are required to pay a fee directly to CLEP.

## **UNDERGRADUATE ADVANCED PLACEMENT (AP)**

Entering freshmen who have taken accelerated or advanced placement courses that meet the standards of the Advanced Placement Program of the College Entrance Examination Board (CEEB) and who pass with a grade of 3 or above may receive college credit. If applicable, college credit granted is treated as transfer credit without a grade and is applied toward degree requirements.

## **UNDERGRADUATE CREDIT FOR LIFE EXPERIENCE**

This is a program for evaluating and awarding college credit for experiential learning not sponsored by the University (e.g., out-of-school work experience). Life experience credit is awarded on a course-by-course basis for experience that satisfies educational objectives of a particular course required in a student's academic program.

In order to receive life experience credit for a particular course, students must not have previously enrolled in the course and all prerequisites for the course must be met. The maximum amount of life experience credit accepted toward graduation is 16 quarter credit hours for an associate's degree and 32 quarter credit hours for a bachelor's degree. Credit earned through life experience may not be used to satisfy residency requirements. The following actions must be taken by the student to apply for life experience credit.

- Schedule an appointment (either in-person or via phone) with the Dean/Chair or designee of the department that offers the particular course for which life experience credit is sought. The Dean/Chair or designee will provide specific guidance on the documentation required for submission and will help the student fill out the life experience request form.
- Prepare and submit required documentation to the Dean/Chair or designee.
- A non-refundable fee may be required for each requested course prior to final approval (see Tuition and Fees schedule at each location).
- Approved Life Experience will be recorded on the transcript as PR (Proficiency).

## **MILITARY SERVICE SCHOOL CREDIT**

CTU awards credit for military schools based on the recommendation of the American Council on Education (ACE) Guide and the applicability of the course content to programs at the University. Requests for military service school credit must be documented by appropriate official records.

## **UNDERGRADUATE CREDIT BY COURSE CHALLENGE**

Credit may be earned on the basis of special challenge examinations and/or projects when students show exceptional background in a particular academic area. In order to challenge a particular course, students must not have previously enrolled in the course and all prerequisites for the course must be met. The maximum amount of credit accepted through course challenge toward graduation is 16 quarter credit hours for an associate's degree and 32 quarter credit hours for a bachelor's degree. Credit earned through course challenge may not be used to satisfy residency requirements. The following actions must be taken by the student to apply for course challenge credit.



- Schedule an appointment with the Dean/Chair or designee of the department that offers the particular course for which course challenge credit is sought. The Dean/Chair or designee will discuss the particular course with the student in more detail and then make an appointment for the student with an appropriate faculty member who will administer the course challenge. The Dean/Chair or designee will also help the student fill out the course challenge request form.
- Meet with the faculty (students enrolled in 100% online degree programs may have an alternate evaluator) member sponsoring the course challenge to determine the specific requirements to be satisfied.
- Only English and mathematics challenge exams are offered for students enrolled in the University's 100% online degree programs.
- A non-refundable fee may be required for each requested course prior to final approval (see Tuition and Fees schedule at each location).
- Meet all requirements for the challenge within one academic quarter.

At the conclusion of the course challenge, a PR (Proficiency) grade will be awarded by the faculty member if the student successfully completes the challenge with a score of 80% or higher. The PR grade will be entered into the student record.

## UNDERGRADUATE CTU PLACEMENT EXAMINATIONS

Colorado Technical University is committed to delivering the best possible education to its students. An important part of this commitment involves proper placement of incoming students into CTU math and English courses. All new degree seeking, undergraduate students, regardless of previous college experience, are required to take the Accuplacer exam as part of the enrollment process (does not apply to students enrolled with CTU Online). Accuplacer is a nationally recognized, computerized, adaptive testing system and is administered to incoming students free of charge by CTU. The following are recommended placements: (Note: max score on each test is 120)

### Arithmetic (AR) test score

33.9 or less  
34.0 to 65.9  
66.0 or greater

### Recommended placement

Consult with Admissions  
MATH060 Pre-Algebra  
Student takes the Elementary Algebra (EA) test

### Elementary Algebra (EA) test score

80.9 or less  
81.0 or greater

### Sentence Skills (SS) test score

59.9 or less  
60.0 to 84.9  
85.0 or greater

### Recommended placement

MATH080 Elementary Algebra  
MATH143 Business Algebra or  
MATH103 College Algebra

### Recommended placement

Consult with Admissions  
ENGL080  
ENGL111

## TRANSFER OF CREDIT TO OTHER SCHOOLS

Colorado Technical University does not imply or guarantee that credits completed at Colorado Technical University will be accepted or transferable to any other college, university, or institution. Each institution has its own policies governing the acceptance of credit from other institutions such as Colorado Technical University. Students seeking to transfer credits earned at Colorado Technical University to another institution should contact the other institution to which they seek admission to inquire as to that institution's policies on credit transfer.

## WITHDRAWAL FROM THE UNIVERSITY/COURSE

Students intending to withdraw from the University must submit a verbal or written notice to a University official. A student's oral or written notification serves as an official withdrawal and will be processed in a timely manner.

The withdrawal date used to determine when the student is no longer enrolled at Colorado Technical University is:

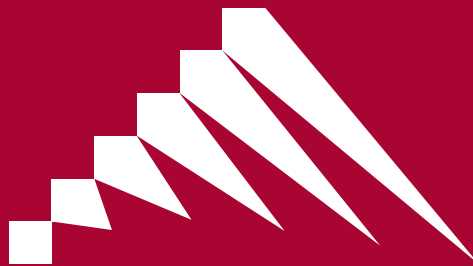
- The date the student submitted an official withdrawal notice to a University official and ceased to attend classes or other school activities. A student who submits a withdrawal notice but who continues to attend classes or other school activities will not be considered to have officially withdrawn from school.
- If a student does not complete the official withdrawal process, the school will determine the student's withdrawal date based upon federal regulation and institutional records.

Please note that the above policy may result in a reduction in school charges that is less than the amount of the Title IV financial aid that must be returned. Therefore, the student may have an outstanding balance due the school that is greater than that which was owed prior to the withdrawal.

**NOTES:**

[illegible]





Colorado Technical University  
[www.coloradotech.edu](http://www.coloradotech.edu)

# Financial Policies

## Colorado Springs & Pueblo

(Effective January 1, 2009)

The cost of an educational program is based upon the hours necessary to complete the desired courses or degree program and the tuition rates in effect at the time the student takes the desired courses, plus any associated fees, books, lab kits, and other educational supplies.

### Application Fee

A non-refundable, one-time application fee of \$50 for U.S. Citizens (\$100 for International Students) is paid once per student, and applies to admission to the University. The one-time fee covers all future applications by the same student to any of CTU's programs.

### Undergraduate & Master's Tuition

Tuition for undergraduate preparation courses is charged by the course:

|                                     |       |
|-------------------------------------|-------|
| ENGL080, IT080, MATH060, or MATH080 | \$200 |
|-------------------------------------|-------|

Tuition for the following courses is charged per credit hour:

|                                                                                            |        |
|--------------------------------------------------------------------------------------------|--------|
| Undergraduate courses                                                                      | \$ 290 |
| All BIOxxx courses                                                                         | \$ 325 |
| Surgical Tech courses<br>(SUR102, SUR110, SUR205, SUR210,<br>SUR 235, SUR245, and SUR 255) | \$ 325 |
| ADN Nursing Program (NRSGrxxx)                                                             | \$ 375 |
| Master's 500-level courses                                                                 | \$ 290 |
| Master's 600-level courses                                                                 | \$ 490 |

### Doctorate Tuition

The Doctorate programs (Colorado Springs only) are offered in a professional, three year format. Students in these programs are charged by the quarter, \$4,784 including required fees and books. Additional quarters, if needed and approved, are offered at \$1800/quarter, standard fees included.

### Costs of Books, Lab Kits, Software and other Educational Supplies

These costs vary depending upon the type of degree pursued and type and number of courses taken in any given quarter. Payment is expected at the time of purchase.

### CTU Online Course Fee

CTU Online courses provide an opportunity for students to take courses online. CTU Online courses are listed in the quarterly course schedule as an OL section. In addition to normal tuition and fees, students will be charged a fee of \$150 for each CTU Online course. This fee will cover books, software and course materials required by the course. At the University's discretion, books may be delivered in an electronic or standard textbook format. For those courses in which the University delivers a book in electronic format, the student may elect to purchase the standard textbook for an additional charge from Words of Wisdom, LLC.

### International Student Cost of Education

The cost of education for international students (defined as any student holding an F1-visa) and out-of-state students is the same as in-state students as found in the undergraduate and graduate areas of this insert.

## Standard Fees

Due to the non-refundable nature of these fees, students are encouraged to discuss their plans in advance with their Admissions Advisor.

### Undergraduate Course Challenge and Life Experience Fees

A \$150 per class non-refundable fee, payable in advance, is assessed for each course. This fee assists in the expense of preparing and evaluating exams and assessing life experience documentation.

### Student Senate Fee

The Student Senate fee supports all student activities, student organizations, resources for student needs, and the enhancement of external activities for students. This \$5 quarterly fee is non-refundable.

### Student Service Fee

A student service fee is charged each quarter to support the resource center, administration hardware and software systems for student records, course scheduling, data management, financial aid, student accounts, registration, academic advising, placement, maintenance of external facilities, parking lot and special community and student service activities. Students are charged a non-refundable fee of \$70 per quarter.

### Certificate Completion Fee

A fee of \$20 is due at the time of certificate application. This fee covers one "Certificate".

### Undergraduate Graduation Fee

A fee of \$150 is due at the time of application for graduation. This fee covers one diploma and diploma cover, two official university transcripts, and costs related to the graduation ceremony such as regalia, invitations and location.

### Master's Graduation Fee

A fee of \$200 is due at the time of application for graduation. This fee covers one diploma and diploma cover, one unframed letter-sized diploma, two official university transcripts, and costs relating to the graduation ceremony such as regalia, invitations and location.

### Computer Lab Fee

A non-refundable lab fee of \$50 is applied for each class offering a lab as part of the course, or as indicated in course descriptions, or in special circumstances (e.g. field trips, etc.). The fee helps defray the expense of equipment upgrades and maintenance, printer cartridges, paper, software licenses, Internet access, and other expenses.

### Audited Undergraduate Courses

Audited courses are those for which students register but for which no credit is received. Individuals wishing to audit courses must be a current student admitted to Colorado Technical University. Your Advisor/Mentor must approve the audit because priority is given to students attempting to earn course credit. All undergraduate courses may be audited; graduate courses may not be audited. The charge to audit a course is 50% on-ground and 100% online of the current credit hour cost times the total number of credits in the course, plus standard fees.



## Avoidable Fees

### Library Fees

An Overdue Library Book Fee of \$1/day per item is enforced. A Damage Fee may be assessed to cover costs of replacement.

### Late Payment Fee

A fee of \$25 is assessed to students who do not make payment on their student accounts by the established and agreed upon payment date.

### Returned Check Fee

Students who present checks that are not acceptable for payment by the bank because of insufficient funds, non-existence of an account, or other reasons for which students are responsible, are charged a minimum fee of \$50 and may be dismissed. State law allows penalties/charges of up to three times the amount of the check for repeat offenders.

### Transcripts and Diplomas

A fee of \$15 is charged for all official transcripts except final graduation transcripts, which are included in the graduation fee. Fees for replacement copies of diplomas or certificates are as follows:

Undergraduate \$25  
Master's \$25  
Doctorate \$50  
Certificate \$20

### Lost Card Replacement Fee

Students have the option of receiving their refunds and/or stipends electronically. They will receive their first card free. Students will be charged a \$15 fee for a replacement card.

## Withdrawal and Refund Policy

Colorado Technical University prefers that notifications of withdrawal or cancellation be made in writing and addressed to the Director of Education, Business Office or initiated using the Colorado Technical University Registration Drop-Add form. The Drop-Add form is available at the book store and library.

Students' written notifications of withdrawal or cancellation (from one or more courses) provide an accurate record of transactions and also ensure that such requests are processed on a timely basis.

The "official date of withdrawal" is the date on which the student notifies the University in writing of their intent to withdraw. If no official written notification is given, the University determines the date the student has withdrawn.

Colorado Technical University is committed to fair treatment of all students. Individuals who find it necessary to officially withdraw from one or more courses at Colorado Technical University due to extenuating circumstances may be considered for a refund of a portion of the tuition for the current quarter. Since faculty engagements and other commitments are made by the University in advance, the following refund schedules have been established.

### Refund Schedule (5½ and 11 week courses)

- A. Applicants not accepted for admission to the University are refunded 100% of tuition and standard fees paid. Application fees are non-refundable.
- B. Students who are accepted for admission to the University but who officially withdraw (in writing) prior to the start of a term are refunded 100% of tuition and standard fees paid.

- C. Students who officially withdraw from one or more courses after the start of a term are subject to the following refund policy:
  1. During the first seven days of a term, students receive a 100% tuition refund, less a \$100 administrative fee. However, the standard fees paid are non refundable.
  2. During the second week of the term, students in a regular 11-week course receive a 75% tuition refund. Students in a normal 5½ week course or a 5½ week independent study course will not receive a refund and are charged full tuition and fees for that term.
  3. After the second week of the term, students will not receive a refund (11 week and 5/12 week).
  4. The above figures do not include the cost of books and supplies or non-refundable standard fees. Any prepayment for subsequent terms is refunded without penalty.
- D. Refunds may be made to students only in cases where no funds are due the University, financial aid programs, outside agencies or any other third parties. Due to the balance verification process with such outside agencies, refund checks may take up to 30 days to be processed after the date of official withdrawal (written notice).

|                   | Week 1                                             | Weeks 2 - 5        |              |
|-------------------|----------------------------------------------------|--------------------|--------------|
| 5-1/2 Week Course | 100% tuition refund, less \$100 Administration Fee | No refund          |              |
|                   |                                                    |                    |              |
|                   | Week 1                                             | Week 2             | Weeks 3 - 11 |
| 11 Week Course    | 100% tuition refund, less \$100 Administration Fee | 75% tuition refund | No refund    |

### International Student Refund Schedule

The tuition refund schedule discussed above applies to international students with the additional requirements listed below:

- A. Refunds are made after receipt of a written request, which includes return of the Colorado Technical University-issued I-20.
- B. Refunds are made to the third parties that provided funding in accordance with the third party's provided terms and conditions.
- C. Students transferring to other educational institutions have their funds transferred directly to those institutions.

## Other Policies and Information

This sheet is an insert to the 2008-2009 CTU Catalog. The CTU Student Handbook contains additional policies and information.

A paper copy is available on request from your advisor. Paper copies of the Campus Crime Report are available at the library and other campus locations.

### Doctoral Advantage

Students who intend to pursue a doctoral degree may be able to combine their CTU master's and doctoral studies to shorten the overall time to completion. By using doctoral and/or master's classes to satisfy outcomes in both programs, students may complete both degrees in as little as four years. Students wishing to participate in the doctoral advantage program should contact the Institute for Advanced Studies. A separate doctoral application is required with no additional application fee. An individual completion plan will be developed in consultation with the Dean.

The following pairs of degrees can be most easily combined:

- MBA with the Doctor of Management
- MSM-ITM, MSM-IT/PM, MSCS-DB, MSEIS with the Doctor of Computer Science with a concentration in Enterprise Information Systems
- MSCS or MSM-ISS with the Doctor of Computer Science

## Scholarships and Grants offered at Colorado Springs and Pueblo

\*\* scholarships/grants may not apply to closed programs \*\*

\*\* scholarships/grants listed on this document may be applied to course work taken at the CTU Colorado Springs or Pueblo campuses \*\*

### Academic Competitiveness Grant (ACG Grant)

The purpose of the Academic Competitiveness Grant (ACG) is to encourage students to take more challenging courses in high school which, according to research, should help make their success in college more likely. The Academic Competitiveness Grant award is in addition to the student's Pell Grant award.

To be eligible for the Academic Competitiveness Grant, candidates must:

- Be a U.S. citizen.
- Be a Federal Pell Grant recipient.
- Be enrolled as a full time student in a degree program.
- Be enrolled in the first or second academic year of an undergraduate degree program.
- Have successfully completed and graduated from a rigorous high school program of study, as determined by the state or local education agency and recognized by the Secretary of Education.
- For second year students, maintain a cumulative grade point average of at least 3.0 on a 4.0 scale.

The program was available for the first time in the 2006-2007 school year for first year students who graduated from high school after January 1, 2006 and for the second year students who graduated from high school after January 1, 2005.

### Academic Excellence Scholarship

Students accepted into a doctoral program in the Institute for Advanced Studies and who meet eligibility requirements will receive a one-time scholarship up to a maximum of \$500. The requirements may be demonstrated by achieving a score at or above the 90<sup>th</sup> percentile on one of the following exams: Graduate Management Admission Test® (GMAT),

Graduate Record Examinations® (GRE®) General Test, a relevant GRE® Subject Test, or the Miller Analogies Test (MAT). This scholarship may not be combined with other scholarships offered through Colorado Technical University.

### Advantage Grant

The purpose of the Colorado Technical University Advantage Grant is to recognize students who face extreme personal and/or financial hardships in pursuit of a degree from Colorado Technical University. Current students must be in good academic standing at Colorado Technical University. Newly-enrolled students must have been in good academic standing at their last institution. This grant typically awards up to \$500 per academic program and will be applied against outstanding current or future charges at the University's discretion. The conditions are as follows:

- This grant is used exclusively toward program charges.
- To be eligible, students must be in attendance during the applicable session.
- Candidates must apply and be accepted for admission to be eligible to receive the grant.
- Candidates must submit a minimum 500 word essay on how they intend to use the skills learned at Colorado Technical University to benefit others and society.
- The scholarship recipient must be a full-time student currently attending or enrolled for a future start at Colorado Technical University.
- All grants are applied as a credit to the student's account, and no cash payment will be awarded to the student.
- The grant is non-transferable and non-substitutable. Interested candidates should contact the Financial Aid Department for additional information.

### African American Voice Scholarship

The Colorado Springs Campus of Colorado Technical University has established the African American Voice Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. The scholarship will not exceed 50% of the student's tuition for the cost of the degree program. Books and fees are not covered by this scholarship. The scholarship, combined with other financial assistance cannot exceed the student's cost of attendance. Scholarship funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. To be eligible for the African American Voice Scholarship a candidate must have a minimum cumulative GPA of 3.0; apply for and be selected by the African American Voice publishers; be accepted for admission to Colorado Technical University; and meet University guidelines for satisfactory academic progress. Scholarships are awarded based on the availability of funding.

### Alpha Phi Alpha Scholarship

The Colorado Springs Campus of Colorado Technical University has established the Alpha Phi Alpha, Iota Omicron Lambda Chapter Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. The scholarship can be awarded up to the full amount of tuition only. Books and fees are not covered by this scholarship. The scholarship, combined with other financial assistance cannot exceed the student's cost of attendance. Scholarship funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. To be eligible for the Alpha Phi Alpha Scholarship a candidate must:

- have a minimum cumulative GPA of 3.0;
- apply for and be selected by the Alpha Phi Alpha, Iota Omicron Lambda Chapter;
- be accepted for admission to Colorado Technical University;
- and meet University guidelines for satisfactory academic progress.

Scholarships are awarded based on the availability of funding.

## Better Business Bureau Grant (BBB)

A grant is available to full time BBB employees, spouses, and their dependent children through Colorado Technical University, Colorado Springs or Pueblo campuses. The grant will not exceed 50% of the student's tuition cost for individual courses, certificate programs, undergraduate, master's, and doctorate degrees. Books and fees are not covered by this grant. The grant, combined with other financial assistance, cannot exceed the student's cost of attendance. Grant funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. Colorado Technical University requires a letter from the CEO/Executive Director of the BBB verifying employment for qualification for this grant program.

## Career Education Scholarship Fund

In order to assist students attending Colorado Technical University and other Career Education Corporation ("CEC") schools, the Career Education Scholarship Fund ("CESF") has been established. Scholarships will have a minimum award of \$500 and a maximum award of \$2,000 per academic year. The conditions are as follows:

- The grant is used exclusively toward program charges.
- There will be no restriction based upon age, race, creed, color, or sex.
- The grant recipient must be a full-time student currently attending or enrolled for a future start at Colorado Technical University.
- Current students must be in good academic standing.
- Newly enrolled students must have been in good academic standing at their last institution.
- For new students, the grant will be awarded for the student's first academic year only.
- For current students, the grant will be awarded for their next academic year only.
- Candidates must apply and be accepted for admission to be eligible to receive the grant.

The Career Education Scholarship Fund will require the potential scholarship recipient to provide sufficient information to also be judged on the following criteria:

- Essay-Applicant's maximum 500 word typed essay on one of the following topics:
  1. Completing my education will allow me to achieve my dream of...
  2. Obtaining the knowledge from my program is important to me because...

The essay must also include a discussion of how winning the Career Education Grant will help the student meet their financial needs for completing their program.

- Service-applicant's record of community service or volunteer work.
- Leadership-applicant's involvement in campus and other organizations.
- Letter(s) of Reference-at least one, but not more than two, letter(s) of reference from a current or previous teacher of the applicant.

The grant is awarded proportionately over each quarter in the degree program. Members of the Grant selection committees, Career Education Scholarship Fund Directors, Career Education Corporation employees, Colorado Technical University employees and their immediate families shall not be eligible for the Grant. All grants are applied as a credit to the student's account in equal installments at the beginning of each term in the respective academic year and not cash payments will be awarded to the student. If a student withdraws or otherwise terminates his/her attendance at Colorado Technical University prior to the academic year's conclusion, any unused portion of the scholarship reverts back to the Career Education Scholarship Fund pursuant to the refund policy.

## CEC Faculty Grant

The Institute for Advanced Studies has established a 10% grant in order to assist part-time or full-time instructors at CEC owned schools to pursue a Doctoral degree program. Instructors must have been employed by any CEC owned school for at least 12 months. A candidate must be accepted for admission to a Doctoral degree program at Colorado Technical University and allow for verification of his or her ongoing teaching of at least one course per calendar year. All grants are applied as a credit to the student's account, and no cash payments will be awarded to the students. The grant may not be combined with any other CTU grant or scholarship.

## Destiny Grant

The purpose of this grant is to provide tuition assistance to full-time, undergraduate, day-time students who attend Colorado Technical University,

The applicant must satisfy the following criteria and requirements to be considered:

- Full time (minimum of 12 credit hours), undergraduate student attending DAY classes only;
- An essay is required. For more information on the requirements of the essay, contact the campus Admissions office
- The funds provided by the Destiny Grant are intended to be used by the student to complete a degree in four years. To ensure four year completion, Destiny recipients will not be allowed to take off two consecutive quarters per calendar year. Absence of two or more consecutive quarters will result in the loss of the grant.
- In order to receive these benefits, the recipient agrees to attend the normal course sequence as identified in the course catalog. Night courses will not be taken unless academic scheduling conflicts are unavoidable. These exceptions must be approved by an appropriate Dean or Director of Education.
- The student agrees to comply with all of the terms and conditions, policies and procedures in the current and subsequent revisions of official university publications (i.e., financial aid policies are outlined in the catalog, etc.).

A maximum of \$3000 may be awarded by the campus, awarded at \$500 per quarter for the first six quarters. There may also be a limited number of grants available in a given quarter at each campus. The grant may not be combined with any other CTU grant or scholarship. For more information, contact campus Admissions.

Note: Exceptions to the above criteria or requirements must be approved by the campus President.

## Education Partner Grant

Colorado Technical University has established a grant in the name of its Education Partners for qualified corporations and organizations in order to assist eligible employees with the opportunity to attend a degree program of study at Colorado Technical University. To be eligible for the Education Partner Grant and waived application fee, a candidate must be accepted for enrollment and allow for verification of employment of the Education Partner and sign the Education Partner Attestation Form.

The Education Partner Grant conditions are as follows:

- The Education Partner Grant is used exclusively toward program charges;
- The grant is awarded proportionately over each session in the program;
- Qualifying students are employees of an eligible institution;
- Students must sign the Education Partner Attestation Form;
- Students must attend the qualifying session prior to the grant being awarded;
- Candidates must apply and be accepted for admission to Colorado Technical University to be eligible to receive the grant;
- Candidates must enroll in an undergraduate or graduate program available at the campus of enrollment;

- All grants are applied as a credit to the student's account, and no cash payments will be awarded to the student.

The grant is non-transferable and non-substitutable and may not be combined with any other CTU grant or scholarship. Interested candidates should contact the Colorado Technical University Admissions or Financial Aid Departments for additional application information. Geographical restrictions may apply.

### Freedom Alliance Scholarship

The purpose of this scholarship is to provide financial assistance to the dependent children of an active duty service member who was killed or permanently disabled in the line of duty, or who is currently classified as POW or MIA. The applicant must be a senior in high school or a high school graduate. Applicants must list CTU on their application. Scholarship applications and rules can be found at [www.freedomalliance.org](http://www.freedomalliance.org) or requested by writing:

Freedom Alliance  
22570 Markey Court, Suite 240  
Dulles, VA 20166-6915

### Friends of CTU Grant

Colorado Technical University has established the Friends of CTU Grant. The grant is up to a maximum of \$5,000 awarded to a local business in order to encourage their employees to pursue their higher education at Colorado Technical University. This grant will be awarded to an eligible organization in Southern Colorado. The organization determines which employee(s) is eligible for the grant. The grant award can be used to assist one or multiple employees up to the full amount of the grant. The grant amount per employee will be awarded proportionately over the length of the degree program.

In order to determine which local business will receive this grant, CTU considers certain actions by its employer partners that assist CTU in accomplishing its mission. The criteria that CTU considers are:

- Participation on CTU industry advisory boards
- Supporting employees who are also CTU adjunct faculty
- Supporting employees who are also CTU students
- Developing and supporting internship opportunities
- Providing career opportunities for CTU graduates
- Participating in CTU Career Networking events
- Providing speakers as subject matter experts for CTU classes

### Hispanic Education Foundation of Pueblo

The Hispanic Education Foundation of Pueblo offers scholarships to low-to-moderate income students, Hispanics and minorities, and non-traditional age students who meet acceptable academic requirements. Colorado Technical University will provide additional scholarships to these students to attend either the Pueblo or Colorado Springs campuses.

### Hispanic Education Foundation Rising Star Scholarship

Colorado Technical University has established the Hispanic Education Foundation Rising Star Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. To be eligible for the Hispanic Education Rising Star Scholarship a candidate must have a minimum cumulative GPA of 3.0; be selected by the Hispanic Education Foundation Executive Director; be accepted for admission to Colorado Technical University; and meet University guidelines for satisfactory academic progress.

### Holiday Commission and Cultural Center Martin Luther King, Jr. Scholarship

Colorado Technical University has established the Holiday Commission and Cultural Center Martin Luther King, Jr. Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. The scholarship will not exceed 50% of the student's tuition for the cost of the degree program. Books and fees are not covered by this scholarship. The scholarship, combined with other financial assistance cannot exceed the student's cost of attendance. Scholarship funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. To be eligible for the Holiday Commission and Cultural Center Martin Luther King, Jr. Scholarship a candidate must have a minimum cumulative GPA of 2.0; apply for and be selected by the Holiday Commission and Cultural Center; be accepted for admission to Colorado Technical University; and meet University guidelines for satisfactory academic progress.

### Liberty Grant

Colorado Springs and Pueblo Campuses do not participate in the Liberty Grant, as they offer the Southern Colorado Military Grant listed elsewhere in this section. However, the Institute for Advanced studies does offer this grant to students in the Doctorate program.

Colorado Technical University has established a 10% grant for active and active reserve military personnel, part-time Reserve, National Guard members and Veterans\* and their immediate families (spouse, life partner or dependent children). To be eligible for the Liberty Grant, a candidate must be accepted for admission to the University and allow for verification of his or her military status (of for family members, the relationship to the enrolled student). The conditions are as follows:

- The Liberty Grant is used exclusively toward tuition;
- The grant is awarded proportionately over each session of the degree program;
- Qualifying students are active military personnel and part-time Reserve and National Guard members or their immediate family members;
- Candidates must be accepted into the Doctorate program;
- All grants are applied as a credit to the student's account, and no cash payments will be awarded to the students.
- The grant may not be combined with any other CTU grant or scholarship.

\*Discharged Veterans must have a discharge other than dishonorable.

### Life Skills Center Scholarship

Colorado Technical University has established a Life Skills Center Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. The scholarship will not exceed 25% of the student's tuition for the cost of the degree program. Books and fees are not covered by this scholarship. The scholarship, combined with other financial assistance cannot exceed the student's cost of attendance. Scholarship funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. To be eligible for the Life Skills Center Scholarship, a candidate must have a minimum cumulative high school GPA of 2.5; apply for and be selected by the Life Skills Center of Colorado Springs, a School District 11 Charter High School; be accepted for admission to Colorado Technical University; and meet University guidelines for satisfactory academic progress.

### Lifelong Learning Grant

The purpose of the Lifelong Learning Grant is to recognize Colorado Technical University alumni who have achieved degree completion at the associate, baccalaureate, or graduate level and intend to pursue a bachelor, graduate or doctorate degree. Colorado Technical University alumni enrolled in a baccalaureate, graduate or Doctoral program who have previously completed a Colorado Technical University associate, baccalaureate, or graduate degree, respectively, will be eligible for a grant of \$1,000. The

grant award will be applied against outstanding current or future charges at the University's discretion.

The conditions are as follows:

- The Lifelong Learning Grant is used exclusively toward program charges;
- The grant is awarded proportionately over each session in the program;
- Candidates must apply and be accepted for admission into a qualifying degree program to be eligible to receive the grant;
- All grants are applied as a credit to the student's account, and no cash payments will be awarded to the student;
- Students who have been determined eligible for a dual concentration program are not eligible for the Colorado Technical University Lifelong Learning Grant.

The grant is non-transferable and non-substitutable. No portion is refundable. Interested candidates should contact the Financial Aid Department for additional application information. Students who take a term off must reapply for the grant when they return to have it reinstated.

### Medical Program Undergraduate and Graduate Grant

In order to assist medical employees complete their undergraduate and/or graduate degrees, Colorado Technical University, Colorado Springs and Pueblo campuses, have established a 15% grant for employees of local Colorado Springs and Pueblo hospitals. To be eligible for the Medical Program Grant, a candidate must be accepted for admission to the University and allow for verification of his or her employment with a local area hospital in Colorado Springs or Pueblo. The Grant can be used toward any degree program offered at the Colorado Springs or Pueblo campuses. The Medical Program Grant is used exclusively toward tuition. Books and fees are not covered by this grant. The grant, combined with other financial assistance cannot exceed the student's cost of attendance. Grant funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. The grant is awarded proportionately over each session of the degree program.

The grant may not be combined with any other CTU grant or scholarship.

### NAACP Achieve Your Dream Scholarship

The Colorado Springs Campus of Colorado Technical University has established the NAACP Achieve Your Dream Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. To be eligible for the NAACP Achieve Your Dream Scholarship a candidate must have a minimum cumulative GPA of 3.0; apply for and be selected by the local NAACP chapter; be accepted for admission to Colorado Technical University; and meet University guidelines for satisfactory academic progress.

### National Science & Mathematics Access to Retain Talent Grant (National SMART Grant)

The National Science and Mathematics Access to Retain Talent Grant, also known as the National SMART Grant is available during the third and fourth years of undergraduate study. The purpose of the National SMART Grant is to encourage students to pursue majors that are in high demand in the global economy, such as physical, life or computer sciences, engineering, mathematics, technology, or a critical foreign language. The National SMART Grant award is in addition to a student's Pell Grant award.

To be eligible for each academic year, a student must:

- Be a U.S. citizen;
- Be a Federal Pell Grant recipient;
- Be enrolled full-time in an undergraduate degree program;
- Major in physical, life or computer sciences, engineering, mathematics, technology, or a critical foreign language; and

- Have at least a 3.0 cumulative grade point average on a 4.0 scale.

Note that the amount of the SMART Grant, when combined with a Pell Grant, may not exceed the student's cost of attendance. In addition, if the number of eligible students is large enough that payment of the full grant amounts would exceed the program appropriation in any fiscal year, then the amount of the grant to each eligible student may be adjusted.

### Omega Psi Phi Fraternity Scholarship

The Colorado Springs Campus of Colorado Technical University has established the Omega Psi Phi Fraternity Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. To be eligible for the Omega Psi Phi Scholarship a candidate must have a minimum cumulative GPA of 3.0; apply for and be selected by the Omega Psi Phi Fraternity; be accepted for admission to Colorado Technical University; and meet University guidelines for satisfactory academic progress. The scholarship will not exceed 50% of the student's tuition for the cost of the degree program. Books and fees are not covered by this scholarship. The scholarship, combined with other financial assistance cannot exceed the student's cost of attendance. Scholarship funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student.

### Project Management Undergraduate Scholarship

The Project Management Institute Educational Foundation (PMIEF) has established a tuition scholarship program to assist qualified students in obtaining degrees from accredited academic institutions of higher learning in the field of project management. CTU is supporting this effort by funding this undergraduate level project management scholarship. The purpose of this scholarship is to provide tuition assistance to a full-time, undergraduate Colorado Technical University student at the Colorado Springs campus enrolled in the Bachelor of Science in Project Management degree program.

Selection is based on merit. Merit is determined from an application package that consists of basic information, three recommendation forms, transcripts, photograph, and a one page essay on "Why I Want to be a Project Manager" (500 words or less). All scholarship applicants are required to submit a one page essay on "Why a Code of Ethics is Important to Project Management" (250 words or less), and a resume. Applications must be submitted by the published deadline.

- Scholarship awardees must meet admission requirements, maintain full-time status, comply with university standards of conduct and maintain satisfactory academic progress with a cumulative GPA of 2.5 or greater.
- Total scholarship amount is \$10,000 and is applied as a tuition credit spread out over the prescribed program length.
- Applications are submitted through the PMIEF website at
- <http://www.pmi.org/pmief/>.

### Pueblo Juneteenth Freedom Scholarship

Colorado Technical University has established the Juneteenth Freedom Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. The scholarship will not exceed 50% of the student's tuition for the cost of the degree program. Books and fees are not covered by this scholarship. The scholarship, combined with other financial assistance, cannot exceed the student's cost of attendance. Scholarship funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. To be eligible for the Juneteenth Freedom Scholarship, a candidate must have a minimum cumulative high school GPA of 2.5; be selected by the President of the Pueblo Juneteenth organization; be accepted for admission to Colorado Technical University; and meet University guidelines for satisfactory academic progress.



## Sons of Italy Scholarship

The Order of the Sons of Italy of Southern Colorado promotes Italian heritage, language and culture; while enhancing the image of Italian Americans and creating stronger Italian families and community. The Sons of Italy Southern Colorado lodge offers scholarships each year to high school seniors and current college students. Scholarship recipients must be of Italian decent and related to a member of the Sons of Italy in America Lodge #2738. Recipients will be judged based on the following criteria: academic performance, extracurricular activities, Italian heritage essay, and letters of recommendation. In addition, scholarship recipients will receive a scholarship from Colorado Technical University not to exceed 50% of the student's tuition for the cost of the degree program (in addition to the Lodge Scholarship??). Books and fees are not covered by this scholarship. The scholarship, combined with other financial assistance cannot exceed the student's cost of attendance. Scholarship funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. The student must attend either the Pueblo or Colorado Springs campuses.

## Southern Colorado Military Grant

In order to assist Colorado based service personnel and their immediate family members to earn their undergraduate or graduate degree at Colorado Technical University, the Colorado Springs and Pueblo campuses have established a grant for all active duty service personnel, including Reservists and Guard members that are on active duty orders, and their immediate family members\*. The grant covers a portion of tuition, all books, and all fees including application fees, student fees and lab fees. The grant may only be used for the cost of education and will be awarded proportionately over each session of the degree program. The grant may not be combined with any other CTU grant or scholarship.

In order to qualify for the grant, the candidate must:

- Provide a copy of their military ID card and demonstrated Military status;
- Provide a Military Statement of Residency signed by the Education Service Office;
- Apply for and be accepted for admission to the University and to the degree program;
- Maintain good standing and demonstrate satisfactory academic progress according to the University's policy regarding Standards of Academic Progress.

CTU Online will honor the tuition rate and degree if an individual leaves Colorado and finds it necessary to switch to CTU Online to complete their degree.

*\*Immediate family member: Spouse (life partner) or dependent children only. Siblings, cousins, etc. are not considered immediate family members.*

## Urban League Pikes Peak Region Empowerment Scholarship

Colorado Technical University has established the Urban League Pikes Peak Region Scholarship to assist eligible students with the opportunity to attend an undergraduate degree program at Colorado Technical University. The scholarship will not exceed 50% of the student's tuition for the cost of the degree program. Books and fees are not covered by this scholarship. The scholarship, combined with other financial assistance cannot exceed the student's cost of attendance. Scholarship funds will be applied to tuition only and cannot be paid in cash or disbursed as a stipend to the student. To be eligible for the Urban League scholarship, a candidate must have a minimum cumulative high school GPA of 2.5; be selected by the Urban League Pikes Peak Region President/CEO; be accepted for admission to Colorado Technical University; and meet University guidelines for satisfactory academic progress.

## **Addendum to the Financial Policies catalog insert CTU Colorado Springs and Pueblo campuses** (Effective October 1, 2009)

### **Southern Colorado Military Grant** (replaces previous grant language)

#### **Applicable for all military benefits other than Post-9/11 Chapter 33 GI Bill Education Benefits**

In order to assist Colorado based service personnel and their immediate family members to earn their undergraduate or graduate degree at Colorado Technical University, the Colorado Springs and Pueblo campuses have established a grant for all active duty service personnel, including Reservists and Guard members that are on active duty orders, and their immediate family members\*. The grant covers a portion of tuition, all books, and all fees including application fees, student fees and lab fees. The grant may only be used for the cost of education and will be awarded proportionately over each session of the degree program. The grant may not be combined with any other CTU grant or scholarship. In order to qualify for the grant, the candidate must:

- Provide a copy of their military ID card and demonstrated Military status;
- Provide a Military Statement of Residency signed by the Education Service Office;
- Apply for and be accepted for admission to the University and to the degree program;
- Maintain good standing and demonstrate satisfactory academic progress according to the University's policy regarding Standards of Academic Progress.

CTU Online will honor the tuition rate and degree if an individual leaves Colorado and finds it necessary to switch to CTU Online to complete their degree.

*\*Immediate family member: Spouse (life partner), or dependent children as defined by the U.S. Department of Education's dependency criteria. Siblings, cousins, etc. are not considered immediate family members.*

### **Liberty Grant (Post 9/11 Chapter 33)** (new grant language)

#### **Applicable to Post-9/11 Chapter 33 GI Bill recipients (Non-Yellow Ribbon Grant eligible)**

Colorado Technical University has established a grant for all U.S. Active Duty, Reserve, National Guard, eligible Veterans<sup>1</sup> and their immediate family members<sup>2</sup> to assist in providing the opportunity to attend a degree program of study at Colorado Technical University. The amount of the grant is contingent upon the level of study. The following granting structure is based on financial need and will be determined after Chapter 33 GI Bill benefits are applied toward current year charges:

- Associate degree programs: Up to 10% of total program charges
- Bachelor degree programs: Up to 15% of total program charges
- Masters degree programs: Up to 20% of total program charges

To be eligible for the Liberty Grant and waived application fee, a candidate must be accepted for admission to the University, allow for the verification of their current military status (or that of their spouse or parent/legal guardian), and complete the Liberty Grant attestation form. The conditions are as follows:

- The grant is used exclusively towards current program charges.
- The grant is awarded proportionately over each session in the program.
- Qualifying students are U.S. Active Duty, Reserve, National Guard, eligible Veterans<sup>1</sup> and their immediate family members<sup>2</sup>.

- Candidates must apply and be accepted for admission to the University to be eligible to receive the grant.
- All grants are applied as a credit to the student's account, and no cash payments will be awarded to the student.
- The grant is non-transferrable and non-substitutable and cannot be combined with any Education Partner Grant, or Lifelong Learning Grant. The grant with the greatest benefit to the student will be applied.

Students selected for membership verification must provide documentation before the grant is applied. Those that are not able to provide documentation will also be required to pay the application fee. Examples of acceptable documentation may include:

1. Current Active Duty Military ID
2. Dependent Military ID
3. Current Military LES
4. DD214
5. Certificate of Discharge
6. Approved Tuition Assistance Voucher

<sup>1</sup>Discharged Veterans must have a discharge other than dishonorable.

<sup>2</sup>Immediate family members: Spouse (life partner), or dependent children as defined by the U.S. Department of Education's dependency criteria.

### **Yellow Ribbon Grant**

In accordance with the Yellow Ribbon Program, a provision of the Post-9/11 Veterans Educational Assistance Act of 2008, the University has established a Yellow Ribbon Grant. Eligibility and amounts are determined on an annual basis (on or after August 1<sup>st</sup>) and are subject to change.

To be eligible for the grant and waived application fee, a candidate must be accepted for admission to the University, be eligible for Chapter 33 Post-9/11 veterans benefits at the 100% rate, as determined by the Department of Veterans Affairs, complete the appropriate University Attestation form, and allow for the verification of their Chapter 33 Post-9/11 eligibility via a DD-214 Member-4, or Certificate of Eligibility, or comparable government document.

The conditions are as follows:

- Candidates must be an eligible Veteran or a Dependent of an eligible Veteran that meets the Post-9/11 GI Bill Transferability requirements ([www.gibill.va.gov](http://www.gibill.va.gov)).
- Candidates must apply and be accepted for admission to the University to be eligible.
- The Yellow Ribbon Grant is applied as a credit to the student's account, and no cash payments will be awarded to the student.
- The Yellow Ribbon Grant is used exclusively towards program charges.
- The Yellow Ribbon Grant is awarded for each period in the program that the student is determined eligible, and where the grant is needed.
- The Yellow Ribbon Grant is non-transferable and non-substitutable and cannot be combined with any other institutional grant

Colorado Technical University is committed to assisting military students in determining the best options available to them. To receive additional information on veterans educational benefit eligibility, students can contact the Veterans Administration at 800-827-1000, or 888-GI BILL-1 (1-888-442-4551) or visit their website at [www.gibill.va.gov](http://www.gibill.va.gov).

#### **Veteran's Educational Benefits**

*Colorado Technical University is approved by the applicable State Approving Agency for Veterans Affairs and participates in many Veteran's Educational Benefit programs. Students interested in Veteran's Educational Benefits should contact either the campus certifying official or the Financial Aid Department. Veterans who are unsure of their benefit eligibility or have additional eligibility questions should contact the Veterans Administration at 800-827- 1000, or 888-GI Bill-1 (1-888-442-4551), or go to <http://www.gibill.va.gov>. Eligible students must maintain satisfactory academic progress and all applicable eligibility requirements to continue receiving Veterans Educational Benefits.*



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# Addendum to the 2008-2009 Catalog





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# New Programs

## College of Business and Management

### Doctor of Management

All doctoral degrees are offered through the University's Institute for Advanced Studies (IAS).

### Management – Organizational Development and Change (DM-ODC)

The Doctor of Management with a concentration in Organizational Development and Change at Colorado Technical University is designed to encourage the professional development of managers through mentoring, action research, and practical projects; enabling them to make key leadership contributions in their area of expertise.

#### Program Outcomes

- Attain familiarity with the body of knowledge in current management theory
- Become a subject-matter expert in a specialized area of management
- Develop a leadership style based on ethical and philosophical consideration
- Effectively manage change through strategic design and research
- Predict future trends through effective research and qualitative methods
- Contribute to management literature via literature reviews, practitioner articles and research articles

#### Concentration Outcomes for Organizational Development and Change

- Evaluate organizational design in the context of the strategic plan.
- Design a large systems intervention strategy.
- Experience and analyze an entire cycle in action research in a complex organization.

Each year of the DM program is designed to provide candidates with the theoretical, research and application capabilities necessary to pursue a successful career in their chosen field. The organization of each year is described below.

#### Year 1: The Foundation

The beginning of the program focuses on research. Each student will spend the first year learning about classic and current management literature and developing competence in research methods. A review of the literature will be completed and work will begin on an action research proposal.

#### Year 2: Acquisition of Knowledge

Once the foundation is in place, year two is the time the student chooses an area of specialization and begins to form a personal understanding of the management research and methods used in that area. Course work will focus on the concentration area: Organizational Development and Change.

### **Year 3: Leadership and Professional Advancement**

In the final year, leadership skills and the ability to manage change are developed. Students will use qualitative methods and strategic processes to be able to predict future trends, furthering a mastery of a specialization. The final year will result in the production of four publishable papers or a dissertation that must be approved by a three member committee.

The DM program includes twelve 5-credit classes, one per term for three years. These courses are taught using the Professional Learning Model™ in an executive format. While much of the work is done online, every other term there is a required residency that starts the course. In alternating terms, the residency is optional. These are graded classes, and students must maintain an average of 3.5 out of a possible 4.0 in these classes.

There are also 12 Research and Writing courses that result in either four publishable papers or a dissertation. One research and writing course is taken each quarter in conjunction with one formal course. There are two options: publishable paper and dissertation. Both require a literature review and a research proposal. The research proposal for both options must be approved by the mentor. The publishable paper option requires the approval by the mentor and two readers for four papers: a publishable literature review, two publishable empirical papers (at least one of which must be publishable as an academic article), and a proposal for programmatic research covering a planned stream of research. This could also serve as a proposal for funding through a company or granting agency. The dissertation option requires a more extensive document that incorporates the literature review, a major empirical study, and the proposal for programmatic research. It must be approved by the mentor and two readers.

### **DM-ODC Program Requirements**

#### **Required Courses**

**All students in the DM-ODC program must complete all of the following courses:**

| <b>Course No.</b> | <b>Course Name</b>                   | <b>Hrs.</b> |
|-------------------|--------------------------------------|-------------|
| MGMT800           | Fundamentals of Management           | 5           |
| MGMT801           | Research and Writing I               | 3           |
| MGMT805           | Research Methods and Design          | 5           |
| MGMT806           | Research and Writing II              | 3           |
| MGMT810           | Qualitative and Ethnographic Methods | 5           |

|         |                                                             |   |
|---------|-------------------------------------------------------------|---|
| MGMT811 | R&W III: Action Research Theory                             | 3 |
| MGMT815 | Quantitative Methods                                        | 5 |
| MGMT816 | R&W IV: The Practice of Action Research                     | 3 |
| MGMT820 | Strategic Organization Design                               | 5 |
| MGMT821 | R&W V: Process Consulting and Intervention Theory           | 3 |
| MGMT825 | Large Scale Transformational Change                         | 5 |
| MGMT826 | R&W VI: The Practice of Process Consulting and Intervention | 3 |
| MGMT830 | Advanced Action Research                                    | 5 |
| MGMT831 | Research and Writing VII                                    | 3 |
| MGMT835 | Special Topics in Organization Development                  | 5 |
| MGMT836 | Research and Writing VIII                                   | 3 |
| MGMT840 | Philosophy of Science, Values and Ethics                    | 5 |
| MGMT841 | Research and Writing IX                                     | 3 |
| MGMT845 | Leadership                                                  | 5 |
| MGMT846 | Research and Writing X                                      | 3 |
| MGMT850 | Strategic Thinking                                          | 5 |
| MGMT851 | Research and Writing XI                                     | 3 |
| MGMT855 | Futuring and Innovation                                     | 5 |
| MGMT856 | Research and Writing XII                                    | 3 |

**Total Program Quarter Credit Hours: 96**

#### **Graduation Requirements:**

In addition to the successful completion of the above 96 credit hours with an acceptable GPA, students must also satisfactorily complete and defend their research, using either the paper or dissertation option

#### **Degree Completion, Emphasis Areas, and Post Doctoral Study**

The student must be continuously enrolled until meeting all graduation requirements. A student who has not completed the research requirements by the end of the formal coursework continues by registering for **MGMT895 Research Continuation** each term until completion of the requirements.

The student may take **MGMT898 Advanced Topics in Management** in order to complete an optional emphasis while in the program. The student, Mentor, and Dean approve a learning contract consisting of two quarters (10 credits) of MGMT898 in a particular area of interest. Current emphasis areas include: Entrepreneurship and Family Business Management, International Management, and Non-violent Transformational Change Management.

The student may take **MGMT899 Post Doctoral Study** in order to complete an emphasis after completing the degree or to gain further experiences that will complement the previous learning. This class may be taken as many times as necessary to complete the emphasis.



## **The Doctoral Advantage**

While a relevant masters degree is ordinarily required for admission to CTU doctoral programs, there is also the option of completing a CTU MBA or MSM while starting work on the Doctor of Management. The program outcomes remain the same for the DM and the MBA or MSM under this option, but the normal completion time for the degrees in the combined program is reduced to four years. Through this program, doctoral work is started after completing seven of the eleven required master's courses. Program plans must be approved by the Dean of Management or Director of Education for the Institute for Advanced Studies. In no case will a master's concentration be awarded unless all of the concentration courses (with the exception of a capstone course) have been completed.

The MBA or MSM degree will be awarded upon successful completion of the seven approved master's courses plus:

|         |                             |   |
|---------|-----------------------------|---|
| MGMT800 | Fundamentals of Management  | 5 |
| MGMT801 | Research and Writing I      | 3 |
| MGMT805 | Research Methods and Design | 5 |
| MGMT806 | Research and Writing II     | 3 |

Students will be required to complete a project equivalent to a master's level capstone project or a concept paper built into the process at the end of MGMT 806, with the approval of a Mentor and two Readers before the MBA will be awarded.

## **Doctoral Degrees**

All doctoral degrees are offered through the University's Institute for Advanced Studies (IAS).

### **Management – Homeland Security (DM-HLS)**

The Doctor of Management with a concentration in Homeland Security at Colorado Technical University is designed to encourage the professional development of managers through mentoring, action research, and practical projects; enabling them to make key leadership contributions in their area of expertise.

#### **Program Outcomes**

- Attain familiarity with the body of knowledge in current management theory
- Become a subject-matter expert in a specialized area of management
- Develop a leadership style based on ethical and philosophical consideration
- Effectively manage change through strategic design and research
- Predict future trends through effective research and qualitative methods
- Contribute to management literature via literature reviews, practitioner articles and research articles

#### **Concentration Outcomes for Homeland Security**

- Assess trans-organizational structures for the management of Homeland Security.
- Develop a plan for coordinating networked Homeland Security organizations.
- Analyze how crises unfold and evaluate contingencies for dealing with complications as they arise.
- Frame policy agendas for creating inter organizational collaboration among businesses, government, and advocacy organizations.

Each year of the DM program is designed to provide candidates with the theoretical, research and application capabilities necessary to pursue a successful career in their chosen field. The organization of each year is described below.

#### **Year 1: The Foundation**

The beginning of the program focuses on research. Each student will spend the first year learning about classic and current management literature and developing competence in research methods. A review of the literature will be completed and work will begin on an action research proposal.

#### **Year 2: Acquisition of Knowledge**

Once the foundation is in place, year two is the time the student chooses an area of specialization and begins to form a personal understanding of the management research and methods used in that area. Course work will focus on the concentration area: Organizational Development and Change.

### **Year 3: Leadership and Professional Advancement**

In the final year, leadership skills and the ability to manage change are developed. Students will use qualitative methods and strategic processes to be able to predict future trends, furthering a mastery of a specialization. The final year will result in the production of four publishable papers or a dissertation that must be approved by a three member committee.

The DM program includes twelve 5-credit classes, one per term for three years. These courses are taught using the Professional Learning Model™ in an executive format. While much of the work is done online, every other term there is a required residency that starts the course. In alternating terms, the residency is optional. These are graded classes, and students must maintain an average of 3.5 out of a possible 4.0 in these classes.

There are also 12 Research and Writing courses that result in either four publishable papers or a dissertation. One research and writing course is taken each quarter in conjunction with one formal course. There are two options: publishable paper and dissertation. Both require a literature review and a research proposal. The research proposal for both options must be approved by the mentor. The publishable paper option requires the approval by the mentor and two readers for four papers: a publishable literature review, two publishable empirical papers (at least one of which must be publishable as an academic article), and a proposal for programmatic research covering a planned stream of research. This could also serve as a proposal for funding through a company or granting agency. The dissertation option requires a more extensive document that incorporates the literature review, a major empirical study, and the proposal for programmatic research. It must be approved by the mentor and two readers.

### **DM-HLS Program Requirements**

#### **Required Courses**

All students in the DM-HLS program must complete all of the following courses:

| <b>Course No.</b> | <b>Course Name</b>                                | <b>Hrs.</b> |
|-------------------|---------------------------------------------------|-------------|
| MGMT800           | Fundamentals of Management                        | 5           |
| MGMT801           | Research and Writing I                            | 3           |
| MGMT805           | Research Methods and Design                       | 5           |
| MGMT806           | Research and Writing II                           | 3           |
| MGMT810           | Qualitative and Ethnographic Methods              | 5           |
| MGMT811           | R&W III: Action Research Theory                   | 3           |
| MGMT815           | Quantitative Methods                              | 5           |
| MGMT816           | R&W IV: The Practice of Action Research           | 3           |
| HLS820            | Contemporary Issues in HLS                        | 5           |
| MGMT821           | R&W V: Process Consulting and Intervention Theory | 3           |

|         |                                                                     |   |
|---------|---------------------------------------------------------------------|---|
| HLS825  | Network Organizations and Other Large Scale Interventions for HLS   | 5 |
| MGMT826 | R&W VI: The Practice of Process Consulting and Intervention         | 3 |
| HLS830  | Crisis Planning and Operations Management                           | 5 |
| MGMT831 | Research and Writing VII                                            | 3 |
| HLS835  | Policy and Governance in Trans-Organizational Collaboration for HLS | 5 |
| MGMT836 | Research and Writing VIII                                           | 3 |
| MGMT840 | Philosophy of Science, Values and Ethics                            | 5 |
| MGMT841 | Research and Writing IX                                             | 3 |
| MGMT845 | Leadership                                                          | 5 |
| MGMT846 | Research and Writing X                                              | 3 |
| HLS850  | Strategic Thinking for HLS                                          | 5 |
| MGMT851 | Research and Writing XI                                             | 3 |
| HLS855  | Futuring and Innovation for HLS                                     | 5 |
| MGMT856 | Research and Writing XII                                            | 3 |

**Total Program Quarter Credit Hours: 96**

#### **Graduation Requirements:**

In addition to the successful completion of the above 96 credit hours with an acceptable GPA, students must also satisfactorily complete and defend their research, using either the paper or dissertation option

#### **Degree Completion, Emphasis Areas and Post Doctoral Study**

The student must be continuously enrolled until meeting all graduation requirements. A student who has not completed the research requirements by the end of the formal coursework continues by registering for **MGMT895 Research Continuation** each term until completion of the requirements.

The student may take **MGMT898 Advanced Topics in Management** in order to complete an optional emphasis while in the program. The student, Mentor, and Dean approve a learning contract consisting of two quarters (10 credits) of MGMT898 in a particular area of interest. Current emphasis areas include: Entrepreneurship and Family Business Management, International Management, and Non-violent Transformational Change Management.

The student may take **MGMT899 Post Doctoral Study** in order to complete an emphasis after completing the degree or to gain further experiences that will complement the previous learning. This class may be taken as many times as necessary to complete the emphasis.

## **The Doctoral Advantage**

While a relevant masters degree is ordinarily required for admission to CTU doctoral programs, there is also the option of completing a CTU MBA or MSM while starting work on the Doctor of Management. The program outcomes remain the same for the DM and the MBA or MSM under this option, but the normal completion time for the degrees in the combined program is reduced to four years. Through this program, doctoral work is started after completing seven of the eleven required master's courses. Program plans must be approved by the Dean of Management or Director of Education for the Institute for Advanced Studies. In no case will a master's concentration be awarded unless all of the concentration courses (with the exception of a capstone course) have been completed.

The MBA or MSM degree will be awarded upon successful completion of the seven approved master's courses plus:

|         |                             |   |
|---------|-----------------------------|---|
| MGMT800 | Fundamentals of Management  | 5 |
| MGMT801 | Research and Writing I      | 3 |
| MGMT805 | Research Methods and Design | 5 |
| MGMT806 | Research and Writing II     | 3 |

Students will be required to complete a project equivalent to a master's level capstone project or a concept paper built into the process at the end of MGMT806, with the approval of a Mentor and two Readers before the MBA will be awarded.



## **Doctoral Degrees**

All doctoral degrees are offered through the University's Institute for Advanced Studies (IAS).

### **Management – Environmental and Social Sustainability (DM-ESS)**

The Doctor of Management with a concentration in Environmental and Social Sustainability at Colorado Technical University is designed to encourage the professional development of managers through mentoring, action research, and practical projects; enabling them to make key leadership contributions in their area of expertise.

#### **Program Outcomes**

- Attain familiarity with the body of knowledge in current management theory
- Become a subject-matter expert in a specialized area of management
- Develop a leadership style based on ethical and philosophical consideration
- Effectively manage change through strategic design and research
- Predict future trends through effective research and qualitative methods
- Contribute to management literature via literature reviews, practitioner articles and research articles

#### **Concentration Outcomes for Environmental and Social Sustainability**

- Apply systems thinking skills to environmental issues.
- Develop a plan for the implementation of the triple bottom line in an organization
- Experience an entire cycle in action research in a complex organization
- Frame policy agendas for creating inter organizational collaboration among businesses, government, and advocacy organizations.

Each year of the DM program is designed to provide candidates with the theoretical, research and application capabilities necessary to pursue a successful career in their chosen field. The organization of each year is described below.

#### **Year 1: The Foundation**

The beginning of the program focuses on research. Each student will spend the first year learning about classic and current management literature and developing competence in research methods. A review of the literature will be completed and work will begin on an action research proposal.

#### **Year 2: Acquisition of Knowledge**

Once the foundation is in place, year two is the time the student chooses an area of specialization and begins to form a personal understanding of the management research and methods used in that area. Course work will focus on the concentration area: Organizational Development and Change.

### **Year 3: Leadership and Professional Advancement**

In the final year, leadership skills and the ability to manage change are developed. Students will use qualitative methods and strategic processes to be able to predict future trends, furthering a mastery of a specialization. The final year will result in the production of four publishable papers or a dissertation that must be approved by a three member committee.

The DM program includes twelve 5-credit classes, one per term for three years. These courses are taught using the Professional Learning Model™ in an executive format. While much of the work is done online, every other term there is a required residency that starts the course. In alternating terms, the residency is optional. These are graded classes, and students must maintain an average of 3.5 out of a possible 4.0 in these classes.

There are also 12 Research and Writing courses that result in either four publishable papers or a dissertation. One research and writing course is taken each quarter in conjunction with one formal course. There are two options: publishable paper and dissertation. Both require a literature review and a research proposal. The research proposal for both options must be approved by the mentor. The publishable paper option requires the approval by the mentor and two readers for four papers: a publishable literature review, two publishable empirical papers (at least one of which must be publishable as an academic article), and a proposal for programmatic research covering a planned stream of research. This could also serve as a proposal for funding through a company or granting agency. The dissertation option requires a more extensive document that incorporates the literature review, a major empirical study, and the proposal for programmatic research. It must be approved by the mentor and two readers.

### **DM-ESS Program Requirements**

#### **Required Courses**

All students in the DM-ESS program must complete all of the following courses:

| <b>Course No.</b> | <b>Course Name</b>                   | <b>Hrs.</b> |
|-------------------|--------------------------------------|-------------|
| MGMT800           | Fundamentals of Management           | 5           |
| MGMT801           | Research and Writing I               | 3           |
| MGMT805           | Research Methods and Design          | 5           |
| MGMT806           | Research and Writing II              | 3           |
| MGMT810           | Qualitative and Ethnographic Methods | 5           |
| MGMT811           | R&W III: Action Research Theory      | 3           |

|                                            |                                                                        |           |
|--------------------------------------------|------------------------------------------------------------------------|-----------|
| MGMT815                                    | Quantitative Methods                                                   | 5         |
| MGMT816                                    | R&W IV: The Practice of Action Research                                | 3         |
| ESS820                                     | Systems Thinking for Sustainability                                    | 5         |
| MGMT821                                    | R&W V: Process Consulting and Intervention Theory                      | 3         |
| ESS825                                     | Organizational Performance and the Triple Bottom Line                  | 5         |
| MGMT826                                    | R&W VI: The Practice of Process Consulting and Intervention            | 3         |
| ESS830                                     | Advanced Action Research for ESS                                       | 5         |
| MGMT831                                    | Research and Writing VII                                               | 3         |
| ESS835                                     | Policy and Governance in Trans-Organizational<br>Collaboration for ESS | 5         |
| MGMT836                                    | Research and Writing VIII                                              | 3         |
| MGMT840                                    | Philosophy of Science, Values and Ethics                               | 5         |
| MGMT841                                    | Research and Writing IX                                                | 3         |
| MGMT845                                    | Leadership                                                             | 5         |
| MGMT846                                    | Research and Writing X                                                 | 3         |
| ESS850                                     | Strategic Thinking for ESS                                             | 5         |
| MGMT851                                    | Research and Writing XI                                                | 3         |
| ESS855                                     | Futuring and Innovation for ESS                                        | 5         |
| MGMT856                                    | Research and Writing XII                                               | 3         |
| <b>Total Program Quarter Credit Hours:</b> |                                                                        | <b>96</b> |

#### **Graduation Requirements:**

In addition to the successful completion of the above 96 credit hours with an acceptable GPA, students must also satisfactorily complete and defend their research, using either the paper or dissertation option

#### **Degree Completion, Emphasis Areas and Post Doctoral Study**

The student must be continuously enrolled until meeting all graduation requirements. A student who has not completed the research requirements by the end of the formal coursework continues by registering for **MGMT895 Research Continuation** each term until completion of the requirements.

The student may take **MGMT898 Advanced Topics in Management** in order to complete an optional emphasis while in the program. The student, Mentor, and Dean approve a learning contract consisting of two quarters (10 credits) of MGMT898 in a particular area of interest. Current emphasis areas include: Entrepreneurship and Family Business Management, International Management, and Non-violent Transformational Change Management.

The student may take **MGMT899 Post Doctoral Study** in order to complete an emphasis after completing the degree or to gain further experiences that will complement the **previous** learning. This class may be taken as many times as necessary to complete the emphasis.

## **The Doctoral Advantage**

While a relevant masters degree is ordinarily required for admission to CTU doctoral programs, there is also the option of completing a CTU MBA or MSM while starting work on the Doctor of Management. The program outcomes remain the same for the DM and the MBA or MSM under this option, but the normal completion time for the degrees in the combined program is reduced to four years. Through this program, doctoral work is started after completing seven of the eleven required master's courses. Program plans must be approved by the Dean of Management or Director of Education for the Institute for Advanced Studies. In no case will a master's concentration be awarded unless all of the concentration courses (with the exception of a capstone course) have been completed.

The MBA or MSM degree will be awarded upon successful completion of the seven approved master's courses plus:

|         |                             |   |
|---------|-----------------------------|---|
| MGMT800 | Fundamentals of Management  | 5 |
| MGMT801 | Research and Writing I      | 3 |
| MGMT805 | Research Methods and Design | 5 |
| MGMT806 | Research and Writing II     | 3 |

Students will be required to complete a project equivalent to a master's level capstone project or a concept paper built into the process at the end of MGMT 806, with the approval of a Mentor and two Readers before the MBA will be awarded.

## Master of Science in Management (MSM)

In order for organization and its management to compete in today's global business environment, there is a great need for individuals who can both lead and manage technical initiatives and business operations. To help meet the need for this competitive new breed of technical leadership and management professional, Colorado Technical University has introduced a new Master of Science in Management degree program. The program architecture consists of research methods, leadership, managerial decision-making and operations management integrated with a solid practical research foundation. Building on this program core, the student can tailor the degree program to meet individual job responsibilities, organizational needs, and career goals.

### Program Outcomes

- Lead and direct technical initiatives and operations
- Analyze and develop strategies for improving business processes and operations
- Integrate technology and operational processes into the organization
- Evaluate emerging technologies and their impact across the organization
- Apply analytical and critical thinking skills necessary to evaluate emerging technologies
- Work effectively as problem-solving team member
- Conduct, use, and evaluate professional applied research

### MSM Program Requirements

| Course No.                                  | Course Name                            | Hrs.      |
|---------------------------------------------|----------------------------------------|-----------|
| MGMT605                                     | Graduate Research Methods              | 4         |
| MGMT640                                     | Operations Management                  | 4         |
| INTD670                                     | Leadership and Ethical Decision-Making | 4         |
| MGMT660                                     | Management Capstone                    | 4         |
| 600 Level Business and Management Electives |                                        | 28        |
| <b>Total Program Quarter Credit Hours:</b>  |                                        | <b>44</b> |

The 28 credits of 600-level Business and Management Electives must be approved by the chair or dean of management at the campus where the degree is being offered.



## Master of Science in Management – Homeland Security (MSM-HLS)

Homeland Security has become a concern at all levels of government and in a wide variety of organizations. This program has been designed to combine essential organizational research and analysis skills with a deep understanding of the variety of threats facing the United States, its communities, and its organizations. The seven required courses in Homeland Security are based on the curriculum of the Masters of Homeland Security as developed by the US Naval Postgraduate School and offered in a variety of Universities that are part of the Homeland Security and Defense Education Consortium.

### Program Outcomes

- Lead and direct technical initiatives and operations
- Analyze and develop strategies for improving organizational processes and operations
- Work effectively as problem-solving team member
- Conduct, use, and evaluate professional applied research
- Analyze models of Homeland Security and effectively communicate them
- Demonstrate an understanding of terrorism and the psychology of fear
- Assess threats to the infrastructure
- Evaluate technological solutions to problems of Homeland Security
- Examine the relationship between Homeland Security-related organizations and government

### MSM PROGRAM REQUIREMENTS

| Course No. | Course Name                                  | Hrs. |
|------------|----------------------------------------------|------|
| MGMT605    | Graduate Research Methods                    | 4    |
| INTD670    | Leadership and Ethical Decision Making       | 4    |
| EMBA690    | Strategic Management in Dynamic Environments | 4    |
| MGMT660    | Management Capstone                          | 4    |

### Homeland Security Concentration

|        |                                       |   |
|--------|---------------------------------------|---|
| HLS600 | Homeland Security Fundamentals        | 4 |
| HLS610 | Dynamics of Terrorism                 | 4 |
| HLS620 | Technology Solutions for HLS          | 4 |
| HLS630 | Organizational and Policy Challenges  | 4 |
| HLS640 | Vulnerability Analysis and Protection | 4 |
| HLS650 | Homeland Security and Government      | 4 |
| HLS660 | Psychology of Fear Management         | 4 |

**Total Program Quarter Credit Hours:**

**44**

## **Associate of Applied Science in Accounting with a concentration in Insurance Premium Auditing (AASACC-IPA)**

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. In response to market demand, the insurance industry continually seeks qualified accounting professionals in insurance premium auditing. In addition to openings resulting from growth, the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The AASACC-IPA degree program is designed to equip you with a variety of basic accounting and premium auditing skills that will be useful in an entry-level premium auditing position. The curriculum provides you with an opportunity to develop your intellectual, interpersonal and communication skills that are needed to succeed in the business world.

Admission to this program is contingent on having received the American Institute for Chartered Property Casualty Underwriter (AICPCU) Associate in Premium Auditing (APA) designation. This requires successful completion of the two APA foundation courses (APA 91 and APA 92), CPCU 520, and either CPCU 540 or CPCU 552.

### **Program Outcomes**

- Demonstrate proficiency in industry validated insurance and risk management skills by the successful completion of the CPCU Associate in Premium Auditing
- Integrate insurance and risk management skills with sound business principles and practices
- Apply research skills to solve insurance and risk management problems
- Demonstrate change-agent skills using critical and creative thinking
- Apply the knowledge and skills of accounting, management, business mathematics, and the liberal arts to identify, resolve, and communicate relevant accounting and premium audit issues
- Demonstrate the ability to communicate in written and verbal modes of communication
- Develop logical processes for planning, auditing, and reporting the results of insurance premium audits
- Show the ability to formulate and resolve complex problems independently and creatively

### **Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the

course. See your Admission's Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

### **AASACC-IPA Program Requirements**

#### **Required Courses**

All students in the AASACC-IPA program must complete all of the following courses:

| <b>Course No.</b>                                     | <b>Course Name</b>                                                 | <b>Hrs.</b> |
|-------------------------------------------------------|--------------------------------------------------------------------|-------------|
| GENERAL EDUCATION (32 hrs)                            |                                                                    |             |
| IT190                                                 | Introduction to IT                                                 | 4           |
| ENGL111                                               | English Composition I                                              | 4           |
| ENGL112                                               | English Composition II                                             | 4           |
| HIST150                                               | World History Since 1500                                           | 4           |
| or                                                    |                                                                    |             |
| HIST210                                               | World History and Culture I                                        | 4           |
| INTD111                                               | Creating Academic and Professional Success                         | 4           |
| MATH143                                               | Business Algebra                                                   | 4           |
| ECON201                                               | Macroeconomics                                                     | 4           |
| SCI120                                                | The Impact of Science and Technology on Society                    | 4           |
| COMMUNICATIONS (8 hrs)                                |                                                                    |             |
| ENGL200                                               | Professional Writing                                               | 4           |
| ENGL210                                               | Professional Speaking                                              | 4           |
| SOCIAL SCIENCE (4 hrs)                                |                                                                    |             |
| ECON202                                               | Microeconomics                                                     | 4           |
| INFORMATION TECHNOLOGY (4 hrs)                        |                                                                    |             |
| IT254                                                 | Spreadsheet Applications                                           | 4           |
| BUSINESS, ACCOUNTING & RISK PREMIUM AUDITING (32 hrs) |                                                                    |             |
| BADM100                                               | Introduction to Business                                           | 4           |
| ACCT201                                               | Accounting I                                                       | 4           |
| ACCT202                                               | Accounting II                                                      | 4           |
| ACCT203                                               | Accounting III                                                     | 4           |
| ACCT215                                               | Introduction to Taxation                                           | 4           |
| FINC220                                               | Financial Statement Analysis                                       | 4           |
| IRM200                                                | Insurance and Risk Management Investigation & Interview Techniques | 4           |

|                                                            |                                                   |           |
|------------------------------------------------------------|---------------------------------------------------|-----------|
| IRM210                                                     | Insurance and Risk Management Capstone/Externship | 4         |
| TRANSFER CREDIT (12 hrs)                                   |                                                   |           |
| CPCU Transfer Credit ( <u>campus validation required</u> ) |                                                   | 12        |
| <b>Total Program Quarter Credit Hours:</b>                 |                                                   | <b>92</b> |

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Professional Communication (ENGL200, ENGL210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.



# College of Criminal Justice and Public Administration

## Bachelor of Science in Court Reporting (BSCR)

The Bachelor of Science in Court Reporting degree program offers those who are looking for a career inside the courts and law community an exciting combination of reporting skills, business background, and communication expertise that will maximize career opportunities available for court reporting and free-lancing along with laying a foundation for closed captioning work as well. Judges and lawyers rely on court reporters to provide the authoritative record in court proceedings. The program's emphasis on communication skills, management, and professional skills along with technical knowledge and expertise will prepare you for positions of responsibility in the day-to-day workings of the legal system.

### Program Outcomes

- Demonstrate professional written and verbal communication skills
- Resolve complex problems in the reporting profession independently and ethically
- Read and write stenography in real-time on a computer-compatible stenography machine with proficiency and accuracy
- Identify the components of a transcription production business, such as transcript format and filing requirements, and billing procedures
- Identify the responsibilities of the court reporter in a variety of settings
- Demonstrate appropriate knowledge of the courts and the civil and criminal systems of law
- Prepare accurate transcripts for a variety of court proceedings that includes multiple speakers, witnesses, and technical material utilizing a CAT system
- Identify and demonstrate the roles and responsibilities of the reporting professional as applied to the practicum setting
- Use technology appropriate to the court reporting profession

### Preparatory Requirements

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor/Mentor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |

|         |                    |   |
|---------|--------------------|---|
| MATH080 | Elementary Algebra | 4 |
|---------|--------------------|---|

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### **BSCR Program Requirements**

#### **Required Courses**

All students in the BSCR program must complete all of the following courses:

| <b>Course No.</b>                                     | <b>Course Name</b>                         | <b>Hrs.</b> |
|-------------------------------------------------------|--------------------------------------------|-------------|
| <b>GENERAL EDUCATION (64 hours)</b>                   |                                            |             |
| IT105                                                 | Information and Technology Literacy        | 4           |
| IT254                                                 | Spreadsheet Applications                   | 4           |
| ENGL111                                               | English Composition I                      | 4           |
| ENGL112                                               | English Composition II                     | 4           |
| ENGL200                                               | Professional Writing                       | 4           |
| ENGL210                                               | Professional Speaking                      | 4           |
| PHIL310                                               | Ethics                                     | 4           |
| INTD111                                               | Creating Academic and Professional Success | 4           |
| BIO122                                                | Anatomy and Physiology I                   | 4           |
| MATH143                                               | Business Algebra                           | 4           |
| MATH306                                               | Computer Assisted Statistics               | 4           |
| BADM100                                               | Introduction to Business                   | 4           |
| LITR220                                               | Values in World Literature                 | 4           |
| HIST210                                               | World History and Culture I                | 4           |
| PSYC100                                               | Introduction to Psychology                 | 4           |
| SOCL101                                               | Introduction to Sociology                  | 4           |
| <b>BUSINESS /MANAGEMENT (8 Hours)</b>                 |                                            |             |
| ACCT201                                               | Accounting I                               | 4           |
| ECON201                                               | Macroeconomics                             | 4           |
| <b>PUBLIC ADMINISTRATION/SOCIAL SCIENCE (8 Hours)</b> |                                            |             |
| PBAD200                                               | American Government                        | 4           |
| SOCL356                                               | American Diversity                         | 4           |
| <b>INTERDISCIPLINARY (4 Hours)</b>                    |                                            |             |
| INTD340                                               | Career Planning                            | 4           |
| <b>MEDICAL (4 Hours)</b>                              |                                            |             |
| HSS121                                                | Medical Terminology                        | 4           |
| <b>LEGAL STUDIES AND CRIMINAL JUSTICE (20 Hours)</b>  |                                            |             |
| CJUS365                                               | Criminal Law                               | 4           |

|                                            |                                  |            |
|--------------------------------------------|----------------------------------|------------|
| CJUS440                                    | The Laws of Evidence             | 4          |
| PALS225                                    | Civil Litigation I               | 4          |
| PALS230                                    | Contract Law                     | 4          |
| PALS325                                    | Civil Litigation II              | 4          |
| COURT REPORTING CORE (72 Hours)            |                                  |            |
| CRPT100                                    | Realtime Theory I                | 4          |
| CRPT102                                    | Realtime Theory II               | 4          |
| CRPT120                                    | Vocabulary for Court Reporters   | 4          |
| CRPT200                                    | Realtime Writing I               | 4          |
| CRPT202                                    | Realtime Writing II              | 4          |
| CRPT210                                    | Computer Aided Transcription I   | 4          |
| CRPT220                                    | Dictation I                      | 1          |
| CRPT225                                    | Dictation II                     | 1          |
| CRPT250                                    | Punctuation and Proofreading     | 4          |
| CRPT300                                    | Realtime Writing III             | 4          |
| CRPT302                                    | Realtime Writing IV              | 4          |
| CRPT320                                    | Dictation III                    | 1          |
| CRPT325                                    | Dictation IV                     | 1          |
| CRPT350                                    | Legal Procedures and Terminology | 4          |
| CRPT400                                    | Realtime Writing V               | 4          |
| CRPT405                                    | Computer-Aided Transcription II  | 4          |
| CRPT410                                    | Realtime Writing VI              | 4          |
| CRPT414                                    | Realtime Reporting Procedures    | 4          |
| CRPT450                                    | Realtime Writing VII             | 4          |
| CRPT460                                    | Realtime Writing VIII            | 4          |
| CRPT475                                    | Internship/Externship            | 4          |
| <b>Total Program Quarter Credit Hours:</b> |                                  | <b>180</b> |

## Associate of Applied Science in Court Reporting (AASCR)

The Associate of Applied Science degree in Court Reporting will train the student in the skills necessary to enter a career in the heart of the legal system. The student will acquire the basic entry level proficiencies needed to work as a freelance court reporter or a court reporter within the court systems. Additionally, the Associate of Applied Science degree in Court Reporting will introduce the student to closed-captioning and other business opportunities. This extended Associate degree will help ensure that the student is able to spend the time needed to gain the accuracy and proficiency for certification and allows the student to proceed directly to the completion of a Bachelor's degree.

### Program Outcomes

- Demonstrate professional written and verbal communication skills
- Read and write stenography in realtime on a computer-compatible stenography machine with proficiency and accuracy
- Identify the components of a transcription production business such as transcript format and filing requirements, and billing procedures
- Identify the responsibilities of the court reporter in a variety of settings
- Demonstrate entry level understanding of the courts and the civil and criminal systems of law
- Prepare accurate transcripts for a variety of court proceedings that includes multiple speakers, witnesses, and technical material utilizing a CAT system
- Identify and demonstrate the roles and responsibilities of the reporting professional as applied to the practicum setting
- Use technology appropriate to the court reporting profession

### Preparatory Requirements

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor/Mentor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

## **AASCR Program Requirements**

### **Required Courses**

All students in the AASCR program must complete all of the following courses:

| <b>Course No.</b>                                    | <b>Course Name</b>                         | <b>Hrs.</b> |
|------------------------------------------------------|--------------------------------------------|-------------|
| <b>GENERAL EDUCATION (40 hours)</b>                  |                                            |             |
| IT105                                                | Information and Technology Literacy        | 4           |
| ENGL111                                              | English Composition I                      | 4           |
| ENGL112                                              | English Composition II                     | 4           |
| INTD111                                              | Creating Academic and Professional Success | 4           |
| BIO122                                               | Anatomy and Physiology                     | 4           |
| MATH143                                              | Business Algebra                           | 4           |
| BADM100                                              | Introduction to Business                   | 4           |
| LITR220                                              | Values in World Literature                 | 4           |
| HIST210                                              | World History and Culture I                | 4           |
| SOCL101                                              | Introduction to Sociology                  | 4           |
| <b>PUBLIC ADMINISTRATION (4 Hours)</b>               |                                            |             |
| PBAD200                                              | American Government                        | 4           |
| <b>MEDICAL (4 Hours)</b>                             |                                            |             |
| HSS121                                               | Medical Terminology                        | 4           |
| <b>LEGAL STUDIES AND CRIMINAL JUSTICE (12 Hours)</b> |                                            |             |
| CJUS365                                              | Criminal Law                               | 4           |
| CJUS440                                              | The Laws of Evidence                       | 4           |
| PALS225                                              | Civil Litigation I                         | 4           |
| <b>COURT REPORTING CORE (72 Hours)</b>               |                                            |             |
| CRPT100                                              | Realtime Theory I                          | 4           |
| CRPT102                                              | Realtime Theory II                         | 4           |
| CRPT120                                              | Vocabulary for Court Reporters             | 4           |
| CRPT200                                              | Realtime Writing I                         | 4           |
| CRPT202                                              | Realtime Writing II                        | 4           |
| CRPT210                                              | Computer-Aided Transcription I             | 4           |
| CRPT220                                              | Dictation I                                | 1           |
| CRPT225                                              | Dictation II                               | 1           |
| CRPT250                                              | Punctuation and Proofreading               | 4           |
| CRPT300                                              | Realtime Writing III                       | 4           |
| CRPT302                                              | Realtime Writing IV                        | 4           |
| CRPT320                                              | Dictation III                              | 1           |
| CRPT325                                              | Dictation IV                               | 1           |
| CRPT350                                              | Legal Procedures and Terminology           | 4           |
| CRPT400                                              | Realtime Writing V                         | 4           |



|                                            |                                 |            |
|--------------------------------------------|---------------------------------|------------|
| CRPT405                                    | Computer-Aided Transcription II | 4          |
| CRPT410                                    | Realtime Writing VI             | 4          |
| CRPT414                                    | Realtime Reporting Procedures   | 4          |
| CRPT450                                    | Realtime Writing VII            | 4          |
| CRPT460                                    | Realtime Writing VIII           | 4          |
| CRPT475                                    | Internship/Externship           | 4          |
| <b>Total Program Quarter Credit Hours:</b> |                                 | <b>132</b> |

## Associate of Science in Court Reporting (ASCR)

The Associate of Science degree in Court Reporting will train the student in the skills necessary to enter a career in the heart of the legal system. The student will acquire the basic, entry-level proficiencies needed to work as a free-lance court reporter or a court reporter within the court systems. Additionally, the Associate of Science degree in Court Reporting will introduce the student to closed-captioning and other business opportunities. This extended Associate degree will help ensure that the student is able to spend the time needed to gain the accuracy and proficiency for certification and allows the student to proceed directly to the completion of a Bachelor's degree.

### Program Outcomes

- Demonstrate professional written and verbal communication skills
- Read and write stenography in realtime on a computer-compatible stenography machine
- Identify the components of a transcription production business such as transcript format and filing requirements, and billing procedures
- Identify the responsibilities of the court reporter in a variety of settings
- Demonstrate entry level understanding of the courts and the civil and criminal systems of law
- Prepare accurate transcripts for a variety of court proceedings that includes multiple speakers, witnesses, and technical material utilizing a CAT system
- Identify and demonstrate the roles and responsibilities of the reporting professional as applied to the practicum setting
- Use technology appropriate to the court reporting profession

### Preparatory Requirements

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor/Mentor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

## **ASCR Program Requirements**

### **Required Courses**

All students in the ASCR program must complete all of the following courses:

| <b>Course No.</b>                                    | <b>Course Name</b>                         | <b>Hrs.</b> |
|------------------------------------------------------|--------------------------------------------|-------------|
| <b>GENERAL EDUCATION (40 hours)</b>                  |                                            |             |
| IT105                                                | Information and Technology Literacy        | 4           |
| ENGL111                                              | English Composition I                      | 4           |
| ENGL112                                              | English Composition II                     | 4           |
| INTD111                                              | Creating Academic and Professional Success | 4           |
| BIO122                                               | Anatomy and Physiology I                   | 4           |
| MATH143                                              | Business Algebra                           | 4           |
| BADM100                                              | Introduction to Business                   | 4           |
| LITR220                                              | Values in World Literature                 | 4           |
| HIST210                                              | World History and Culture I                | 4           |
| SOCL101                                              | Introduction to Sociology                  | 4           |
| <b>PUBLIC ADMINISTRATION (4 Hours)</b>               |                                            |             |
| PBAD200                                              | American Government                        | 4           |
| <b>MEDICAL (4 Hours)</b>                             |                                            |             |
| HSS121                                               | Medical Terminology                        | 4           |
| <b>LEGAL STUDIES AND CRIMINAL JUSTICE (12 Hours)</b> |                                            |             |
| CJUS365                                              | Criminal Law                               | 4           |
| CJUS440                                              | The Laws of Evidence                       | 4           |
| PALS225                                              | Civil Litigation I                         | 4           |
| <b>COURT REPORTING CORE (72 Hours)</b>               |                                            |             |
| CRPT100                                              | Realtime Theory I                          | 4           |
| CRPT102                                              | Realtime Theory II                         | 4           |
| CRPT120                                              | Vocabulary for Court Reporters             | 4           |
| CRPT200                                              | Realtime Writing I                         | 4           |
| CRPT202                                              | Realtime Writing II                        | 4           |
| CRPT210                                              | Computer -Aided Transcription I            | 4           |
| CRPT220                                              | Dictation I                                | 1           |
| CRPT225                                              | Dictation II                               | 1           |
| CRPT250                                              | Punctuation and Proofreading               | 4           |
| CRPT300                                              | Realtime Writing III                       | 4           |
| CRPT302                                              | Realtime Writing IV                        | 4           |
| CRPT320                                              | Dictation III                              | 1           |
| CRPT325                                              | Dictation IV                               | 1           |
| CRPT350                                              | Legal Procedures and Terminology           | 4           |
| CRPT400                                              | Realtime Writing V                         | 4           |
| CRPT405                                              | Computer-Aided Transcription II            | 4           |

|                                            |                               |            |
|--------------------------------------------|-------------------------------|------------|
| CRPT410                                    | Realtime Writing VI           | 4          |
| CRPT414                                    | Realtime Reporting Procedures | 4          |
| CRPT450                                    | Realtime Writing VII          | 4          |
| CRPT460                                    | Realtime Writing VIII         | 4          |
| CRPT475                                    | Internship/Externship         | 4          |
| <b>Total Program Quarter Credit Hours:</b> |                               | <b>132</b> |

# College of Information Systems and Technology

## Master of Science in Enterprise Information Systems (MSEIS)

Large, complex organizations require a different perspective when solving technical problems. Local solutions may not be sufficient for the entire enterprise. Today, these large organizations need technical leaders who can take a problem and find a technical solution that will be functional for all components of the enterprise. This program centers on a set of core courses which are designed to provide the student with an understanding of all the different elements that make up an enterprise and how those elements interrelate.

Please note the Preparatory Requirements, discussed below, that are necessary for success in this program.

### Core Program Outcomes

- Plan, implement and use technology within a broad business and real-world perspective
- Demonstrate the ability to critically analyze and solve technical issues as they relate to the enterprise
- Demonstrate the ability to design, implement and manage technology solutions to achieve enterprise goals
- Exercise strong interpersonal and team communication skills
- Demonstrate the skills necessary to perform all actions within an ethical framework

### MSEIS Core Program Requirements

| Course No.                                  | Course Name                                   | Hrs. |
|---------------------------------------------|-----------------------------------------------|------|
| IT605                                       | Enterprise Information Systems                | 4    |
| CS635                                       | Computer Networking                           | 4    |
| CS663                                       | Enterprise Architecture                       | 4    |
| CS654                                       | Security Management                           | 4    |
| CS660                                       | Database Systems                              | 4    |
| IT660                                       | Information Technology System Development     | 4    |
| PM600                                       | Project Management Processes in Organizations | 4    |
| PM620                                       | Schedule and Cost Control Techniques          | 4    |
| CS694                                       | Enterprise Information Systems Capstone       | 4    |
| Selected electives (CS/MGMT/PM/SCM courses) |                                               | 8    |



**RECOMMENDED ELECTIVES**

Select two courses from the list below:

|                                         |                                                 |
|-----------------------------------------|-------------------------------------------------|
| CS640                                   | Software Project Management                     |
| CS661                                   | Software Information Assurance                  |
| CS662                                   | System Security Certification and Accreditation |
| MGMT600                                 | Applied Managerial Decision-Making              |
| PM610                                   | Project Planning, Execution and Closure         |
| SCM620                                  | Design and Production Considerations            |
| Other elective courses by approval only |                                                 |

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Enterprise Solutions (IT605, CS645, CS694)  
Information Systems Development (IT660, CS660, IT605)  
Security Certification and Accreditation (elective CS662)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your Admissions advisor for more information.

**Preparatory Requirements**

The CTU Master of Science in Enterprise Information Systems degree program is designed to provide technical depth in the issues and concerns for enterprise-level solutions. In order to achieve this depth, a solid foundation in computer science (CS) and information technology (IT) is required. Students who have the required background but need to refresh some of their CS/IT skills are highly encouraged to take CS500 and/or IT501. Students who do not have the required background in CS/IT should consult with the program Dean or Chair to design an undergraduate foundation program in preparation for this degree. A resume and entrance essay stating why the student wants to attend graduate school are required in order to successfully assess the student's preparation for entrance into the MSEIS program. Students without a CS or IT undergraduate degree must demonstrate at least two years of work experience in the field.

# Revised Programs

## College of Business and Management

### Executive Master of Business Administration (EMBA)

(replaces pp. 40-41)

The Executive MBA Program combines a solid core of MBA courses with an innovative set of concentration courses. Designed to give students those tools, theories and skills necessary for long-term success, this curriculum emphasizes decision making, innovation, ethics, and a global perspective.

- Leadership skills grounded in sound ethical judgment, with the purpose of building environments where innovation, creativity and efficiency flourish
- Methods and practices of ‘*Intrapreneurism*’, which applies the skills and mindset of the entrepreneur *within* an organization
- An understanding of emerging markets and how to best position an organization to take advantage of opportunities in those markets
- Application of appropriate technologies and management styles that take into consideration the cultural and socio-economic realities of the environment
- Four basic ideas on which the curriculum is built: Ethical management and leadership; the use of good judgment and the making smart choices; an understanding of the global business environment; and the ability to create environments where innovative ideas can be taken from concept through application efficiently and consistently

### Program Outcomes

- Employ leadership skills, including effective judgment and decision-making
- Differentiate between ‘entrepreneur’ and ‘intrapreneur’ and use skills of both to work within an organization to produce innovative change and growth
- Work effectively as problem-solving team members
- Demonstrate an understanding of the major functional areas of business administration, including the critical skills necessary to analyze and solve business problems.
- Identify and analyze emerging global markets
- Manage an organization ethically and in a socially-responsible manner
- Formulate value-creation strategies

- Engage in professional business practices that cross cultural, economic and political boundaries
- Synthesize course material and present innovative solutions to contemporary, real-world problems and initiatives

## **EMBA Program Requirements**

### **MBA Core Program Requirements**

| <b>Course No.</b> | <b>Course Name</b>                     | <b>Hrs.</b> |
|-------------------|----------------------------------------|-------------|
| ECON616           | Applied Managerial Economics           | 4           |
| FINC615           | Applied Managerial Finance             | 4           |
| IT600             | Information Technology Management      | 4           |
| MGMT600           | Applied Managerial Decision-Making     | 4           |
| INTD670           | Leadership and Ethical Decision-making | 4           |
| ACCT614           | Applied Managerial Accounting          | 4           |

### **EMBA Requirements**

| <b>Course No.</b> | <b>Course Name</b>                               | <b>Hrs.</b> |
|-------------------|--------------------------------------------------|-------------|
| EMBA630           | Decision in Management: Navigating Uncertainty   | 4           |
| EMBA640           | Entrepreneurship/Intrapreneurship and Innovation | 4           |
| EMBA650           | Emerging Markets                                 | 4           |
| EMBA690           | Strategic Management in Dynamic Environments     | 4           |
| EMBA695           | EMBA Capstone                                    | 4           |

**Total Program Quarter Credit Hours: 44**

### **CTU Academic Certificates Included in this Program: (No additional tuition cost)**

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Executive Management (EMBA630, EMBA640, EMBA650, EMBA690)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## Master of Business Administration with a concentration in Accounting (MBA-ACC)

(replaces pp. 42-43)

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of personal financial advisors. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on greater advisory roles. In addition to openings resulting from growth, the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The Master of Business Administration in Accounting is a program for students with a Bachelor's degree in accounting or closely related fields. This program provides students with strong theoretical foundations and professional skills in the main functional areas of accounting, including financial reporting, management control and auditing, and taxation. In addition, this program is designed to prepare graduates for careers in industry, government and not-for-profit organizations.

### Program Outcomes

- Perform an audit review and prepare the appropriate documentation
- Describe how accounting information is used in implementing management policy
- Utilize accounting information to evaluate how to organize the business for managerial control
- Discuss the ethical implications of taxation and business decisions
- Develop a practical understanding and application of specific actions, processes, and techniques needed to move into the "next generation" of organizations
- Develop financial reports to meet business expansion needs
- Apply product costing techniques in the development of a master budget from a strategic perspective

### MBA Core Program Requirements

| Course No. | Course Name                            | Hrs. |
|------------|----------------------------------------|------|
| ECON616    | Applied Managerial Economics           | 4    |
| FINC615    | Applied Managerial Finance             | 4    |
| IT600      | Information Technology Management      | 4    |
| MGMT600    | Applied Managerial Decision-Making     | 4    |
| INTD670    | Leadership and Ethical Decision-Making | 4    |
| ACCT614    | Applied Managerial Accounting          | 4    |

**MBA-ACC Requirements**

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ACCT618           | Taxation and Business Decisions | 4           |
| ACCT624           | Advanced Cost Accounting        | 4           |
| ACCT628           | Financial Reporting             | 4           |
| ACCT634           | Accounting Information Systems  | 4           |
| ACCT644           | Management Control and Auditing | 4           |

**Total Program Quarter Credit Hours: 44**

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Financial Reporting (ACCT618, ACCT628, ACCT634, ACCT644)  
Management Accounting and Control (ACCT624, ACCT634, ACCT644)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA). The student who meets the unique requirements of the State Board of Accounting in their state's Application for CPA Licensure is qualified to sit for the CPA exam.



## Master of Business Administration (MBA)

(replaces pp. 46-47)

The MBA is a professional degree intended for those who aspire to increasing levels of responsibility in business and industry. An MBA is an investment in the graduate's future. This degree program is designed to provide each student with a breadth of skills ranging from accounting to project management. The program revolves around managerial skills required in planning, organizing and controlling work in organizations, and focuses on directing, coaching and motivating people for effective performance. In addition, this program is designed to help the student understand various management theories, essential management functions and their interrelationships, and the global environment of today's business.

### Program Outcomes

- Demonstrate an understanding of effective, ethical leadership strategies and skills
- Conduct professional applied research
- Demonstrate competence in the chosen field
- Communicate information effectively
- Work effectively as problem-solving team members
- Understand the implications of the internet on today's business
- Demonstrate an understanding of the major functional areas of business administration including the critical skills necessary to analyze and solve business problems
- Show a mastery of mathematics, statistics, accounting, finance, and economics to a sufficient degree to apply quantitative reasoning and analysis to business and management problems

### MBA Core Program Requirements

| Course No. | Course Name                            | Hrs. |
|------------|----------------------------------------|------|
| ECON616    | Applied Managerial Economics           | 4    |
| FINC615    | Applied Managerial Finance             | 4    |
| IT600      | Information Technology Management      | 4    |
| MGMT600    | Applied Managerial Decision-Making     | 4    |
| INTD670    | Leadership and Ethical Decision-Making | 4    |
| ACCT614    | Applied Managerial Accounting          | 4    |

### MBA – Additional Program Requirements

| Course No. | Course Name                                                  | Hrs. |
|------------|--------------------------------------------------------------|------|
| MKTG630    | Applied Managerial Marketing                                 | 4    |
| PM600      | Project Management Processes in Organizations                | 4    |
| SCM610     | Logistics/Supply Chain Management Inventory and Distribution | 4    |

|         |                                      |   |
|---------|--------------------------------------|---|
| HRMT640 | Strategic Human Resources Management | 4 |
| MGMT660 | Management Capstone                  | 4 |

**Total Program Quarter Credit Hours: 44**

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Business Management (IT600, MKTG630, PM600)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## Master of Business Administration with a concentration in Finance (MBA-FIN)

(replaces pp. 50-51)

The Master of Business Administration in Finance combines graduate business administration skills with an emphasis on finance. This concentration helps students understand how to analyze financial information to make decisions to enhance business success. Ethical issues in finance and financial management for multinational enterprises are also covered.

### Program Outcomes

- Make financial decisions that build the value of the organization
- Employ sound financial reasoning in business planning, operation, and assessment
- Effectively research, analyze, and interpret financial information to influence managerial decision making
- Develop change-agent skills that reflect critical and creative thinking

### MBA Core Program Requirements

| Course No. | Course Name                            | Hrs. |
|------------|----------------------------------------|------|
| ECON616    | Applied Managerial Economics           | 4    |
| FINC615    | Applied Managerial Finance             | 4    |
| IT600      | Information Technology Management      | 4    |
| MGMT600    | Applied Managerial Decision-Making     | 4    |
| INTD670    | Leadership and Ethical Decision-Making | 4    |
| ACCT614    | Applied Managerial Accounting          | 4    |

### MBA-FIN Requirements

| Course No. | Course Name                                        | Hrs. |
|------------|----------------------------------------------------|------|
| MKTG630    | Applied Managerial Marketing                       | 4    |
| FINC600    | Financial Statement Analysis                       | 4    |
| FINC605    | Corporate Portfolio Management                     | 4    |
| FINC610    | Financial Management for Multinational Enterprises | 4    |
| FINC660    | Finance Capstone                                   | 4    |

**Total Program Quarter Credit Hours: 44**

### CTU Academic Certificates Included in this Program: (No additional tuition cost)

Business Administration (MGMT600, ECON616, FINC615, ACCT614)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these

certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## **Master of Business Administration with a concentration in Healthcare Management (MBA-HCM)**

(replaces pp. 54-55)

The MBA-HCM degree program combines graduate business administration skills with an emphasis on healthcare management. This concentration covers a range of skills relevant to the healthcare environment, including management concepts and processes, resource allocation, risk assessment, and financing. These concepts are applied within the ethical, legal, and policy framework of the healthcare environment advantage.

### **Program Outcomes**

- Apply sound business principles and practices to the unique field of healthcare
- Coordinate resources effectively within legal, regulatory, and ethical constraints
- Demonstrate visionary leadership skills by creating innovative solutions to management problems
- Apply critical thinking to the diverse disciplines found in healthcare organizations
- Demonstrate change agent skills that reflect critical and creative thinking regarding human resource management issues
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies

### **MBA Core Program Requirements**

| <b>Course No.</b> | <b>Course Name</b>                     | <b>Hrs.</b> |
|-------------------|----------------------------------------|-------------|
| ECON616           | Applied Managerial Economics           | 4           |
| FINC615           | Applied Managerial Finance             | 4           |
| IT600             | Information Technology Management      | 4           |
| MGMT600           | Applied Managerial Decision-Making     | 4           |
| INTD670           | Leadership and Ethical Decision-Making | 4           |
| ACCT614           | Applied Managerial Accounting          | 4           |

### **MBA-HCM Requirements**

| <b>Course No.</b> | <b>Course Name</b>                               | <b>Hrs.</b> |
|-------------------|--------------------------------------------------|-------------|
| MKTG630           | Applied Managerial Marketing                     | 4           |
| HCM612            | Managing the Healthcare Organization             | 4           |
| HCM621            | Ethics, Policy, and Law in Healthcare Management | 4           |
| HCM631            | Systems in Healthcare                            | 4           |
| HCM660            | Healthcare Capstone                              | 4           |

**Total Program Quarter Credit Hours: 44**



**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Business Administration (MGMT600, ECON616, FINC615, ACCT614)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## **Master of Business Administration with a concentration in Human Resource Management (MBA-HRM)**

(replaces pp. 58-59)

The MBA-HRM degree program is designed to prepare the graduate to integrate human resource functions into an organization's strategic plan. Every manager needs to be aware of the federal regulations that govern human resources and labor relations. In many companies, HR functions are being turned over to line managers and supervisors as a cost savings, while the actual HR functions are being outsourced to 1-800 numbers and Intranet sites. Thus, the department manager is being relied on more and more to be knowledgeable about HR issues. For this reason, the Human Resource Management concentration can be an excellent choice for those who wish to work in the management field.

### **Program Outcomes**

- Develop change-agent skills, especially related to critical and creative thinking, regarding human resource management issues
- Discuss the importance of strategic human resource planning and be able to participate in futuristic forecasting, and strategic planning processes
- Apply knowledge of the legal and ethical principles to human resource management decision making and policy development
- Resolve operational problems using knowledge and understanding principles and various functions of human resource management including models of compensation and benefits, selection, recruitment, succession planning, equal employment opportunity, employment rights, training, employee and organizational development
- Explain the impact of current trends in legal decisions on organizational policies and human resources impacts
- Apply the management, legal, and ethical issues of diversity, affirmative action, employee and labor relations to the design of organizational decision models and policies

### **MBA Core Program Requirements**

| <b>Course No.</b> | <b>Course Name</b>                     | <b>Hrs.</b> |
|-------------------|----------------------------------------|-------------|
| ECON616           | Applied Managerial Economics           | 4           |
| FINC615           | Applied Managerial Finance             | 4           |
| IT600             | Information Technology Management      | 4           |
| MGMT600           | Applied Managerial Decision-Making     | 4           |
| INTD670           | Leadership and Ethical Decision-Making | 4           |
| ACCT614           | Applied Managerial Accounting          | 4           |

## **MBA-HRM Requirements**

| <b>Course No.</b> | <b>Course Name</b>                                | <b>Hrs.</b> |
|-------------------|---------------------------------------------------|-------------|
| MKTG630           | Applied Managerial Marketing                      | 4           |
| HRMT640           | Strategic Human Resource Management               | 4           |
| HRMT650           | Current Legal Issues in Human Resource Management | 4           |
| HRMT655           | Managing Organizational Development and Change    | 4           |
| HRMT660           | Human Resource Management Capstone                | 4           |

**Total Program Quarter Credit Hours: 44**

### **CTU Academic Certificates Included in this Program: (No additional tuition cost)**

Business Administration (ACCT614, ECON616, FINC615, MGMT600)  
Human Resource Management (HRMT640, HRMT650, HRMT655)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

**AFFILIATED WITH:  
The Society for Human Resource Management**



CTU has met the requirements for affiliation with the Society of Human Resource Management. [www.shrm.org](http://www.shrm.org)

## **Master of Business Administration with a concentration in Insurance and Risk Management (MBA-IRM)**

(replaces pp. 62-63)

The Master of Business Administration in Insurance and Risk Management is designed for insurance professionals that have earned the Chartered Property Casualty Underwriter (CPCU) designation of the American Institute for CPCU (AICPCU) and Insurance Institute of American (IIA). Upon receipt of proof that an applicant to the University has successfully been awarded the CPCU designation, CTU will credit the applicant 16 quarter hours toward the MBA-IRM degree program. After a student has completed the MBA core, and the award of the CPCU has been validated, he/she will be enrolled in a two-course (8 quarter credit) capstone project under the supervision of a qualified faculty member. Once the capstone has been completed successfully, the student will be awarded the MBA-IRM degree.

### **Program Outcomes**

- Demonstrate proficiency in industry validated insurance and risk management skills by the successful completion of the CPCU designation, including:
  - CPCU foundation courses
  - CPCU Commercial or Personal concentration courses
  - CPCU ethics requirement
  - CPCU experience requirement
- Integrate insurance and risk management skills with sound business principles and practices
- Apply research skills to solve insurance and risk management problems
- Demonstrate change-agent skills using critical and creative thinking

### **MBA Core Program Requirements**

| <b>Course No.</b> | <b>Course Name</b>                 | <b>Hrs.</b> |
|-------------------|------------------------------------|-------------|
| ECON616           | Applied Managerial Economics       | 4           |
| FINC615           | Applied Managerial Finance         | 4           |
| IT600             | Information Technology Management  | 4           |
| MGMT600           | Applied Managerial Decision-Making | 4           |
| ACCT614           | Applied Managerial Accounting      | 4           |

### **MBA-IRM Requirements**

| <b>Course No.</b>                                          | <b>Course Name</b>                        | <b>Hrs.</b> |
|------------------------------------------------------------|-------------------------------------------|-------------|
| IRM681                                                     | Insurance and Risk Management Capstone I  | 4           |
| IRM682                                                     | Insurance and Risk Management Capstone II | 4           |
| CPCU Transfer Credit ( <u>campus validation required</u> ) |                                           | 16          |

**Total Program Quarter Credit Hours:**

**44**

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Business Administration (MGMT600, ECON616, FINC615, ACCT614)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.



**Master of Business Administration with a concentration in  
Logistics/Supply Chain Management (MBA-L/SCM)**  
(replaces pp. 66-67)

The MBA-SCM is a comprehensive program that is designed to build a generalist foundation that emphasizes the application of critical thinking and management skills in today's business environment. Students will understand how to apply the detailed functional aspects of logistics and supply chain management from a global, international, and domestic perspective.

**Program Outcomes**

- Demonstrate an understanding of the relevance and applicability of logistics and supply chain methodologies to businesses operating in a global environment
- Conduct scholarly research in the fields of logistics and supply chain management
- Apply managerial logistics and supply chain philosophy and concepts, as well as quantitative and qualitative methodologies to product design, warehousing, distribution, procurements, and contracting decisions
- Design an integrated supply chain system from the raw material to delivery to the end customer; including reverse logistics considerations

**MBA Core Program Requirements**

| <b>Course No.</b> | <b>Course Name</b>                            | <b>Hrs.</b> |
|-------------------|-----------------------------------------------|-------------|
| ECON616           | Applied Managerial Economics                  | 4           |
| FINC615           | Applied Managerial Finance                    | 4           |
| IT601             | Information Technology in Business Management | 4           |
| MGMT600           | Applied Managerial Decision-Making            | 4           |
| INTD670           | Leadership and Ethical Decision-Making        | 4           |
| ACCT614           | Applied Managerial Accounting                 | 4           |

**MBA-L/SCM Requirements**

| <b>Course No.</b> | <b>Course Name</b>                                           | <b>Hrs.</b> |
|-------------------|--------------------------------------------------------------|-------------|
| MKTG630           | Applied Managerial Marketing                                 | 4           |
| SCM610            | Logistics/Supply Chain Management Inventory and Distribution | 4           |
| SCM620            | Design and Production Considerations                         | 4           |
| SCM630            | Supply Chain/Logistics Cost Analysis                         | 4           |
| SCM660            | Global Supply Chain Management Capstone                      | 4           |

**Total Program Quarter Credit Hours: 44**

**CTU Academic Certificates Included in this Program:**  
**(No additional tuition cost)**

Business Administration (ACCT614, ECON616, FINC615, MGMT600)

## Logistics/Supply Chain Management (SCM610, SCM620, SCM630)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

### AFFILIATED WITH:



#### **The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF)**

The International Society of Logistics Engineers (SOLE) and the Logistics Education Foundation (LEF) endorse the Master of Science in Management with a concentration in Logistics/Supply Chain

Management and associated certificate programs. [www.sole.org](http://www.sole.org)

## Master of Business Administration with a concentration in Marketing (MBA-MKTG)

(replaces pp. 70-71)

The MBA-Marketing degree is focused on the skills needed to make critical marketing decisions for businesses and organizations. Marketing research is crucial to analyzing and understanding data and trends. As increasing numbers of companies look to expand into global markets, individuals with a grasp of cultural, ethical, and legal implications of international marketing will be in high demand. The field of marketing has been, and is being, transformed by technology; successful leaders need to be ready to adapt and leverage this technology to gain competitive advantage.

### Program Outcomes

- Demonstrate mastery of marketing research, international marketing, e-marketing, and customer relationship management skills
- Adapt marketing strategies globally using critical thinking, ethics, and cross-cultural understanding
- Manage the expected growth in global competition creatively
- Develop effective marketing plans including pricing, product placement, and promotion of goods and services
- Demonstrate change-agent skills using critical and creative thinking

### MBA Core Program Requirements

| Course No. | Course Name                            | Hrs. |
|------------|----------------------------------------|------|
| ECON616    | Applied Managerial Economics           | 4    |
| FINC615    | Applied Managerial Finance             | 4    |
| IT600      | Information Technology Management      | 4    |
| MGMT600    | Applied Managerial Decision-Making     | 4    |
| INTD670    | Leadership and Ethical Decision-making | 4    |
| ACCT614    | Applied Managerial Accounting          | 4    |

### MBA-MKTG Requirements

| Course No. | Course Name                  | Hrs. |
|------------|------------------------------|------|
| MKTG630    | Applied Managerial Marketing | 4    |
| MKTG618    | Marketing Research Methods   | 4    |
| MKTG628    | Marketing in the Digital Age | 4    |
| MKTG638    | International Marketing      | 4    |
| MKTG660    | Marketing Capstone           | 4    |

|                                            |           |
|--------------------------------------------|-----------|
| <b>Total Program Quarter Credit Hours:</b> | <b>44</b> |
|--------------------------------------------|-----------|

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Business Administration (MGMT600, ECON616, FINC615, ACCT614)  
Marketing Management (MKTG628, MKTG630, MKTG628, MKTG638)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## Master of Business Administration with a concentration in Mediation and Dispute Resolution (MBA-MDR)

(replaces pp. 74-75)

The MBA-MDR degree program is designed for mediation professionals that have earned the Advanced Practitioner of Mediation (APM) designation of the Institute of Advanced Dispute Resolution (IADR). Upon receipt of proof that an applicant to the University has successfully been awarded the APM designation, CTU will credit the applicant 12 quarter hours toward the MBA-MDR degree program. After a student has completed the MBA-MDR core, and the award of the APM has been validated, he/she will be enrolled in a two-course capstone project.

### Program Outcomes

- Demonstrate proficiency in industry validated mediation and dispute resolution skills by the successful completion of the APM designation, including:
  - APM core course
  - APM specialization courses
- Demonstrate an understanding of the major functional areas of business administration including the critical skills necessary to analyze and solve business problems
- Show a mastery of mathematics, statistics, accounting, finance, and economics to a sufficient degree to apply quantitative reasoning and analysis to business and management problems
- Demonstrate effective, ethical leadership strategies and skills
- Conduct professional applied research
- Communicate information effectively
- Work effectively as problem-solving team members

### MBA Core Program Requirements

| Course No. | Course Name                            | Hrs. |
|------------|----------------------------------------|------|
| FINC615    | Applied Managerial Finance             | 4    |
| IT600      | Information Technology Management      | 4    |
| MGMT600    | Applied Managerial Decision-Making     | 4    |
| INTD670    | Leadership and Ethical Decision-Making | 4    |
| ACCT614    | Applied Managerial Accounting          | 4    |

### MBA-MDR Requirements

| Course No. | Course Name                  | Hrs. |
|------------|------------------------------|------|
| MKTG630    | Applied Managerial Marketing | 4    |



|                     |                                              |    |
|---------------------|----------------------------------------------|----|
| MDR680              | Mediation and Dispute Resolution Capstone I  | 4  |
| MDR681              | Mediation and Dispute Resolution Capstone II | 4  |
| APM Transfer credit | <u>(campus validation required)</u>          | 12 |

**Total Program Quarter Credit Hours: 44**

## **Bachelor of Science in Project Management (BSPM)**

(replaces pp. 114-115)

The BSPM degree is designed to provide you with the basic tools, techniques and skills needed to effectively organize and manage projects. The curriculum covers in details the process and knowledge areas defined by the Project Management Institute (PMI) in the Guide to the Project Management Body of Knowledge (PMBOK™), the industry standard for project management. In addition, the program integrates business foundation courses with the theory and practice of project management in order to develop well-equipped and skilled project managers. The program utilizes a practical approach, helping to develop project team skills.

### **Program Outcomes—Business Core**

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### **Program Outcomes—Project Management**

- Define a project, project management, and type of project structures, project life cycle phases, knowledge areas, and process
- Organize and staff a project office with appropriate structure, personal and processes

- Explain cultural, legal, political, financial issues associated with managing a project in domestic and international environments
- Align project goals with the corporate strategic planning process
- Manage and integrate organizational programs and project portfolio
- Analyze project scope and identify project key tasks and stakeholders; manage scope changes
- Align project tasks into a project schedule, determine task time, order of precedence and resources required
- Construct and implement an approach for using contracting and procurement activities to fulfill project goals
- Create and implement a proactive risk management and quality plan. Assess potential and actual risks. Develop contingency plans. Mitigate the effects of risks

### **Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

### **BSPM Program Requirements**

#### **Required Courses**

All students in the BSPM program must complete all of the following courses:

| <b>Course No.</b>                 | <b>Course Name</b>          | <b>Hrs.</b> |
|-----------------------------------|-----------------------------|-------------|
| <b>GENERAL EDUCATION (64 hrs)</b> |                             |             |
| IT190                             | Introduction to IT          | 4           |
| IT254                             | Spreadsheet Applications    | 4           |
| ENGL111                           | English Composition I       | 4           |
| ENGL112                           | English Composition II      | 4           |
| ENGL200                           | Professional Writing        | 4           |
| ENGL210                           | Professional Speaking       | 4           |
| PHIL310                           | Ethics                      | 4           |
| HIST150                           | World History Since 1500    | 4           |
| or                                |                             |             |
| HIST210                           | World History and Culture I | 4           |
| LITR220                           | Values in World Literature  | 4           |

|                                              |                                                   |   |
|----------------------------------------------|---------------------------------------------------|---|
| INTD111                                      | Creating Academic and Professional Success        | 4 |
| SCI120                                       | The Impact of Science and Technology on Society   | 4 |
| MATH143                                      | Business Algebra                                  | 4 |
| MATH306                                      | Computer Assisted Statistics                      | 4 |
| ECON201                                      | Macroeconomics                                    | 4 |
| BADM100                                      | Introduction to Business                          | 4 |
| PSYC100                                      | Introduction to Psychology                        | 4 |
| MATHEMATICS (4 hrs)                          |                                                   |   |
| MATH476                                      | Quantitative Decision-Making                      | 4 |
| SOCIAL SCIENCE (8 hrs)                       |                                                   |   |
| HIST250                                      | World Cultures and Values                         | 4 |
| or                                           |                                                   |   |
| HIST310                                      | World History and Culture II                      | 4 |
| SOCL101                                      | Introduction to Sociology                         | 4 |
| BUSINESS MANAGEMENT (72 hrs)                 |                                                   |   |
| ACCT201                                      | Accounting I                                      | 4 |
| ACCT202                                      | Accounting II                                     | 4 |
| ACCT203                                      | Accounting III                                    | 4 |
| BADM150                                      | Contemporary Business Trends                      | 4 |
| BADM305                                      | Organizational Behavior                           | 4 |
| BADM350                                      | International Business                            | 4 |
| BADM360                                      | Operations Management                             | 4 |
| BADM410                                      | Business Law I                                    | 4 |
| BADM420                                      | Business Law II                                   | 4 |
| BADM440                                      | Research Design Methods and Applications          | 4 |
| BADM475                                      | Small Business Management and Entrepreneurship    | 4 |
| or                                           |                                                   |   |
| BADM480                                      | Business Strategy and Policy                      | 4 |
| ECON202                                      | Microeconomics                                    | 4 |
| FINC400                                      | Financial Management                              | 4 |
| HRMT210                                      | Introduction to Human Resource Management         | 4 |
| HRMT440                                      | Managing Organizational Change                    | 4 |
| MKTG210                                      | Introduction to Marketing                         | 4 |
| PM401                                        | Project Management Theory                         | 4 |
| SCM210                                       | Introduction to Logistics/Supply Chain Management | 4 |
| GENERAL ELECTIVES (4 hrs)                    |                                                   |   |
| Electives—Choose a minimum of 4 credit hours |                                                   | 4 |

|                                            |                                           |            |
|--------------------------------------------|-------------------------------------------|------------|
| PROJECT MANAGEMENT CONCENTRATION (28 hrs)  |                                           |            |
| PM220                                      | Project Management Tools                  | 4          |
| or                                         |                                           |            |
| PM332                                      | Organizational Leadership                 | 4          |
| PM344                                      | Project Risk Management                   | 4          |
| PM346                                      | Contracts and Procurement                 | 4          |
| PM357                                      | Project Performance and Quality Assurance | 4          |
| PM434                                      | Project Scheduling and Cost               | 4          |
| PM410                                      | HR Project Management                     | 4          |
| PM430                                      | Project Management Capstone               | 4          |
| <b>Total Program Quarter Credit Hours:</b> |                                           | <b>180</b> |

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400  
Management Essentials (BADM100, BADM305, HRMT210)  
Organizational Systems Improvement (BADM360, BADM 420, BADM480,  
HRMT440)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.



## Bachelor of Science in Business Administration (BSBA) Degrees

### Bachelor of Science in Business Administration with a concentration in Accounting (BSBA-ACC)

(replaces pp. 118-119)

An increase in the number of businesses, changing financial laws and regulations, and increased scrutiny of company finances will spur the job growth of accountants and auditors. Increasingly, accountants also are assuming the role of a personal financial advisor. In response to market demand, these financial specialists will offer more financial management and consulting services as they take on a greater advisory role. In addition to openings resulting from growth, the need to replace accountants and auditors who retire or transfer to other occupations will produce numerous job openings.

The BSBA-ACC degree program is designed to equip you with a variety of accounting and business skills necessary to succeed as an accountant in an industry environment. It offers flexibility to allow students to pursue their own unique business interests. In addition, the curriculum provides you with an opportunity to develop your intellectual, interpersonal and communication skills so that you can succeed in the business world. **Students wishing to sit for the Certified Public Accountant (C.P.A.) exam should consider enrollment in the BSBA-ACC degree program after consultation with your Program Chair.**

#### **Program Outcomes—BSBA Business Core**

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams

- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### **Program Outcomes –Accounting Concentration**

- Apply the knowledge and skills of accounting, management, business mathematics, and the liberal arts to identify, resolve, and communicate relevant accounting issues
- Prepare, comprehend and interpret the required financial statements according to Generally Accepted Accounting Principles (GAAP)
- Demonstrate a basic knowledge of the importance of the moral standards embodied in the professional code of ethics
- Distinguish between financial, managerial, cost accounting and tax accounting principles and practices
- Distinguish the appropriate information to be used in managerial decision making
- Identify, formulate, and communicate the relevant accounting issues in the Sarbanes-Oxley era
- Manage a complete set of accounts for a small to moderate-sized organization

### **Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

### **BSACC Program Requirements**

#### **Required Courses**

All students in the BSBA-ACC program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b>       | <b>Hrs.</b> |
|----------------------------|--------------------------|-------------|
| GENERAL EDUCATION (64 hrs) |                          |             |
| IT190                      | Introduction to IT       | 4           |
| IT254                      | Spreadsheet Applications | 4           |
| ENGL111                    | English Composition I    | 4           |
| ENGL112                    | English Composition II   | 4           |
| ENGL200                    | Professional Writing     | 4           |
| ENGL210                    | Professional Speaking    | 4           |

|                              |                                                 |   |
|------------------------------|-------------------------------------------------|---|
| PHIL310                      | Ethics                                          | 4 |
| HIST150                      | World History Since 1500                        | 4 |
| or                           |                                                 |   |
| HIST210                      | World History and Culture I                     | 4 |
| LITR220                      | Values in World Literature                      | 4 |
| INTD111                      | Creating Academic and Professional Success      | 4 |
| SCI120                       | The Impact of Science and Technology on Society | 4 |
| MATH143                      | Business Algebra                                | 4 |
| MATH306                      | Computer Assisted Statistics                    | 4 |
| ECON201                      | Macroeconomics                                  | 4 |
| BADM100                      | Introduction to Business                        | 4 |
| PSYC100                      | Introduction to Psychology                      | 4 |
| MATHEMATICS (4 hrs)          |                                                 |   |
| MATH476                      | Quantitative Decision-Making                    | 4 |
| SOCIAL SCIENCE (8 hrs)       |                                                 |   |
| HIST250                      | World Cultures and Values                       | 4 |
| or                           |                                                 |   |
| HIST310                      | World History and Culture II                    | 4 |
| SOCL101                      | Introduction to Sociology                       | 4 |
| BUSINESS MANAGEMENT (72 hrs) |                                                 |   |
| ACCT201                      | Accounting I                                    | 4 |
| ACCT202                      | Accounting II                                   | 4 |
| ACCT203                      | Accounting III                                  | 4 |
| BADM150                      | Contemporary Business Trends                    | 4 |
| BADM305                      | Organizational Behavior                         | 4 |
| BADM350                      | International Business                          | 4 |
| BADM360                      | Operations Management                           | 4 |
| BADM410                      | Business Law I                                  | 4 |
| BADM420                      | Business Law II                                 | 4 |
| BADM440                      | Research Design Methods and Applications        | 4 |
| BADM475                      | Small Business Management and Entrepreneurship  | 4 |
| or                           |                                                 |   |
| BADM480                      | Business Strategy and Policy                    | 4 |
| ECON202                      | Microeconomics                                  | 4 |
| FINC400                      | Financial Management                            | 4 |
| HRMT210                      | Introduction to Human Resource Management       | 4 |
| HRMT440                      | Managing Organizational Change                  | 4 |

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| MKTG210 | Introduction to Marketing                         | 4 |
| PM401   | Project Management Theory                         | 4 |
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |

#### GENERAL ELECTIVES (4 hrs)

|                                              |   |
|----------------------------------------------|---|
| Electives—Choose a minimum of 4 credit hours | 4 |
|----------------------------------------------|---|

#### ACCOUNTING CONCENTRATION (28 hrs)

|         |                                |   |
|---------|--------------------------------|---|
| ACCT210 | Computerized Accounting        | 4 |
| ACCT341 | Intermediate Accounting I      | 4 |
| ACCT342 | Intermediate Accounting II     | 4 |
| ACCT351 | Cost Accounting                | 4 |
| ACCT460 | Accounting Capstone            | 4 |
| FINC220 | Financial Statement Analysis   | 4 |
| FINP310 | Taxation in Financial Planning | 4 |

**Total Program Quarter Credit Hours: 180**

#### **CTU Academic Certificates Included in this Program: (No additional tuition cost)**

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)

Financial Statement Analysis (ACCT341, ACCT342, FINC400)

Organizational Systems Improvement (BADM360, BADM480, HRMT440)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Accounting courses at CTU meet the educational standards of the American Institute of Certified Public Accountants (AICPA).

## **Bachelor of Science in Business Administration with a concentration in Finance (BSBA-FIN)**

(replaces pp. 120-121)

The BSBA-FIN degree concentration supplements your fundamental business knowledge with a focus in finance, including financial accounting, capital and money markets, investments, and risk assessment. You will explore both corporate and international financial management. The finance concentration builds upon the solid foundation of the BSBA degree that emphasizes practical competencies, creative leadership approaches, and the development of critical thinking skills. You can build a strong base of practical, real world applications, learning from professors with extensive business experience. In addition to important undergraduate foundation studies in areas including English, math, social science, and technology, you can learn about integrating technology for greater operational efficiency, professional communication skills, collaboration and team building skills, accounting and financial management, international business practices, business law, and project management.

### **Program Outcomes—BSBA Business Core**

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### **Program Outcomes—Finance Concentration**



- Discuss the differences between using equity and debt to finance investment opportunities
- Examine the financial performance of a firm based on its financial statements
- Discuss the ethical ramifications of a firm's financial disclosure
- Describe the functions and roles played by financial markets and institutions particularly as they relate to the flow of funds from lenders to borrowers within the global financial system
- Evaluate the activities and impact of the U.S. treasury department, state and local governmental units' involvement in raising funds within the financial system
- Discuss and evaluate the ethical, economic, demographic, social and technological forces reshaping financial institutions, financial markets and the financial system
- Analyze the ways in which monetary policy can influence a nation's economic goals of achieving full employment, controlling inflation, sustaining adequate economic growth, and achieving a stable balance-of-payments position

### **Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

### **BSBA-FIN Program Requirements**

#### **Required Courses**

All students in the BSBA-FIN program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b>          | <b>Hrs.</b> |
|----------------------------|-----------------------------|-------------|
| GENERAL EDUCATION (64 hrs) |                             |             |
| IT190                      | Introduction to IT          | 4           |
| IT254                      | Spreadsheet Applications    | 4           |
| ENGL111                    | English Composition I       | 4           |
| ENGL112                    | English Composition II      | 4           |
| ENGL200                    | Professional Writing        | 4           |
| ENGL210                    | Professional Speaking       | 4           |
| PHIL310                    | Ethics                      | 4           |
| HIST150                    | World History Since 1500    | 4           |
| or                         |                             |             |
| HIST210                    | World History and Culture I | 4           |

|                              |                                                   |   |
|------------------------------|---------------------------------------------------|---|
| LITR220                      | Values in World Literature                        | 4 |
| INTD111                      | Creating Academic and Professional Success        | 4 |
| SCI120                       | The Impact of Science and Technology on Society   | 4 |
| MATH143                      | Business Algebra                                  | 4 |
| MATH306                      | Computer Assisted Statistics                      | 4 |
| ECON201                      | Macroeconomics                                    | 4 |
| BADM100                      | Introduction to Business                          | 4 |
| PSYC100                      | Introduction to Psychology                        | 4 |
| MATHEMATICS (4 hrs)          |                                                   |   |
| MATH476                      | Quantitative Decision-Making                      | 4 |
| SOCIAL SCIENCE (8 hrs)       |                                                   |   |
| HIST250                      | World Cultures and Values                         | 4 |
| or                           |                                                   |   |
| HIST310                      | World History and Culture II                      | 4 |
| SOCL101                      | Introduction to Sociology                         | 4 |
| BUSINESS MANAGEMENT (72 hrs) |                                                   |   |
| ACCT201                      | Accounting I                                      | 4 |
| ACCT202                      | Accounting II                                     | 4 |
| ACCT203                      | Accounting III                                    | 4 |
| BADM150                      | Contemporary Business Trends                      | 4 |
| BADM305                      | Organizational Behavior                           | 4 |
| BADM350                      | International Business                            | 4 |
| BADM360                      | Operations Management                             | 4 |
| BADM410                      | Business Law I                                    | 4 |
| BADM420                      | Business Law II                                   | 4 |
| BADM440                      | Research Design Methods and Applications          | 4 |
| BADM475                      | Small Business Management and Entrepreneurship    | 4 |
| or                           |                                                   |   |
| BADM480                      | Business Strategy and Policy                      | 4 |
| ECON202                      | Microeconomics                                    | 4 |
| FINC400                      | Financial Management                              | 4 |
| HRMT210                      | Introduction to Human Resource Management         | 4 |
| HRMT440                      | Managing Organizational Change                    | 4 |
| MKTG210                      | Introduction to Marketing                         | 4 |
| PM401                        | Introduction to Project Management                | 4 |
| SCM210                       | Introduction to Logistics/Supply Chain Management | 4 |
| GENERAL ELECTIVES (4 hrs)    |                                                   |   |

|                                              |   |
|----------------------------------------------|---|
| Electives—Choose a minimum of 4 credit hours | 4 |
| FINANCE CONCENTRATION (28 hrs)               |   |
| FINC220 Financial Statement Analysis         | 4 |
| FINC310 Money and Capital Markets            | 4 |
| FINC320 Investments                          | 4 |
| FINC330 Risk Management                      | 4 |
| FINC410 Corporate Finance                    | 4 |
| FINC420 International Finance                | 4 |
| FINC460 Finance Capstone                     | 4 |

**Total Program Quarter Credit Hours: 180**

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203)  
Management Essentials (BADM101, BADM305, HRMT210)  
Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
Investments (FINC220, FINC310, FINC320, FINC330)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## **Bachelor of Science in Business Administration with a concentration in Human Resource Management (BSBA-HRM)**

(replaces pp. 124-125)

Recent legislation and court rulings, rising healthcare costs, globalization, increased complexity of many jobs, the aging of the workforce, and increased usage of human resource information systems and technological advances that can leave employees with obsolete skills will continue to increase the demand for human resource professionals. Human Resource Management is the study of issues that affect people at work.

CTU's BSBA-HRM degree concentration is designed to prepare the aspiring human resource professional to participate as an integral member of an organization's management team. The complexities of today's legal environment, together with increased emphasis on customer service and competitiveness through effective personnel management, have dramatically affected the role and responsibilities of the human resource manager. Program curriculum is designed to develop insight into management structures and processes and to build professional skills in communication, human resources and systems management.

### **Program Outcomes—BSBA Core**

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### **Program Outcomes—Human Resource Management Concentration**

- Interpret implications of the rapidly changing and expanding role of the contemporary and future human resource manager
- Apply strategic thinking to human resource planning and policy consideration
- Evaluate successful processes for employee selection, placement, promotion, and termination
- Implement professional practices such as designing a compensation plan, conducting a job analysis, designing a training program, implementing a group diagnosis process, developing a performance appraisal approach, designing a strategic staffing plan, designing an employee manual, apply lessons learned from strikes and labor unrest to current HR policy
- Evaluate the role of technology in the various HR functions
- Apply principles of diversity management to HR policies and labor relations
- Analyze legal implications of employment and labor law in relation to HR policies and practices
- Recognize and resolve ethical issues using critical thinking
- Apply collaborative learning experiences to projects and problem solving
- Apply standards of scholarly research and documentation in developing solutions

### **Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### **BSBA-HRM Program Requirements**

#### **Required Courses**

All students in the BSBA-HRM program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b> | <b>Hrs.</b> |
|----------------------------|--------------------|-------------|
| GENERAL EDUCATION (64 hrs) |                    |             |
| IT190                      | Introduction to IT | 4           |



|                              |                                                 |   |
|------------------------------|-------------------------------------------------|---|
| IT254                        | Spreadsheet Applications                        | 4 |
| ENGL111                      | English Composition I                           | 4 |
| ENGL112                      | English Composition II                          | 4 |
| ENGL200                      | Professional Writing                            | 4 |
| ENGL210                      | Professional Speaking                           | 4 |
| PHIL310                      | Ethics                                          | 4 |
| HIST150                      | World History Since 1500                        | 4 |
| or                           |                                                 |   |
| HIST210                      | World History and Culture I                     | 4 |
| LITR220                      | Values in World Literature                      | 4 |
| INTD111                      | Creating Academic and Professional Success      | 4 |
| SCI120                       | The Impact of Science and Technology on Society | 4 |
| MATH143                      | Business Algebra                                | 4 |
| MATH306                      | Computer Assisted Statistics                    | 4 |
| ECON201                      | Macroeconomics                                  | 4 |
| BADM100                      | Introduction to Business                        | 4 |
| PSYC100                      | Introduction to Psychology                      | 4 |
| MATHEMATICS (4 hrs)          |                                                 |   |
| MATH476                      | Quantitative Decision-Making                    | 4 |
| SOCIAL SCIENCE (8 hrs)       |                                                 |   |
| HIST250                      | World Cultures and Values                       | 4 |
| or                           |                                                 |   |
| HIST310                      | World History and Culture II                    | 4 |
| SOCL101                      | Introduction to Sociology                       | 4 |
| BUSINESS MANAGEMENT (72 hrs) |                                                 |   |
| ACCT201                      | Accounting I                                    | 4 |
| ACCT202                      | Accounting II                                   | 4 |
| ACCT203                      | Accounting III                                  | 4 |
| BADM150                      | Contemporary Business Trends                    | 4 |
| BADM305                      | Organizational Behavior                         | 4 |
| BADM350                      | International Business                          | 4 |
| BADM360                      | Operations Management                           | 4 |
| BADM410                      | Business Law I                                  | 4 |
| BADM420                      | Business Law II                                 | 4 |
| BADM440                      | Research Design Methods and Applications        | 4 |
| BADM475                      | Small Business Management and Entrepreneurship  | 4 |
| or                           |                                                 |   |
| BADM480                      | Business Strategy and Policy                    | 4 |

|         |                                                   |   |
|---------|---------------------------------------------------|---|
| ECON202 | Microeconomics                                    | 4 |
| FINC400 | Financial Management                              | 4 |
| HRMT210 | Introduction to Human Resource Management         | 4 |
| HRMT440 | Managing Organizational Change                    | 4 |
| MKTG210 | Introduction to Marketing                         | 4 |
| PM401   | Project Management Theory                         | 4 |
| SCM210  | Introduction to Logistics/Supply Chain Management | 4 |

#### GENERAL ELECTIVES (4 hrs)

|                                              |   |
|----------------------------------------------|---|
| Electives—Choose a minimum of 4 credit hours | 4 |
|----------------------------------------------|---|

#### HUMAN RESOURCE MANAGEMENT CONCENTRATION (28 hrs)

|          |                                     |   |
|----------|-------------------------------------|---|
| HRMT220  | Staffing the Organization           | 4 |
| HRMT300  | Managing Employee Performance       | 4 |
| HRMT330  | HRM Legal Environment               | 4 |
| HRMT410  | Training and Employee Development   | 4 |
| HRMT415  | Compensation and Benefits           | 4 |
| HRMT420  | Managing Labor-Management Relations | 4 |
| HRMT485* | Human Resources Capstone            | 4 |

\* Capstone class may be conducted incrementally based on campus decision.

**Total Program Quarter Credit Hours: 180**

#### **CTU Academic Certificates Included in this Program: (No additional tuition cost)**

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
Management Essentials (BADM101, BADM305, HRMT210)  
Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
Human Resource Management (HRMT210, HRMT220, HRMT330, HRMT420)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## **Bachelor of Science in Business Administration with a concentration in International Business (BSBA-IB)**

(replaces pp. 130-131)

In today's environment, almost all businesses are affected in some way by international and global factors. Managing a business in this environment has become increasingly challenging. The CTU International Business concentration looks at how unique political, social, legal, and cultural factors change the dynamics of business. Specific issues such as global economic factor, international marketing approach, and international finance considerations are examined in detail.

### **Program Outcomes—BSBA Core**

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### **Program Outcomes—International Business Concentration**

- Understand the issues in managing a business in today's domestic, international and global environments
- Develop and implement an international/global strategy
- Explain cultural, legal, political, financial issues associated with managing in domestic international, and global environments
- Manage and integrate operations in a multinational environment

- Develop and integrate supply chain management techniques for inbound, outbound, and reverse control of goods
- Create and implement a proactive risk management approach to handle political, natural and legal risks present in the international environment. Develop contingency plans. Mitigate the effects of risks

### **Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### **BSBA-IB Program Requirements**

#### **Required Courses**

All students in the BSBA-IB program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b>                              | <b>Hrs.</b> |
|----------------------------|-------------------------------------------------|-------------|
| GENERAL EDUCATION (64 hrs) |                                                 |             |
| IT190                      | Introduction to IT                              | 4           |
| IT254                      | Spreadsheet Applications                        | 4           |
| ENGL111                    | English Composition I                           | 4           |
| ENGL112                    | English Composition II                          | 4           |
| ENGL200                    | Professional Writing                            | 4           |
| ENGL210                    | Professional Speaking                           | 4           |
| PHIL310                    | Ethics                                          | 4           |
| HIST150                    | World History Since 1500                        | 4           |
| or                         |                                                 |             |
| HIST210                    | World History and Culture I                     | 4           |
| LITR220                    | Values in World Literature                      | 4           |
| INTD111                    | Creating Academic and Professional Success      | 4           |
| SCI120                     | The Impact of Science and Technology on Society | 4           |
| MATH143                    | Business Algebra                                | 4           |
| MATH306                    | Computer Assisted Statistics                    | 4           |
| ECON201                    | Macroeconomics                                  | 4           |

|                                               |                                                   |   |
|-----------------------------------------------|---------------------------------------------------|---|
| BADM100                                       | Introduction to Business                          | 4 |
| PSYC100                                       | Introduction to Psychology                        | 4 |
| MATHEMATICS (4 hrs)                           |                                                   |   |
| MATH476                                       | Quantitative Decision-Making                      | 4 |
| SOCIAL SCIENCE (8 hrs)                        |                                                   |   |
| HIST250                                       | World Cultures and Values                         | 4 |
| or                                            |                                                   |   |
| HIST310                                       | World History and Culture II                      | 4 |
| SOCL101                                       | Introduction to Sociology                         | 4 |
| BUSINESS MANAGEMENT (72 hrs)                  |                                                   |   |
| ACCT201                                       | Accounting I                                      | 4 |
| ACCT202                                       | Accounting II                                     | 4 |
| ACCT203                                       | Accounting III                                    | 4 |
| BADM150                                       | Contemporary Business Trends                      | 4 |
| BADM305                                       | Organizational Behavior                           | 4 |
| BADM350                                       | International Business                            | 4 |
| BADM360                                       | Operations Management                             | 4 |
| BADM410                                       | Business Law I                                    | 4 |
| BADM420                                       | Business Law II                                   | 4 |
| BADM440                                       | Research Design Methods and Applications          | 4 |
| BADM475                                       | Small Business Management and Entrepreneurship    | 4 |
| or                                            |                                                   |   |
| BADM480                                       | Business Strategy and Policy                      | 4 |
| ECON202                                       | Microeconomics                                    | 4 |
| FINC400                                       | Financial Management                              | 4 |
| HRMT210                                       | Introduction to Human Resource Management         | 4 |
| HRMT440                                       | Managing Organizational Change                    | 4 |
| MKTG210                                       | Introduction to Marketing                         | 4 |
| PM401                                         | Project Management Theory                         | 4 |
| SCM210                                        | Introduction to Logistics/Supply Chain Management | 4 |
| GENERAL ELECTIVES (4 hrs)                     |                                                   |   |
| Electives—Choose a minimum of 4 credit hours  |                                                   | 4 |
| INTERNATIONAL BUSINESS CONCENTRATION (28 hrs) |                                                   |   |
| BADM220                                       | International Business Communication              | 4 |
| BADM355                                       | Legal Operations in International Business        | 4 |
| MKTG305                                       | Marketing and the Virtual Marketplace             | 4 |
| ECON310                                       | Global Managerial Economics                       | 4 |



|          |                                 |   |
|----------|---------------------------------|---|
| MKTG410  | International Marketing         | 4 |
| FINC420  | International Finance           | 4 |
| BADM465* | International Business Capstone | 4 |

\* Capstone class may be conducted incrementally based on campus decision.

**Total Program Quarter Credit Hours: 180**

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
Management Essentials (BADM101, BADM305, HRMT210)  
Organizational Systems Improvement (BADM360, BADM415, BADM480, HRMT440)  
Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

**Bachelor of Science in Business Administration with a concentration in Logistics/Supply Chain Management (BSBA-L/SCM)**  
(replaces pp. 136-137)

The BSBA-L/SCM degree program can prepare you with skills and knowledge you need to manage a cost effective, efficient global supply chain. The program covers qualitative and quantitative techniques of distribution management, inventory control, procurement, and supplier management from a global perspective.

**Program Outcomes—BSBA Core**

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

**Program Outcomes—Logistics/Supply Chain Management Concentration**

- Relate and apply logistics methodologies to business strategy and operations
- Apply technical and management skills necessary to design, develop, and implement a supply chain from a global perspective
- Discuss issues associated with integrating supply chain factors throughout the value chain from product design, through manufacturing, delivery, support, and disposal

- Apply quantitative and qualitative managerial methods applicable to global supply chain management to include, inventory control, distribution, procurement, and contracting issues

### **Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### **BSBA-L/SCM Program Requirements**

#### **Required Courses**

All students in the BSBA-LSC program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b>                              | <b>Hrs.</b> |
|----------------------------|-------------------------------------------------|-------------|
| GENERAL EDUCATION (64 hrs) |                                                 |             |
| IT190                      | Introduction to IT                              | 4           |
| IT254                      | Spreadsheet Applications                        | 4           |
| ENGL111                    | English Composition I                           | 4           |
| ENGL112                    | English Composition II                          | 4           |
| ENGL200                    | Professional Writing                            | 4           |
| ENGL210                    | Professional Speaking                           | 4           |
| PHIL310                    | Ethics                                          | 4           |
| HIST150                    | World History Since 1500                        | 4           |
| or                         |                                                 |             |
| HIST210                    | World History and Culture I                     | 4           |
| LITR220                    | Values in World Literature                      | 4           |
| INTD111                    | Creating Academic and Professional Success      | 4           |
| SCI120                     | The Impact of Science and Technology on Society | 4           |
| MATH143                    | Business Algebra                                | 4           |
| MATH306                    | Computer Assisted Statistics                    | 4           |
| ECON201                    | Macroeconomics                                  | 4           |
| BADM100                    | Introduction to Business                        | 4           |
| PSYC100                    | Introduction to Psychology                      | 4           |

|                                                |                                                   |   |
|------------------------------------------------|---------------------------------------------------|---|
| MATHEMATICS (4 hrs)                            |                                                   |   |
| MATH476                                        | Quantitative Decision-Making                      | 4 |
| SOCIAL SCIENCE (8 hrs)                         |                                                   |   |
| HIST250                                        | World Cultures and Values                         | 4 |
| or                                             |                                                   |   |
| HIST310                                        | World History and Culture II                      | 4 |
| SOCL101                                        | Introduction to Sociology                         | 4 |
| BUSINESS MANAGEMENT (72 hrs)                   |                                                   |   |
| ACCT201                                        | Accounting I                                      | 4 |
| ACCT202                                        | Accounting II                                     | 4 |
| ACCT203                                        | Accounting III                                    | 4 |
| BADM150                                        | Contemporary Business Trends                      | 4 |
| BADM305                                        | Organizational Behavior                           | 4 |
| BADM350                                        | International Business                            | 4 |
| BADM360                                        | Operations Management                             | 4 |
| BADM410                                        | Business Law I                                    | 4 |
| BADM420                                        | Business Law II                                   | 4 |
| BADM440                                        | Research Design Methods and Applications          | 4 |
| BADM475                                        | Small Business Management and Entrepreneurship    | 4 |
| or                                             |                                                   |   |
| BADM480                                        | Business Strategy and Policy                      | 4 |
| ECON202                                        | Microeconomics                                    | 4 |
| FINC400                                        | Financial Management                              | 4 |
| HRMT210                                        | Introduction to Human Resource Management         | 4 |
| HRMT440                                        | Managing Organizational Change                    | 4 |
| MKTG210                                        | Introduction to Marketing                         | 4 |
| PM401                                          | Introduction to Project Management                | 4 |
| SCM210                                         | Introduction to Logistics/Supply Chain Management | 4 |
| GENERAL ELECTIVES (4 hrs)                      |                                                   |   |
| Electives—Choose a minimum of 4 credit hours   |                                                   | 4 |
| SUPPLY CHAIN MANAGEMENT CONCENTRATION (28 hrs) |                                                   |   |
| BADM370                                        | Quality Management                                | 4 |
| SCM220                                         | Transportation and Distribution Management        | 4 |
| SCM310                                         | Material and Inventory Management                 | 4 |
| SCM320                                         | Contracts and Procurement                         | 4 |
| SCM330                                         | Contract Pricing and Negotiation                  | 4 |
| SCM410                                         | Contract Management                               | 4 |





## **Bachelor of Science in Business Administration with a concentration in Management (BSBA-MGM)**

(replaces pp. 138-139)

Professional education in business administration serves to develop your capabilities so that you may assume positions of leadership and responsibility at all levels of management in our society. Business managers formulate the policies and direct the operations of corporations, nonprofit institutions and government agencies. Managers and top executives are found in every industry, but wholesale and retail trade, and service industries employ over six out of ten business managers.

### **Program Outcomes—BSBA Business Core**

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### **Program Outcomes—Management Concentration**

- Analyze business organizations from a managerial perspective
- Apply theories and concepts related to human behavior in organizations
- Recognize human behaviors and attitudes that could jeopardize an effective and efficient management of an organization
- Utilize supervisory skills to effectively manage individuals and teams
- Demonstrate competencies and professional skills in management and business

**Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

**BSBA-MGM Program Requirements****Required Courses**

All students in the BSBA-MGM program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b>                              | <b>Hrs.</b> |
|----------------------------|-------------------------------------------------|-------------|
| GENERAL EDUCATION (64 hrs) |                                                 |             |
| IT190                      | Introduction to IT                              | 4           |
| IT254                      | Spreadsheet Applications                        | 4           |
| ENGL111                    | English Composition I                           | 4           |
| ENGL112                    | English Composition II                          | 4           |
| ENGL200                    | Professional Writing                            | 4           |
| ENGL210                    | Professional Speaking                           | 4           |
| PHIL310                    | Ethics                                          | 4           |
|                            |                                                 |             |
| HIST150                    | World History Since 1500                        | 4           |
| or                         |                                                 |             |
| HIST210                    | World History and Culture I                     | 4           |
|                            |                                                 |             |
| LITR220                    | Values in World Literature                      | 4           |
| INTD111                    | Creating Academic and Professional Success      | 4           |
| SCI120                     | The Impact of Science and Technology on Society | 4           |
| MATH143                    | Business Algebra                                | 4           |
| MATH306                    | Computer Assisted Statistics                    | 4           |
| ECON201                    | Macroeconomics                                  | 4           |
| BADM100                    | Introduction to Business                        | 4           |
| PSYC100                    | Introduction to Psychology                      | 4           |
|                            |                                                 |             |
| MATHEMATICS (4 hrs)        |                                                 |             |
| MATH476                    | Quantitative Decision-Making                    | 4           |
|                            |                                                 |             |
| SOCIAL SCIENCE (8 hrs)     |                                                 |             |
| HIST250                    | World Cultures and Values                       | 4           |
| or                         |                                                 |             |
| HIST310                    | World History and Culture II                    | 4           |

|                                              |                                                   |            |
|----------------------------------------------|---------------------------------------------------|------------|
| SOCL101                                      | Introduction to Sociology                         | 4          |
| BUSINESS MANAGEMENT (72 hrs)                 |                                                   |            |
| ACCT201                                      | Accounting I                                      | 4          |
| ACCT202                                      | Accounting II                                     | 4          |
| ACCT203                                      | Accounting III                                    | 4          |
| BADM150                                      | Contemporary Business Trends                      | 4          |
| BADM305                                      | Organizational Behavior                           | 4          |
| BADM350                                      | International Business                            | 4          |
| BADM360                                      | Operations Management                             | 4          |
| BADM410                                      | Business Law I                                    | 4          |
| BADM420                                      | Business Law II                                   | 4          |
| BADM440                                      | Research Design Methods and Applications          | 4          |
| BADM475                                      | Small Business Management and Entrepreneurship    | 4          |
| or                                           |                                                   |            |
| BADM480                                      | Business Strategy and Policy                      | 4          |
| ECON202                                      | Microeconomics                                    | 4          |
| FINC400                                      | Financial Management                              | 4          |
| HRMT210                                      | Introduction to Human Resource Management         | 4          |
| HRMT440                                      | Managing Organizational Change                    | 4          |
| MKTG210                                      | Introduction to Marketing                         | 4          |
| PM401                                        | Introduction to Project Management                | 4          |
| SCM210                                       | Introduction to Logistics/Supply Chain Management | 4          |
| GENERAL ELECTIVES (4 hrs)                    |                                                   |            |
| Electives—Choose a minimum of 4 credit hours |                                                   | 4          |
| MANAGEMENT CONCENTRATION (28 hrs)            |                                                   |            |
| ACCT351                                      | Cost Accounting                                   | 4          |
| BADM370                                      | Quality Management                                | 4          |
| MKTG320                                      | Advertising and Media Practices                   | 4          |
| MKTG310                                      | Sales Management                                  | 4          |
| BADM460                                      | Business Capstone                                 | 4          |
| Business Elective                            |                                                   | 4          |
| Business Elective                            |                                                   | 4          |
| <b>Total Program Quarter Credit Hours:</b>   |                                                   | <b>180</b> |

**CTU Academic Certificates Included in this Program:**  
**(No additional tuition cost)**

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)

Management Essentials (BADM101, BADM305, HRMT210)  
Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## **Bachelor of Science in Business Administration with a concentration in Marketing Management (BSBA-MKTG)**

(replaces pp. 142-143)

Opportunities for marketing professionals are expected to increase by as much as 20 percent through 2010.<sup>1</sup> Marketing is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy organizational objectives. The BSBA-MKTG is designed to prepare you to understand and apply marketing, sales and management principles in order to contribute to organizational success.

### **Program Outcomes—BSBA Business Core**

- Demonstrate knowledge of the basic functional areas of management
- Assess personal leadership style and adapt to needs of situations, employees, and co-workers
- Demonstrate the critical skills necessary to solve business problems
- Apply appropriate concepts and principles of finance, accounting, and statistics to make effective decisions
- Understand the impact a global and electronic marketplace has on management practices, human resources, and strategic decision making
- Understand the legal and global environments in which businesses operate
- Act as a change agent to assist organizations, individuals, and teams to adapt successfully to continuous change
- Employ tools, principles, and techniques of continuous process improvement in order to achieve quality and excellence in the workplace
- Participate as a collaborative solution finder in a team environment
- Demonstrate the ability to work comfortably and effectively in multicultural teams
- Demonstrate a sense of responsibility for one's own learning and the ability to assess and continuously improve
- Demonstrate the application of management information systems including spreadsheets and database applications

### **Program Outcomes—Marketing Management Concentration**

- Explain the core areas of marketing within an organization
- Apply the fundamental concepts of marketing
- Describe the role of marketing in an organization

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<sup>1</sup> U.S. Bureau of Labor Statistics, "National Industry-Occupations Employment Matrix"



- Explain the role marketing variable play in the success of any organization
- Perform marketing research, including problem definition, research design, data collection, data analysis, and the resulting communication
- Develop a comprehensive marketing strategy for an approved product or service
- Develop a multinational marketing plan considering the global and cultural issues of marketing
- Respond to developing trends such as e-marketing
- Operate in and respond to different environments (regulatory, economic, social, technology, etc.) that affect marketing
- Analyze dispositional topics such as the organizational ethics, values, and political and social factors in light of organizational goals

### **Preparatory Requirements**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| IT080             | Introduction to Computing       | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

### **BSBA-MKTG Program Requirements**

#### **Required Courses**

All students in the BSBA-MKTG program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b>                         | <b>Hrs.</b> |
|----------------------------|--------------------------------------------|-------------|
| GENERAL EDUCATION (64 hrs) |                                            |             |
| IT190                      | Introduction to IT                         | 4           |
| IT254                      | Spreadsheet Applications                   | 4           |
| ENGL111                    | English Composition I                      | 4           |
| ENGL112                    | English Composition II                     | 4           |
| ENGL200                    | Professional Writing                       | 4           |
| ENGL210                    | Professional Speaking                      | 4           |
| PHIL310                    | Ethics                                     | 4           |
| HIST150                    | World History Since 1500                   | 4           |
| or                         |                                            |             |
| HIST210                    | World History and Culture I                | 4           |
| LITR220                    | Values in World Literature                 | 4           |
| INTD111                    | Creating Academic and Professional Success | 4           |

|                                              |                                                   |   |
|----------------------------------------------|---------------------------------------------------|---|
| SCI120                                       | The Impact of Science and Technology on Society   | 4 |
| MATH143                                      | Business Algebra                                  | 4 |
| MATH306                                      | Computer Assisted Statistics                      | 4 |
| ECON201                                      | Macroeconomics                                    | 4 |
| BADM100                                      | Introduction to Business                          | 4 |
| PSYC100                                      | Introduction to Psychology                        | 4 |
| MATHEMATICS (4 hrs)                          |                                                   |   |
| MATH476                                      | Quantitative Decision-Making                      | 4 |
| SOCIAL SCIENCE (8 hrs)                       |                                                   |   |
| HIST250                                      | World Cultures and Values                         | 4 |
| or                                           |                                                   |   |
| HIST310                                      | World History and Culture II                      | 4 |
| SOCL101                                      | Introduction to Sociology                         | 4 |
| BUSINESS MANAGEMENT (72 hrs)                 |                                                   |   |
| ACCT201                                      | Accounting I                                      | 4 |
| ACCT202                                      | Accounting II                                     | 4 |
| ACCT203                                      | Accounting III                                    | 4 |
| BADM150                                      | Contemporary Business Trends                      | 4 |
| BADM305                                      | Organizational Behavior                           | 4 |
| BADM350                                      | International Business                            | 4 |
| BADM360                                      | Operations Management                             | 4 |
| BADM410                                      | Business Law I                                    | 4 |
| BADM420                                      | Business Law II                                   | 4 |
| BADM440                                      | Research Design Methods and Applications          | 4 |
| BADM475                                      | Small Business Management and Entrepreneurship    | 4 |
| or                                           |                                                   |   |
| BADM480                                      | Business Strategy and Policy                      | 4 |
| ECON202                                      | Microeconomics                                    | 4 |
| FINC400                                      | Financial Management                              | 4 |
| HRMT210                                      | Introduction to Human Resource Management         | 4 |
| HRMT440                                      | Managing Organizational Change                    | 4 |
| MKTG210                                      | Introduction to Marketing                         | 4 |
| PM401                                        | Project Management Theory                         | 4 |
| SCM210                                       | Introduction to Logistics/Supply Chain Management | 4 |
| GENERAL ELECTIVES (4 hrs)                    |                                                   |   |
| Electives—Choose a minimum of 4 credit hours |                                                   | 4 |
| MARKETING MANAGEMENT CONCENTRATION (28 hrs)  |                                                   |   |

|                                            |                                              |            |
|--------------------------------------------|----------------------------------------------|------------|
| MKTG220                                    | Advertising and Media Practices              | 4          |
| MKTG305                                    | Marketing in a Virtual Marketplace           | 4          |
| MKTG310                                    | Sales Management                             | 4          |
| MKTG330                                    | Marketing Research                           | 4          |
| MKTG446                                    | Marketing Concepts in International Business | 4          |
| MKTG425                                    | Product Service Planning                     | 4          |
| MKTG430                                    | Integrated Marketing Strategy Capstone       | 4          |
| <b>Total Program Quarter Credit Hours:</b> |                                              | <b>180</b> |

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

Basics of Accounting and Finance (ACCT201, ACCT202, ACCT203, FINC400)  
Management Essentials (BADM100, BADM305, HRMT210)  
Organizational Systems Improvement (BADM360, BADM480, HRMT440)  
Small Business Management and Entrepreneurship (BADM475, FINC400, HRMT210)  
Marketing Research (MKTG320, MKTG330, MKTG410, BADM440)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

Source: [www.acinet.org](http://www.acinet.org)

# College of Engineering and Computer Science

## Master of Science in Computer Science (MSCS)

(replaces pp. 208-211)

This program centers on a set of core courses which are designed to provide the student with an understanding of operating systems and networking, as well as knowledge of computer system architecture and the software system engineering process. The concentration courses provide the foundation in the software engineering process, computer system security or database management. These concentrations give the student skills necessary for the organization and control of software and database development, management of computer system security, or using state-of-the-practice software engineering techniques to successfully deliver software systems requiring a multi-person effort.

### Core Program Outcomes

- Apply effective leadership strategies and skills
- Critically evaluate the issues that affect the development and modification of complex software systems
- Conduct professional, scholarly, applied research
- Acquire a breadth of knowledge and understanding of the field of computer science
- Use analytical and critical thinking skills for effective decision analysis and problem solving

### Preparatory Requirements

The CTU Master of Science in Computer Science degree program is designed to provide technical depth in computer science and in the three concentration areas—software engineering, security and database. In order to achieve this depth a solid foundation in mathematics, computer science, and the student's concentration area is required. In addition, the student must have an intermediate level of ability to program in a current object-oriented programming language such as C++ or Java, such as is provided by CS215 or IT215. Students who have the required background but need to refresh their mathematics skills are highly encouraged to take MATH501. Students who have the required background but need to refresh some of their computer science skills are highly encouraged to take CS500. Students who do not have the required background in mathematics, computer science, and the concentration or current object oriented programming skills should consult with an Admissions Advisor to design an undergraduate foundation program in preparation for this degree. A resume and entrance essay stating why the student wants to attend graduate school are required in order to successfully assess the student's preparation for entrance into the MSCS program.

## **MSCS Core Program Requirements**

| <b>Course No.</b> | <b>Course Name</b>                     | <b>Hrs.</b> |
|-------------------|----------------------------------------|-------------|
| CS635             | Computer Networking                    | 4           |
| CS640             | Software Project Management            | 4           |
| CS651             | Computer Systems Security Foundations  | 4           |
| CS660             | Database Systems                       | 4           |
| CS672             | Systems Engineering Methods            | 4           |
| INTD670           | Leadership and Ethical Decision Making | 4           |

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## **MSCS—Software Engineering Concentration (MSCS-SE)**

According to the U.S. Bureau of Labor Statistics, the explosive impact of computers and information technology on our everyday lives has generated a need to design and develop new computer software systems and to incorporate new technologies in a rapidly growing range of applications. The tasks performed by software engineers evolve quickly, reflecting new areas of specialization or changes in technology, as well as the preferences and practices of employers. Software engineers apply the principles and techniques of computer science, engineering and mathematical analysis to the design, development, testing and evaluation of the software and systems that enable computers to perform their many applications.

### **Software Engineering Concentration Outcomes**

- Perform at the project lead level concerning software systems
- Identify and apply the skills necessary for the organization and control of software development efforts
- Use state-of-the-practice software engineering techniques requiring a multi-person effort
- Explore the effective use of project management tools to provide for resource optimization to meet product delivery challenges
- Critically evaluate the software process improvement, quality assurance and risk management practices throughout the software development process

### **MSCS-SE Concentration Requirements**

| <b>Course No.</b> | <b>Course Name</b>                   | <b>Hrs.</b> |
|-------------------|--------------------------------------|-------------|
| CS641             | Software Requirements Engineering    | 4           |
| CS644             | Computer Systems Architecture        | 4           |
| CS649             | Software Design                      | 4           |
| CS671             | Software Systems Engineering Process | 4           |

CS698      Computer Science Capstone

4

or

Elective--any 600 level course that has not been used by this student for another graduate degree.



**Total Program Quarter Credit Hours:**

**44**

\*\*\*\*\*

### **MSCS—Computer Systems Security Concentration (MSCS-CSS)**

Protecting vital enterprise computer systems from unauthorized change, improper access, theft of information and monetary theft has always been important. It is becoming more so with the rapid growth of networking, the Internet and e-business. This concentration presents an overview of computer systems security, together with the specialized knowledge required to develop a security policy, formulate an implementation plan, design and implement security measures, and monitor and manage computer systems security.

#### **Computer Systems Security Concentration Outcomes**

- Assess the need for, and make recommendations on the technical requirements necessary for the implementation of an effective security infrastructure
- Identify and describe the impact of implementing security components at the operating system and network level
- Develop effective enterprise level security policies, standards and procedures

#### **MSCS-CSS Concentration Requirements**

| <b>Course No.</b> | <b>Course Name</b>             | <b>Hrs.</b> |
|-------------------|--------------------------------|-------------|
| CS652             | Operating Systems Security     | 4           |
| CS653             | Network Security               | 4           |
| CS654             | Security Management            | 4           |
| CS661             | Software Information Assurance | 4           |

CS698 Computer Science Capstone

4

or

Elective--any 600 level course that has not been used by this student for another graduate degree.

**Total Program Quarter Credit Hours:**

**44**

\*\*\*\*\*

### **MSCS—Database Systems Concentration (MSCS-DB)**

Successful organizations recognize the importance of high-performance database management systems. The effective operation of these data resources offers strategic advantages in the competitive marketplace. Specialized skills are required to design, configure, and manage these data warehouses. The Database Systems concentration provides the skills necessary to effectively analyze, design, implement and optimize complex data repositories. Students learn to transform data into powerful information systems for business.

### Database Systems Concentration Outcomes

- Identify, describe and analyze database models, database languages, and database management systems
- Use state-of-the-practice techniques to design and implement databases and data warehouses to support an organization's information needs
- Apply database administration skills to maintain optimized performance of database applications, databases, and data warehouses
- Analyze the implications and effects on design, implementation, use, and performance of distributing a database across multiple nodes
- Analyze risks, develop security policies, and apply effective techniques to maintain the integrity and security of an organization's databases

### MSCS-DB Concentration Requirements

| Course No.                                                                                         | Course Name               | Hrs. |
|----------------------------------------------------------------------------------------------------|---------------------------|------|
| CS681                                                                                              | Database Design           | 4    |
| CS682                                                                                              | Database Administration   | 4    |
| CS683                                                                                              | Data Warehouse            | 4    |
| CS685                                                                                              | Distributed Databases     | 4    |
| CS698                                                                                              | Computer Science Capstone | 4    |
| or                                                                                                 |                           |      |
| Elective--any 600 level course that has not been used by this student for another graduate degree. |                           |      |

**Total Program Quarter Credit Hours: 44**

**CTU Academic Certificates Included in this Program, depending on chosen concentration:**  
**(No additional tuition cost)**

Computer Systems Architecture (CS635, CS644, elective CS672)  
Software Systems Engineering (CS640, CS644, CS671, elective CS672)  
Information Systems Security (CS651, CS652, CS661)  
Information Systems Security Management (CS651, CS654, CS661)  
Software Development (CS640, CS649, CS671)  
Database Design (CS660, CS681, CS683)  
Database Administration (CS651, CS660, CS682)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## Bachelor of Science in Computer Science (BSCS)

(replaces pp. 218-219)

According to the Bureau of Labor Statistics, computer science and software engineering are among the fastest growing career fields in the United States. Technology is pervasive and will continue to touch our lives on a daily basis. This program contains a set of core courses which are designed to provide an understanding of the varied aspects of technology, operating systems and networking, as well as knowledge of computer system architecture and the software system engineering process.

### Program Outcomes

- Program in at least one high level programming language using programming fundamentals, abstraction modeling for problem solving, algorithms, data structures, and complexity
- Examine computer architecture, operating systems, and network-centric computing, including Internet technology
- Implement the goals and techniques of software engineering
- Demonstrate effective use of technical and professional communication
- Extend the breadth of computer science knowledge through the completion of various technical options, which include proficiency in another high level language and database systems

### Preparatory Requirements

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### BSCS Program Requirements

This program consists of two parts; one is the set of courses required for all students enrolled in the program. The other part consists of sets of courses from which students may select based on their interests and courses available on their campus.

**Required Courses**

All students in the BSCS program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b>                              | <b>Hrs.</b> |
|----------------------------|-------------------------------------------------|-------------|
| GENERAL EDUCATION (64 hrs) |                                                 |             |
| CS250                      | Fundamentals of Database Systems                | 4           |
| IT254                      | Spreadsheet Applications                        | 4           |
| ENGL111                    | English Composition I                           | 4           |
| ENGL112                    | English Composition II                          | 4           |
| ENGL200                    | Professional Writing                            | 4           |
| ENGL210                    | Professional Speaking                           | 4           |
| PHIL310                    | Ethics                                          | 4           |
| INTD111                    | Creating Academic and Professional Success      | 4           |
| SCI120                     | The Impact of Science and Technology on Society | 4           |
| MATH103                    | College Algebra                                 | 4           |
| MATH306                    | Computer Assisted Statistics                    | 4           |
| BADM100                    | Introduction to Business                        | 4           |
| ECON201                    | Macroeconomics                                  | 4           |
| One of:                    |                                                 |             |
| LITR220                    | Values in World Literature                      | 4           |
| or                         |                                                 |             |
| HUMN200                    | Art and Music Appreciation                      | 4           |
| One of:                    |                                                 |             |
| HIST150                    | World History Since 1500                        | 4           |
| Or                         |                                                 |             |
| HIST210                    | World History and Culture I                     | 4           |
| One of:                    |                                                 |             |
| PSYC100                    | Introduction to Psychology                      | 4           |
| or                         |                                                 |             |
| SOCL101                    | Introduction to Sociology                       | 4           |
| MATHEMATICS (20 hrs)       |                                                 |             |
| MATH104                    | Trigonometry                                    | 4           |
| MATH115                    | Pre-Calculus                                    | 4           |
| MATH200                    | Discrete Mathematics                            | 4           |
| MATH201                    | Calculus I                                      | 4           |
| MATH304                    | Linear Algebra                                  | 4           |
| PROJECT MANAGEMENT (4 hrs) |                                                 |             |
| One of:                    |                                                 |             |
| PM210                      | Introduction to Project Management              | 4           |
| or                         |                                                 |             |



|       |                           |   |
|-------|---------------------------|---|
| PM401 | Project Management Theory | 4 |
|-------|---------------------------|---|

COMPUTING/INFORMATION TECHNOLOGY (36 hrs)

|         |                                      |   |
|---------|--------------------------------------|---|
| CE242   | Computer Architecture                | 4 |
| CS104   | Problem Solving Concepts with C++    | 4 |
| CS115   | Programming with C++                 | 4 |
| CS146   | Introduction to UNIX                 | 4 |
| CS215   | Intermediate C++ Programming         | 4 |
| CS230   | Data Structures                      | 4 |
| EBUS208 | Web Site/ Portfolio Development      | 4 |
| IT200   | Introduction to Networking           | 4 |
| IT300   | Computer Networks and Communications | 4 |

SOFTWARE ENGINEERING (36 hrs)

|       |                   |   |
|-------|-------------------|---|
| CS265 | Algorithms        | 4 |
| CS340 | Operating Systems | 4 |

One of:

|        |                              |   |
|--------|------------------------------|---|
| CS366  | Software Engineering Methods | 4 |
| or     |                              |   |
| SWE410 | Software Processes           | 4 |

|              |                                   |   |
|--------------|-----------------------------------|---|
| CS376        | Object-Oriented Methods           | 4 |
| CS381        | Software Requirements Engineering | 4 |
| CS382        | Software Design                   | 4 |
| CS383        | Software Testing                  | 4 |
| CS481/SWE481 | Software Engineering Capstone I   | 4 |
| CS482/SWE482 | Software Engineering Capstone II  | 4 |

**Selected Elective Courses**

All students in the BSCS program must complete the specified number of hours by selecting courses in each of the following categories:

| Course No.                                            | Course Name                                     | Hrs. |
|-------------------------------------------------------|-------------------------------------------------|------|
| PROGRAMMING BREADTH ELECTIVE (4 hrs) Select one from: |                                                 |      |
| CS245                                                 | Programming Languages: Java for C++ Programmers | 4    |
| CS246                                                 | Structured Query Language                       | 4    |

ELECTIVES (16 hrs)

|                                                           |    |
|-----------------------------------------------------------|----|
| Choose 16 credits from the Computer Science Elective list | 16 |
|-----------------------------------------------------------|----|

|                                            |            |
|--------------------------------------------|------------|
| <b>Total Program Quarter Credit Hours:</b> | <b>180</b> |
|--------------------------------------------|------------|

COMPUTER SCIENCE ELECTIVES

|       |                   |   |
|-------|-------------------|---|
| CS320 | Computer Graphics | 4 |
|-------|-------------------|---|

|         |                                                                      |   |
|---------|----------------------------------------------------------------------|---|
| CS325   | Advanced C++ Programming                                             | 4 |
| CS345   | UNIX Systems Programming                                             | 4 |
| CS346   | User Interface Design                                                | 4 |
| CS352   | Advanced Database Systems                                            | 4 |
| CS360   | Windows® Programming                                                 | 4 |
| CS495   | Advanced Research and Study in Computer Science                      | 4 |
| CS499   | Special Topics in Computer Science                                   | 4 |
| CSS150  | Introduction to Computer Security                                    | 4 |
| EBUS218 | Multimedia for the Web                                               | 4 |
| EBUS228 | Advanced Web Publishing                                              | 4 |
| EBUS420 | Web-Based Database Applications                                      | 4 |
| IT315   | Advanced Java                                                        | 4 |
| IT340   | Client/Server System and Network Administration                      | 4 |
| IT400   | Information Technology Architectures                                 | 4 |
| IT410   | Web Page-Based Database Application Programming<br>with Visual Basic | 4 |
| MATH302 | Differential Equations                                               | 5 |
| SWE311  | The Software Engineering Profession                                  | 4 |
| SWE323  | Introduction to Game Design and Development                          | 4 |
| SWE345  | Survey of Programming Languages                                      | 4 |
| SWE400  | Software Construction                                                | 4 |
| SWE420  | Distributed Systems and Concurrency                                  | 4 |
| SWE423  | Designing for Games                                                  | 4 |
| SWE440  | Software Project Management                                          | 4 |
| SWE441  | Human Elements in Projects and Organizations                         | 4 |
| SWE443  | Game Programming and Production                                      | 4 |

**CTU Academic Certificates Included in this Program:**

**(No additional tuition cost)**

Programmer Analyst (CS265, CS340, one of CS366 or SWE410, CS383)

C++ Programming (CS115, CS215, CS230)

C++ Programming (Advanced) (CS265, CS325)

Computer Network Telecommunications (IT200, IT300)

Computer Systems Architecture (CE242, IT400)

Object-Oriented Methods (CS376)

Professional Communication (ENGL200, ENGL210)

Server Java Programming (IT315)

Software Engineering Application (CS481, CS482) or (SWE481, SWE482)

Software Engineering Process (one of CS366 or SWE410, CS376)

UNIX Network Administration (IT200, IT340)

UNIX Programming (CS146, CS345)

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guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## Computer Systems Security (BSCSS)

(replaces pp. 220-221)

A key requirement in today's technical environment is to protect organizational systems from theft of data, unauthorized change or access, and other acts of crime. Today's technical industry is growing at a fast pace, and it is essential that industries keep abreast of the latest changes and be prepared to combat computer crime that are enabled by new advances in technology bring about. The Bachelor of Science in Computer Systems Security program provides students with a comprehensive knowledge and skills in various aspects of System security as it relates to computer systems. Students will study the essentials of computer systems security including network security; Web, Internet and e-Commerce security; and wireless security. This program will expose students to essential skills, techniques, and knowledge necessary to deploy and manage security systems and configure security solutions.

### Program Outcomes

- Explain network communication protocols and the supporting network hardware
- Demonstrate proficiency in a current programming language
- Explain the importance of security in an organization as well as security architecture for common computer platforms and applications
- Describe of the relationship between criminal law and computer and cyber crime and concepts for collecting, analyzing, recovering and preserving forensic evidence
- Identify computer systems security problems and configure security solutions to solve
- Explain current regulations, statutes, treaties and laws of other countries regarding legal aspects of computer systems security
- Demonstrate an understanding of analysis and evaluation of security risks, monitoring and detection techniques, contingency planning and disaster recovery, formulation of security policies, and preparation of implementation plans for those policies
- Identify and apply the fundamental knowledge needed to secure computer systems using available hardware and software

### Preparatory Requirements

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

## **BSCSS Program Requirements**

### **Required Courses**

All students in the BSCSS program must complete all of the following courses:

| <b>Course No.</b>                 | <b>Course Name</b>                              | <b>Hrs.</b> |
|-----------------------------------|-------------------------------------------------|-------------|
| <b>GENERAL EDUCATION (64 hrs)</b> |                                                 |             |
| CS250                             | Fundamentals of Database Systems                | 4           |
| IT254                             | Spreadsheet Applications                        | 4           |
| ENGL111                           | English Composition I                           | 4           |
| ENGL112                           | English Composition II                          | 4           |
| ENGL200                           | Professional Writing                            | 4           |
| ENGL210                           | Professional Speaking                           | 4           |
| HUMN200                           | Art and Music Appreciation                      | 4           |
| PHIL310                           | Ethics                                          | 4           |
| HIST150                           | World History Since 1500                        | 4           |
| or                                |                                                 |             |
| HIST210                           | World History and Culture I                     | 4           |
| INTD111                           | Creating Academic and Professional Success      | 4           |
| SCI120                            | The Impact of Science and Technology on Society | 4           |
| MATH103                           | College Algebra                                 | 4           |
| MATH306                           | Computer Assisted Statistics                    | 4           |
| BADM100                           | Introduction to Business                        | 4           |
| ECON201                           | Macroeconomics                                  | 4           |
| PSYC100                           | Introduction to Psychology                      | 4           |
| <b>MATHEMATICS (20 hrs)</b>       |                                                 |             |
| MATH104                           | Trigonometry                                    | 4           |
| MATH115                           | Pre-Calculus                                    | 4           |
| MATH200                           | Discrete Mathematics                            | 4           |
| MATH201                           | Calculus I                                      | 4           |
| MATH304                           | Linear Algebra                                  | 4           |
| <b>Project Management (4 hrs)</b> |                                                 |             |
| PM210                             | Introduction to Project Management              | 4           |
| or                                |                                                 |             |
| PM401                             | Project Management Theory                       | 4           |
| <b>Criminal Justice (8 hrs)</b>   |                                                 |             |
| CJUS141                           | Introduction to Criminal Justice                | 4           |
| CJUS365                           | Criminal Law                                    | 4           |



|                                            |                                                    |            |
|--------------------------------------------|----------------------------------------------------|------------|
| Computing/Information Technology (36 hrs)  |                                                    |            |
| CE242                                      | Computer Architecture                              | 4          |
| CS104                                      | Problem Solving Concepts with C++                  | 4          |
| CS115                                      | Programming with C++                               | 4          |
| CS146                                      | Introduction to UNIX                               | 4          |
| CS215                                      | Intermediate C++ Programming                       | 4          |
| CS230                                      | Data Structures                                    | 4          |
| CS265                                      | Algorithms                                         | 4          |
| CS340                                      | Operating Systems                                  | 4          |
| EBUS208                                    | Web Site/Portfolio Development                     | 4          |
| Computer Networking (8 hrs)                |                                                    |            |
| IT200                                      | Introduction to Networking                         | 4          |
| IT300                                      | Computer Networks and Communication                | 4          |
| Computer Security (40 hrs)                 |                                                    |            |
| CSS150                                     | Introduction to Computer Security                  | 4          |
| CSS200                                     | Principles of Network Security                     | 4          |
| CSS250                                     | Security Risk Management                           | 4          |
| CSS300                                     | Vulnerability Assessment and Management            | 4          |
| CSS320                                     | Process Engineering                                | 4          |
| CSS350                                     | Computer Forensics I                               | 4          |
| CSS351                                     | Computer Forensics II                              | 4          |
| CSS380                                     | Business Continuity and Disaster Recovery Planning | 4          |
| CSS440                                     | Security Policy and Leadership                     | 4          |
| CSS450                                     | Security Capstone                                  | 4          |
| <b>Total Program Quarter Credit Hours:</b> |                                                    | <b>180</b> |

**CTU Academic Certificates Included in this Program:  
(No additional tuition cost)**

C++ Programming (CS115, CS215, CS230)  
 CompTIA Security+™ Fundamentals (CSS150, CSS200)  
 Computer Forensics (CSS350)  
 Computer Forensics (Advanced) (CSS351)  
 Computer Network Telecommunications (IT200, IT300)  
 Computer Security Methods (CSS300, CSS320, CSS380)  
 Disaster Planning and Recovery (CSS380)  
 Professional Communication (ENGL200, ENGL210)  
 Security Risk Management (CSS200, CSS250)  
 Security System Management (CSS300, CSS440)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification

examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# College of Information Systems and Technology

## Bachelor of Science in Advertising & Digital Media Design (BSADMD)

(replaces pp. 274-275)

The power of advertising, marketing and digital media permeates nearly every area of our daily lives from consumer recognition to product loyalty and beyond. Creative businesses seek marketing professionals that can manage media campaigns and design requests from concept to completion. The ability to create memorable images and manage projects effectively and memorably can lead towards a rewarding future in the Creative industry.

### Program Outcomes

- Explore the advertising, digital design and marketing industries
- Demonstrate the use of a variety of marketing related skills
- Convert customer requests into clear specifications and proposals; then use the appropriate graphic design processes to meet client expectations
- Explore the basics of 3D computer graphics
- Select appropriate techniques and technologies for both print and web media
- Create and refine individual professional quality resume and portfolio
- Establish budget, project management, and legal guidelines for customer projects and manage them from conception to completion
- Exhibit professionalism through accuracy, attention to detail, teamwork skills, meeting deadlines, and effectively respond to clients needs

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor/Mentor to arrange for credit.

| Course No. | Course Name                         | Hrs. |
|------------|-------------------------------------|------|
| ENGL080    | English Composition Preparation     | 4    |
| IT105      | Information and Technology Literacy | 4    |
| MATH060    | Pre-Algebra                         | 4    |
| MATH080    | Elementary Algebra                  | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

**BSADMD PROGRAM REQUIREMENTS**

| <b>Course No.</b>                                  | <b>Course Name</b>                              | <b>Hrs.</b> |
|----------------------------------------------------|-------------------------------------------------|-------------|
| <b>GENERAL EDUCATION (64 hrs)</b>                  |                                                 |             |
| IT235                                              | Database Applications with Access               | 4           |
| IT254                                              | Spreadsheet Applications                        | 4           |
| ENGL111                                            | English Composition I                           | 4           |
| ENGL112                                            | English Composition II                          | 4           |
| ENGL200                                            | Professional Writing                            | 4           |
| ENGL210                                            | Professional Speaking                           | 4           |
| PHIL310                                            | Ethics                                          | 4           |
| VC150                                              | Theory and History of Design                    | 4           |
| VC120                                              | Design Fundamentals                             | 4           |
| INTD111                                            | Creating Academic & Professional Success        | 4           |
| SCI120                                             | The Impact of Science and Technology on Society | 4           |
| MATH143                                            | Business Algebra                                | 4           |
| FINC200                                            | Applied Finance & Managerial Accounting         | 4           |
| MKTG210                                            | Introduction to Marketing                       | 4           |
| BADM100                                            | Introduction to Business                        | 4           |
| ECON201                                            | Macroeconomics                                  | 4           |
| <b>COMPUTING/INFORMATION TECHNOLOGY (16 hrs)</b>   |                                                 |             |
| EBUS208                                            | Web Site/Portfolio Development                  | 4           |
| EBUS218                                            | Multimedia for the Web                          | 4           |
| EBUS325                                            | Web Design                                      | 4           |
| VC301                                              | Foundation in 3D Computer Graphics              | 4           |
| <b>BUSINESS and PROJECT MANAGEMENT (8 hrs)</b>     |                                                 |             |
| BADM475                                            | Small Business Management and Entrepreneurship  | 4           |
| PM401                                              | Project Management Theory                       | 4           |
| <b>MARKETING (20 hrs)</b>                          |                                                 |             |
| MKTG310                                            | Sales Management                                | 4           |
| MKTG220                                            | Advertising and Media Practices                 | 4           |
| MKTG330                                            | Marketing Research                              | 4           |
| MKTG415                                            | International Marketing                         | 4           |
| MKTG42                                             | Product Service Planning                        | 4           |
| <b>VISUAL COMMUNICATIONS REQUIREMENTS (64 hrs)</b> |                                                 |             |
| VC110                                              | Drawing I                                       | 4           |
| VC125                                              | Visual Thinking and Layout Techniques           | 4           |
| VC130                                              | Typography I                                    | 4           |
| VC210                                              | Drawing II                                      | 4           |
| VC221                                              | Advertising Principles                          | 4           |
| VC225                                              | Computer Illustration I                         | 4           |

|       |                                   |   |
|-------|-----------------------------------|---|
| VC230 | Typography II                     | 4 |
| VC242 | Digital Imaging and Photography I | 4 |
| VC270 | Desktop Publishing I              | 4 |
| VC290 | Portfolio Development             | 4 |
| VC310 | Corporate Identity Development    | 4 |
| VC322 | Production Standards              | 4 |
| VC325 | Computer Illustration II          | 4 |
| VC340 | Branding and Packaging            | 4 |
| VC370 | Desktop Publishing II             | 4 |
| VC375 | Digital Video Editing             | 4 |

INTERNSHIP or CAPSTONE (4 hrs)

Choose one of:

|       |            |   |
|-------|------------|---|
| VC496 | Internship | 4 |
| VC497 | Capstone   | 4 |

ELECTIVES (8 hrs) See list below.

Electives—Choose a minimum of 8 credit hours 8

**Total Program Quarter Credit Hours: 184**

**Electives—Select 8 hours from the following list or others with dean/chair approval**

|         |                                                                |   |
|---------|----------------------------------------------------------------|---|
| CS104   | Problem Solving Concepts with C++                              | 4 |
| EBUS228 | Advanced Web Publishing (prerequisites CS104, EBUS208)         | 4 |
| EBUS420 | Web-Based Database Applications (prerequisites EBUS228, IT235) | 4 |
| IT190   | Introduction to IT                                             | 4 |
| VC243   | Digital Imaging and Photography II                             | 4 |
| VC371   | Desktop Publishing III                                         | 4 |
| VC415   | Advanced Graphic Design                                        | 4 |
| VC430   | Promotional Design                                             | 4 |
| VC450   | Corporate Design Strategies                                    | 4 |
| VC465   | Editorial Design                                               | 4 |

Any VC, IT, CS, MKTG or BADM courses with dean/chair approval

**CTU Academic Certificates Included in this Program:**

**(No additional tuition cost)**

Fundamentals of Computer Illustration (VC120, VC210, VC225)

Advanced Computer Illustration (VC225, VC325)

Drawing (VC110, VC210)

Design Principles (VC125, VC120, VC150)

Typography (VC130, VC230)

Professional Communication (ENGL200, ENGL210)

Web Page Development (EBUS208, EBUS218)

Web Page Development (Advanced) (EBUS228 elective)

Advanced Desktop Publishing (VC270, VC370, VC371 elective, VC465 elective)



Desktop Publishing (VC270, VC370)

Digital Imaging Techniques (VC242, VC243 elective, VC375)

Advertising & Marketing Principles (BADM100, MKTG210, VC221)

Advanced Marketing Techniques (BADM475, MKTG410, MKTG420)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these external certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass certification examinations regardless of their eligibility status upon enrollment.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## Bachelor of Science in Enterprise Information Management (BSEIM)

(replaces pp. 278-279)

The ability to integrate people, process, and technology is becoming increasingly important for an organization to be effective, efficient, and competitive in a global business environment. Having the ability to understand and assess technology solutions, solve business problems, and manage complex projects are critical elements in accomplishing an organization's vision, objectives and strategies.

This program is designed to provide the foundation for those individuals who will become the new generation of business leaders. The program integrates business concepts, technology solutions, and project management skills. Graduates of the program will have had the opportunity to develop effective communications skills, improved insight into business operations, a variety of problem solving approaches, and the ability to effectively manage resources and projects. They should understand the impact of market and customer requirements. The program includes a major project where students are required to demonstrate the synthesis of skills they have acquired.

### Program Outcomes

- Develop an understanding of financial, capital, budgeting, and cost management functions and their impact to business processes and operations
- Apply the fundamentals of leading and managing local, remote, and offshore resources and organizational functions and their relationship in a business setting
- Demonstrate software and project management best practices throughout the System Development Life Cycle (SDLC)
- Use state-of-the-practice techniques to develop a system that meets given quality specifications and includes a functioning business application
- Apply state-of-the-practice techniques to design and develop a software system that solves a business-oriented problem

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| Course No. | Course Name               | Hrs. |
|------------|---------------------------|------|
| ENGL080    | English Composition       | 4    |
| IT080      | Introduction to Computing | 4    |
| MATH060    | Pre-Algebra               | 4    |
| MATH080    | Elementary Algebra        | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or

Chair.

## **BSEIM PROGRAM REQUIREMENTS**

### **Required Courses**

All students in the BSEIM program must complete all of the following courses:

| <b>Course No.</b>                    | <b>Course Name</b>                              | <b>Hrs.</b> |
|--------------------------------------|-------------------------------------------------|-------------|
| <b>GENERAL EDUCATION (64 hrs)</b>    |                                                 |             |
| CS250                                | Fundamentals of Database Systems                | 4           |
| IT254                                | Spreadsheet Applications                        | 4           |
| ENGL111                              | English Composition I                           | 4           |
| ENGL112                              | English Composition II                          | 4           |
| ENGL200                              | Professional Writing                            | 4           |
| ENGL210                              | Professional Speaking                           | 4           |
| LITR220                              | Values in World Literature                      | 4           |
| PHIL310                              | Ethics                                          | 4           |
| INTD111                              | Creating Academic and Professional Success      | 4           |
| SCI120                               | The Impact of Science and Technology on Society | 4           |
| MATH103                              | College Algebra                                 | 4           |
| MATH306                              | Computer Assisted Statistics                    | 4           |
| BADM100                              | Introduction to Business                        | 4           |
| ECON201                              | Macroeconomics                                  | 4           |
| One of:                              |                                                 |             |
| HIST150                              | World History Since 1500                        | 4           |
| or                                   |                                                 |             |
| HIST310                              | World History and Culture II                    | 4           |
| One of:                              |                                                 |             |
| PSYC100                              | Introduction to Psychology                      | 4           |
| or                                   |                                                 |             |
| SOCL101                              | Introduction to Sociology                       | 4           |
| <b>BUSINESS (16 hours)</b>           |                                                 |             |
| ACCT201                              | Accounting I                                    | 4           |
| BADM305                              | Organizational Behavior                         | 4           |
| HRMT210                              | Introduction to Human Resource Management       | 4           |
| MKTG210                              | Introduction to Marketing                       | 4           |
| <b>PROJECT MANAGEMENT (12 hours)</b> |                                                 |             |
| PM210                                | Introduction to Project Management              | 4           |
| or                                   |                                                 |             |
| PM401                                | Project Management Theory                       | 4           |
| PM220                                | Project Management Tools                        | 4           |
| SWE441                               | Human Elements in Projects and Organizations    | 4           |

COMPUTING and INFORMATION TECHNOLOGY (52 hours)

|        |                                      |   |
|--------|--------------------------------------|---|
| CS104  | Problem Solving Concepts with C++    | 4 |
| CE242  | Computer Architecture                | 4 |
| CS246  | Structured Query Language            | 4 |
| CS346  | User Interface Design                | 4 |
| CSS150 | Introduction to Computer Security    | 4 |
| IT200  | Introduction to Networking           | 4 |
| IT300  | Computer Networks and Communications | 4 |
| IT400  | Information Technology Architectures | 4 |

PROGRAMMING SEQUENCE—Pick one set of 3 courses:

|       |                               |   |
|-------|-------------------------------|---|
| CS115 | Programming with C++          | 4 |
| CS215 | Intermediate C++ Programming  | 4 |
| CS230 | Data Structures               | 4 |
| or    |                               |   |
| IT115 | Java Programming              | 4 |
| IT215 | Intermediate Java Programming | 4 |
| IT315 | Advanced Java                 | 4 |

CAPSTONE SEQUENCE

|       |                |   |
|-------|----------------|---|
| IT481 | IT Capstone I  | 4 |
| IT482 | IT Capstone II | 4 |

MATHEMATICS (8 hours)

|         |                      |   |
|---------|----------------------|---|
| CS265   | Algorithms           | 4 |
| MATH200 | Discrete Mathematics | 4 |

SOFTWARE ENGINEERING (12 hours)

One of:

|        |                              |   |
|--------|------------------------------|---|
| CS366  | Software Engineering Methods | 4 |
| or     |                              |   |
| SWE410 | Software Processes           | 4 |

|        |                             |   |
|--------|-----------------------------|---|
| CS376  | Object-Oriented Methods     | 4 |
| SWE440 | Software Project Management | 4 |

ELECTIVES (16 hours)

|                                                                 |    |
|-----------------------------------------------------------------|----|
| Open elective (any course may be used)                          | 4  |
| Business, Project Management or Technical electives (3 courses) | 12 |

**Total Program Quarter Credit Hours: 180**

**CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM:  
(No additional tuition cost)**

C++ Programming (CS115, CS215, CS230)  
Client Java Programming (IT115, IT215)  
Computer Network Telecommunications (IT200, IT300)  
Computer Systems Architecture (CE242, IT400)  
CompTIA Network+™ Fundamentals (IT200)  
Management Essentials (BADM100, BADM305, Elective HRMT440)  
Object-Oriented Methods (CS376)  
Professional Communication (ENGL200, ENGL210)  
Software Engineering Process ({CS366 or SWE410}, CS376)  
Software Engineering Application ({CS481, CS482} or {SWE481, SWE482})

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.



## Bachelor of Science in Information Systems Management (BSISM)

(replaces pp. 280-281)

Most organizations have invested significantly in computer hardware and software systems. Today, the need is for professionals who can align and manage technology in harmony with human resources. The BS-ISM degree can provide the foundation for a career as a network engineer, network operations analyst, certified systems engineer, systems administrator, IT manager, business analyst, systems analyst, IT project leader or sales account representative.

### Program Outcomes

- Plan, implement, maintain, and manage computing and information systems
- Demonstrate an understanding of current computer networks and protocols of data communications
- Explain database concepts, discuss the capabilities of modern database systems, and apply those concepts in the design, implementation, and querying of a database to support a business
- Apply the skills necessary to manage people and to use technology to support business goals through team projects
- Apply the tools and techniques of project management

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### BSISM PROGRAM REQUIREMENTS

#### Required Courses

All students in the BSISM program must complete all of the following courses:

| Course No.                 | Course Name                         | Hrs. |
|----------------------------|-------------------------------------|------|
| GENERAL EDUCATION (68 hrs) |                                     |      |
| IT105                      | Information and Technology Literacy | 4    |

|                                           |                                                                  |   |
|-------------------------------------------|------------------------------------------------------------------|---|
| IT235                                     | Database Applications with Access                                | 4 |
| IT254                                     | Spreadsheet Applications                                         | 4 |
| ENGL111                                   | English Composition I                                            | 4 |
| ENGL112                                   | English Composition II                                           | 4 |
| ENGL200                                   | Professional Writing                                             | 4 |
| ENGL210                                   | Professional Speaking                                            | 4 |
| PHIL310                                   | Ethics                                                           | 4 |
| HIST150                                   | World History Since 1500                                         | 4 |
| or                                        |                                                                  |   |
| HIST210                                   | World History and Culture I                                      | 4 |
| LITR220                                   | Values in World Literature                                       | 4 |
| INTD111                                   | Creating Academic & Professional Success                         | 4 |
| SCI120                                    | The Impact of Science & Technology on Society                    | 4 |
| MATH143                                   | Business Algebra                                                 | 4 |
| MATH306                                   | Computer Assisted Statistics                                     | 4 |
| ECON201                                   | Macroeconomics                                                   | 4 |
| BADM100                                   | Introduction to Business                                         | 4 |
| One of:                                   |                                                                  |   |
| PSYC100                                   | Introduction to Psychology                                       | 4 |
| or                                        |                                                                  |   |
| SOCL101                                   | Introduction to Sociology                                        | 4 |
| MATHEMATICS (4 hrs)                       |                                                                  |   |
| MATH476                                   | Quantitative Decision-Making                                     | 4 |
| COMPUTING/INFORMATION TECHNOLOGY (60 hrs) |                                                                  |   |
| CS104                                     | Problem Solving Concepts with C++                                | 4 |
| CS146                                     | Introduction to UNIX                                             | 4 |
| CS246                                     | Structured Query Language                                        | 4 |
| CSS150                                    | Introduction to Computer Security                                | 4 |
| EBUS208                                   | Web Site/Portfolio Development                                   | 4 |
| EBUS228                                   | Advanced Web Publishing                                          | 4 |
| EBUS420                                   | Web-Based Database Applications                                  | 4 |
| IT145                                     | Introduction to Operating Systems and Client/Server Environments | 4 |
| IT180                                     | Introduction to Computer Technology                              | 4 |
| IT200                                     | Introduction to Networking                                       | 4 |
| IT190                                     | Introduction to IT                                               | 4 |
| IT225                                     | IT Support Systems                                               | 4 |
| IT300                                     | Computer Networks and Communications                             | 4 |
| IT340                                     | Client/Server System and Network Administration                  | 4 |
| IT400                                     | Information Technology Architectures                             | 4 |

|                                            |                             |            |
|--------------------------------------------|-----------------------------|------------|
| BUSINESS (12 hrs)                          |                             |            |
| ACCT201                                    | Accounting I                | 4          |
| BADM305                                    | Organizational Behavior     | 4          |
| BADM410                                    | Business Law I              | 4          |
| PROJECT MANAGEMENT (8 hrs)                 |                             |            |
| PM401                                      | Project Management Theory   | 4          |
| PM434                                      | Project Scheduling and Cost | 4          |
| ELECTIVES (20 hrs)                         |                             |            |
| Choose from CS/CSS/IT/Management courses   |                             | 16         |
| CAPSTONE COURSE SEQUENCE (8 hrs)           |                             |            |
| IT485                                      | ISM Capstone I              | 4          |
| IT486                                      | ISM Capstone II             | 4          |
| <b>Total Program Quarter Credit Hours:</b> |                             | <b>180</b> |

**CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM:  
(No additional tuition cost)**

CompTIA A+™ Fundamentals (IT180)  
 CompTIA Network+™ (IT200)  
 Computer Network Telecommunications (IT200, IT300)  
 Help Desk Support (IT225)  
 Professional Communication (ENGL200, ENGL210)  
 UNIX Network Administration (IT200, IT340)  
 UNIX Programming (CS146, elective CS345)  
 Web Page Development (EBUS208, elective EBUS218)  
 Web Page Development (Advanced) (EBUS228)

Colorado Technical University certificates may include foundational preparation for certification by outside agencies. Requirements for taking and passing these certification examinations are not controlled by CTU and are subject to change without notice. CTU cannot guarantee that graduates will be eligible to take/pass these external certification examinations.

There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

## Bachelor of Science in Information Technology (BSIT)

(replaces pp. 282-283)

Successful organizations use technology to find solutions to all kinds of business challenges. Individuals who understand how to use technology to contribute to productivity and the bottom line are in top demand. According to the U.S. Bureau of Labor Statistics, Office of Employment Predictions, by 2010 the number of computer and information technology management positions that require a bachelor's degree is expected to increase by 50 percent.

### Program Outcomes

- Define and explain current computer networks, protocols, and the role of network management software
- Define and explain the fundamentals of computer system security requirements
- Implement the goals and techniques of software engineering through the development of a complex application
- Apply database concepts and capabilities through the creation, organization, and maintenance of modern database systems
- Solve complex problems through the ability to program in at least one high level programming language

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

ENGL112, English Composition II, is a prerequisite for all 300 and 400 level courses. Exceptions to this policy must be approved by the appropriate Director of Education, Dean or Chair.

### BSIT PROGRAM REQUIREMENTS

This program consists of two parts; one is the set of courses required for all students enrolled in the program. The other part consists of sets of courses from which students may select based on their interests and courses available on their campus.

#### Required Courses

All students in the BSIT program must complete all of the following courses:

| Course No. | Course Name | Hrs. |
|------------|-------------|------|
|------------|-------------|------|

|                                           |                                               |   |
|-------------------------------------------|-----------------------------------------------|---|
| GENERAL EDUCATION (64 hrs)                |                                               |   |
| CS250                                     | Fundamentals of Database Systems              | 4 |
| IT254                                     | Spreadsheet Applications                      | 4 |
| ENGL111                                   | English Composition I                         | 4 |
| ENGL112                                   | English Composition II                        | 4 |
| ENGL200                                   | Professional Writing                          | 4 |
| ENGL210                                   | Professional Speaking                         | 4 |
| PHIL310                                   | Ethics                                        | 4 |
| One of:                                   |                                               |   |
| HIST250                                   | World Cultures and Values                     | 4 |
| or                                        |                                               |   |
| HIST310                                   | World History and Culture II                  | 4 |
|                                           |                                               |   |
| LITR220                                   | Values in World Literature                    | 4 |
| INTD111                                   | Creating Academic & Professional Success      | 4 |
| SCI120                                    | The Impact of Science & Technology on Society | 4 |
| MATH103                                   | College Algebra                               | 4 |
| MATH306                                   | Computer Assisted Statistics                  | 4 |
| ECON201                                   | Macroeconomics                                | 4 |
| BADM100                                   | Introduction to Business                      | 4 |
|                                           |                                               |   |
| One of:                                   |                                               |   |
| PSYC100                                   | Introduction to Psychology                    | 4 |
| or                                        |                                               |   |
| SOCL101                                   | Introduction to Sociology                     | 4 |
|                                           |                                               |   |
| MATHEMATICS (4 hrs)                       |                                               |   |
| MATH200                                   | Discrete Mathematics                          | 4 |
|                                           |                                               |   |
| BUSINESS (4 hrs)                          |                                               |   |
| EBUS308                                   | Introduction to e-Business                    | 4 |
|                                           |                                               |   |
| PROJECT MANAGEMENT (8 hrs)                |                                               |   |
| PM401                                     | Project Management Theory                     | 4 |
| PM434                                     | Project Scheduling and Cost                   | 4 |
|                                           |                                               |   |
| COMPUTING/INFORMATION TECHNOLOGY (52 hrs) |                                               |   |
| CS104                                     | Problem Solving Concepts with C++             | 4 |
| CS146                                     | Introduction to UNIX                          | 4 |
| CS246                                     | Structured Query Language                     | 4 |
| CS376                                     | Object-Oriented Methods                       | 4 |
| CSS150                                    | Introduction to Computer Security             | 4 |
| EBUS208                                   | Web Site/Portfolio Development                | 4 |
| IT145                                     | Introduction to Operating Systems and         |   |



|       |                                                 |   |
|-------|-------------------------------------------------|---|
|       | Client/Server Environments                      | 4 |
| IT200 | Introduction to Networking                      | 4 |
| IT300 | Computer Networks and Communications            | 4 |
| IT340 | Client/Server System and Network Administration | 4 |
| IT400 | Information Technology Architectures            | 4 |
| IT481 | IT Capstone I                                   | 4 |
| IT482 | IT Capstone II                                  | 4 |

### **Selected Elective Courses**

All students in the BSIT program must complete the specified number of hours by selecting courses in each of the following categories:

|                   |                    |             |
|-------------------|--------------------|-------------|
| <b>Course No.</b> | <b>Course Name</b> | <b>Hrs.</b> |
|-------------------|--------------------|-------------|

#### **OBJECT-ORIENTED PROGRAMMING ELECTIVES (12 hrs)**

|                                                                                         |    |
|-----------------------------------------------------------------------------------------|----|
| Choose 12 credits of one language from OBJECT-ORIENTED PROGRAMMING LANGUAGE course list | 12 |
|-----------------------------------------------------------------------------------------|----|

#### **PROFESSIONAL TRACK ELECTIVES (between 20 and 24 hrs)**

Choose a minimum of 20 credits from two of the PROFESSIONAL TRACK(s) listed below.

Note, some tracks have two courses and some tracks three. If less than 24 hours are selected then the 4 additional hours will be from the next category—(Other tracks may be allowed with approval by your Dean/Chair).

|            |    |
|------------|----|
| Electives. | 24 |
|------------|----|

#### **ELECTIVES (between 12 and 16 hrs)**

|                                                                                                              |    |
|--------------------------------------------------------------------------------------------------------------|----|
| Choose a minimum of 12 credit hours from CS/CSS/IT/EBUS list<br>(Other courses may be allowed with approval) | 12 |
|--------------------------------------------------------------------------------------------------------------|----|

|                                            |            |
|--------------------------------------------|------------|
| <b>Total Program Quarter Credit Hours:</b> | <b>180</b> |
|--------------------------------------------|------------|

#### **OBJECT-ORIENTED PROGRAMMING ELECTIVES (Select one language)**

|         |                                                                   |   |
|---------|-------------------------------------------------------------------|---|
| EBUS115 | Visual Basic Programming                                          | 4 |
| EBUS215 | Intermediate Visual Basic Programming                             | 4 |
| IT410   | Web Page-Based Database Application Programming<br>w/Visual Basic | 4 |

or

|       |                               |   |
|-------|-------------------------------|---|
| IT115 | Java Programming              | 4 |
| IT215 | Intermediate Java Programming | 4 |
| IT315 | Advanced Java                 | 4 |

or

|       |                      |   |
|-------|----------------------|---|
| CS115 | Programming with C++ | 4 |
|-------|----------------------|---|

|       |                              |   |
|-------|------------------------------|---|
| CS215 | Intermediate C++ Programming | 4 |
| CS230 | Data Structures              | 4 |

PROFESSIONAL TRACK ELECTIVES (Select from two professional tracks from the following or see your Dean/Chair for approval of additional tracks)

|        |                                                   |   |
|--------|---------------------------------------------------|---|
| ITM304 | Active Directory Services                         | 4 |
| ITM308 | Planning and Maintaining a Network Infrastructure | 4 |
| ITM309 | Network Infrastructure Design                     | 4 |

or

|        |                                       |   |
|--------|---------------------------------------|---|
| ITM302 | Server Operating Systems              | 4 |
| ITM306 | Network Infrastructure Administration | 4 |
| ITM314 | Operating System Security             | 4 |

or

|        |                                         |   |
|--------|-----------------------------------------|---|
| CSS200 | Principles of Network Security          | 4 |
| CSS250 | Security Risk Management                | 4 |
| CSS300 | Vulnerability Assessment and Management | 4 |

or

|       |                                   |   |
|-------|-----------------------------------|---|
| CS381 | Software Requirements Engineering | 4 |
| CS382 | Software Design                   | 4 |
| CS383 | Software Testing                  | 4 |

or

|         |                         |   |
|---------|-------------------------|---|
| EBUS218 | Multimedia for the Web  | 4 |
| EBUS228 | Advanced Web Publishing | 4 |

Plus one of:

|         |            |   |
|---------|------------|---|
| EBUS325 | Web Design | 4 |
|---------|------------|---|

or

|         |            |   |
|---------|------------|---|
| EBUS432 | E-Commerce | 4 |
|---------|------------|---|

#### CS/EBUS/IT/ITM ELECTIVES

|       |                                                |   |
|-------|------------------------------------------------|---|
| CS245 | Programming Language: Java for C++ Programmers | 4 |
| CS345 | UNIX Systems Programming                       | 4 |
| CS352 | Advanced Database Systems                      | 4 |
| CS366 | Software Engineering Methods                   | 4 |
| CS381 | Software Requirements Engineering              | 4 |
| CS382 | Software Design                                | 4 |
| CS383 | Software Testing                               | 4 |

|          |                                         |   |
|----------|-----------------------------------------|---|
| EBUS218  | Multimedia for the Web                  | 4 |
| FINC400  | Financial Management                    | 4 |
| IT180    | Introduction to Computer Technology     | 4 |
| IT225 IT | Support Systems                         | 4 |
| IT441    | IT Strategic Planning                   | 4 |
| IT460    | Managing Information Systems            | 4 |
| ITMXXX   | ITM courses as available                | 4 |
| PMXXX    | Project Management courses as available | 4 |

**CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM:  
(No additional tuition cost)**

C++ Programming (Electives CS115, CS215, CS230)  
 Cisco CCNA™ Preparation (IT200, elective ITM321)  
 Client Java Programming (Electives — either IT115 and IT215 or elective CS245)  
 Computer Network Telecommunications (IT200, IT300)  
 CompTIA A+™ Fundamentals (Elective IT180)  
 CompTIA Network+™ Fundamentals (IT200)  
 CompTIA Security+™ Fundamentals (CSS150, elective CSS200)  
 Object-Oriented Methods (CS376)  
 Professional Communication (ENGL200, ENGL210)  
 Server Java Programming (IT315)  
 Software Engineering Application (IT481, IT482)  
 Software Engineering Process (CS376, Elective {CS366 or SWE410})  
 UNIX Network Administration (IT200, IT340)  
 UNIX Programming (CS146, elective CS345)  
 Visual Basic Programming (EBUS115, EBUS215)  
 Web Page Development (EBUS208, elective EBUS218)

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There are no additional courses or tuition costs for the certificates available in this degree program. Other certificate options may be available that are not listed here; however additional tuition cost may be incurred. Contact your admissions advisor for more information.

# New Courses

## **CHEM100 Basic Chemistry**

This course is a general introduction to chemical principles and their application. The course will include the scientific method and theory development as well as scientific inquiry. Topics include nomenclature, atomic theory, periodicity, reactions, equations, stoichiometry, solutions, gases, and introduction to the theories of equilibria, acid-bases, redox, and radioactivity.

Credit: 4

## **CJFI456 Forensic Investigation of Dynamic Events**

This is a survey course encompassing forensic investigative inquiry into the dynamics of arson, post-blast investigations, and vehicular incident investigations. Students will be introduced to scientific procedures for determining the cause of fires and will learn to recognize the fire scene, burn patterns, thermal indicators, arson indicators and the dynamics of fire development. A second section of the course is designed to educate the student in the proper investigation of any post-blast explosives incident. Areas addressed include explosives recognition, improvised explosive devices, and scene processing and evidence collection. The third section of the course involves the examination of the skills required to systematically investigate a traffic accident by being able to recognize critical evidence at the accident scene, and to preserve and record it properly. When possible, labs will be conducted to demonstrate, re-enforce, and emphasize key considerations presented during lecture.

Prerequisite: CJFI360

Credit: 4

## **CJFI455 Courtroom Presentation of Scientific Evidence**

This course will provide a comprehensive view of the components of criminal trials and will focus on the knowledge, skills, attitudes, and specialized expertise that contribute to credibility as a witness. Specific topical areas of discussion will include types of questions asked of witnesses, strategies and tactics of the prosecution and defense, and, effective methods for improving skills on the witness stand. Additionally, students will learn how to effectively prepare for courtroom testimony by recognizing the critical value and importance of all reports. As part of the course, students will have the opportunity to participate in a moot court exercise.

Prerequisite: CJFI360

Credit: 4

## **CJFI457 Taphonomy—Applied Decomposition Research**

This course is interdisciplinary and will introduce students to field-based research in taphonomy--the post-mortem history of organisms. Students will obtain hands-on experience in extracting and interpreting biological and environmental information gained from the investigative process of decomposition in an outdoor environment using pigs as human models. The research project will require daily collection of specific samples; i.e., soil samples, fly larvae, flies, beetles, maggots, soft tissue samples, etc.

**WARNING:** *Some materials presented in class as well as the research project itself are of a graphic nature and may be offensive to some students! Student discretion is advised when considering taking this course; this course is not recommended for the squeamish!*

Prerequisite: CJFI360

Credit: 4

### **CJUS380 White Collar Crime – Forensic Accounting**

This course introduces the student to the nature and scope of white collar and financial crimes. Students will learn how to identify the various types of financial crimes and the methods and techniques used to investigate and prosecute this type of criminal activity.

Prerequisite: ACC201, CJUS141

Credit: 4

### **CRPT100 Realtime Theory I**

This course provides an introduction to the careers in realtime reporting information systems and communication technology. The student is introduced to the concepts associated with the ability to write a conflict-free theory on a computer-compatible stenography machine. Reading skills for stenography notes on literary, jury charge, and testimonial material are developed. The student will practice dictation for reinforcement of theory.

Credit: 4

### **CRPT102 Realtime Theory II**

This course is a continuation of Realtime Theory I. The student will continue to develop proficiency in the ability to write a conflict-free theory on a computer-compatible stenography machine. Reading skills for stenography notes on literary, jury charge, and testimony material are further developed. The student will continue to build proficiency through the practice of dictation.

Prerequisite: CRPT100

Credit: 4

### **CRPT120 Vocabulary for Court Reporters**

During this course, the student studies and builds vocabulary relative to terms used in the court reporting profession. Emphasis is placed on spelling, usage, and commonly confused words utilized in the court reporting profession.

Prerequisite: None

Credit: 4

### **CRPT200 Realtime Writing I**

This course continues development of conflict-free theory for writing on a computer-compatible steno machine. The student will develop reading and writing skills on literary, jury charge, and testimony material with emphasis on high realtime translation rates.

Prerequisite: CRPT102

Credit: 4



**CRPT202 Realtime Writing II**

This course reviews conflict-free theory for writing on a computer-compatible steno machine. Major emphasis is on development of reading and writing skill on literary, jury charge, and testimony material with high realtime translation rates.

Prerequisite: CRPT200

Credit: 4

**CRPT210 Computer-Aided Transcription I**

This course provides an introduction to the principles of computer-aided transcription. The student continues to develop personal dictionary and editing skills. The student will use computer-aided transcription software to build writing skills.

Prerequisite: CRPT202

Credit: 4

**CRPT220 Dictation I**

Students will study and practice terminology related to current events and geography. During this course, the student will integrate this terminology into their dictionary.

Prerequisite: None

Credit: 1

**CRPT225 Dictation II**

Students will study and practice terminology related to various types of expert witness testimony. During this course, the student will integrate this terminology into their dictionary.

Prerequisite: None

Credit: 1

**CRPT250 Punctuation and Proofreading**

This course provides instruction on the ability to effectively punctuate the spoken word. Skills from composition instruction are applied to the spoken word as delivered in testimony and court proceedings. The student will learn techniques to sharpen proofreading skills to produce an error-free document.

Credit: 4

Prerequisite: CRPT202

**CRPT300 Realtime Writing III**

This course continues development of reading and writing skills on literary, jury charge, and testimony material with emphasis on high realtime translation rates.

Credit: 4

Prerequisite: CRPT202

**CRPT302 Realtime Writing IV**

The student will continue to develop reading and writing skills on the steno machine on literary, jury charge, and testimony material with emphasis on high realtime translation rates.

Prerequisite: CRPT300

Credit: 4

**CRPT320 Dictation III**

Students will study and practice terminology related to medical terminology. During this course, the student will integrate this terminology into their dictionary.

Prerequisite: None

Credit: 1

**CRPT325 Dictation IV**

In this course, students practice their proficiency in integrating current events, various expert witness testimony, medical terminology and other relevant terminology into the transcription of dictated materials.

Prerequisites: CRPT220, CRPT225, CRPT320

Credit: 1

**CRPT350 Legal Procedures and Terminology**

This course provides an introduction to the legal system with an overview of all aspects of the law discussed. Through the discussion of the areas of the law, the student will learn legal terminology that will be integrated throughout the program and the reporting profession.

Prerequisite: CRPT202

Credit: 4

**CRPT400 Realtime Writing V**

The student will continue to develop reading and writing skills on literary, jury charge, and testimony material with emphasis on realtime translation rates.

Prerequisite: CRPT302

Credit: 4

**CRPT405 Computer-Aided Transcription II**

This course is a continuation of Computer-Aided Transcription I. The student further develops writing and editing skills for computer-aided transcription including realtime and closed captioning. The student continues to build the CAT dictionary. Accuracy in realtime and using the CAT software and each special feature is developed with considerable skill practice.

Prerequisite: CRPT210, CRPT302

Credit: 4

**CRPT410 Realtime Writing VI**

The student will continue to develop reading and writing skills on literary, jury charge, and testimony material with emphasis on realtime translation rates.

Prerequisite: CRPT400

Credit: 4

**CRPT414 Realtime Reporting Procedures and Business Applications**

This course will focus on the profession of reporting including responsibilities, certification, professional associations and ethics of reporters. The student will prepare transcripts from a variety of legal proceedings. The information necessary in establishing and operating a transcript production business will be explored.

Prerequisites: CRPT102, CRPT400, CRPT405

Credit: 4

**CRPT450 Realtime Writing VII**

The student will continue to develop reading and writing skills on literary, jury charge, and testimony material with emphasis on realtime translation rates.

Prerequisite: CRPT410

Credit: 4

**CRPT460 Realtime Writing VIII**

The student will continue to develop reading and writing skills on literary, jury charge, and testimony material with emphasis on realtime translation rates. The student will also complete simulated Certified Realtime Reporter (CRR) exam and Registered Professional Reporter (RPR) exam.

Prerequisites: CRPT450

Credit: 4

**CRPT475 Internship/Externship**

This course is the final course in the core court reporting curriculum. The student will apply skills and knowledge learned in the classroom to the practical reporting profession. Must have achieved a minimum of 200 wpm prior to commencement of the internship/externship.

Prerequisite: Approval – all core court reporting courses up through CRPT450 must be completed prior to commencement of the internship/externship

Credit: 4

**CS683 Data Warehouse**

This course provides an in-depth study of data warehouses and data marts. Specific techniques for conceptual, logical, and physical design of data warehouses are presented. Other topics include extraction-transformation-load (ETL) techniques, data warehouse applications, and the relationship between data warehouses and traditional database. Completion of a significant project is required.

Prerequisite: CS660 or Approval

Credit: 4

**CS685 Distributed Databases**

This course explores distributed database systems from design through operations and maintenance. Topics include design and implementation of a distributed database, distributed query processing, and database management in a distributed systems environment. Examples from open source and commercial database management systems are discussed. Completion of a significant project is required.

Prerequisite: CS681, CS682 or Approval

Credit: 4

**EMBA630 Decisions in Management: Navigating Uncertainty**

Students in this course will be introduced to three perspectives on decision-making: the rational choice model, a competing values model, and a model grounded in an understanding of the processes of judgment heuristics and bias.

Prerequisite: Approval

Credit: 4

**EMBA640 Entrepreneurship /Intrapreneurship and Innovation**

This course is designed to introduce the student to the idea of Intrapreneurship and the opportunities for innovation that exist within an existing corporation. These same skills apply to those mavericks that would pursue the same innovation outside of mainstream business community as Entrepreneurs. The similarities and differences will be addressed along with the necessary multidisciplinary and dynamic skill-sets required to build a successful enterprise from within and outside the traditional business structures.

Prerequisite: Approval

Credit: 4

**EMBA650 Emerging Markets**

Students in this course will learn how to identify and analyze the various governmental, business and political challenges and opportunities that exist when operating within emerging international markets. International law, business ethics, policy options, tariffs and operation of existing economies and organizations are examined. The roles of history and tradition are also explored in light of their potential impact on various emerging global market economies.

Prerequisite: Approval

Credit: 4

**EMBA690 Strategic Management in Dynamic Environments**

Students will master analytical and integrative tools to perform in-depth analyses of industries, firms, and competitors. Course material includes methods to predict competitive behavior and develop and implement strategic plans to achieve and sustain a competitive profile in the emerging global marketplace.

Prerequisite: Approval

Credit: 4

**EMBA695 Capstone**

The capstone provides EMBA students the opportunity to integrate knowledge and skills

gained throughout the program in the completion of selected, real-world projects, culminating in a publishable work, proposal, or initiative that addresses an existing problem in the workplace.

Prerequisite: Approval

Credit: 4

### **ESS820 Systems Thinking for Sustainability**

This introduction to systems thinking in the context of sustainability issues will introduce students to both core sustainability content and systems thinking skills. We will focus attention particularly on issues of global resource flows, energy, toxicity and habitat. In addition we offer direction on how to transform social systems toward sustainability, taking the organization and its value chain as the primary level of analysis. Given the experiential nature of the course, students will be required to complete a personal sustainability project of their choosing in their organizational setting.

Credit: 5

### **ESS825 Organizational Performance and the Triple Bottom Line**

This course examines the inherent difficulties in implementing the triple bottom line. It will focus on making the difficult decisions that attempt to simultaneously address economic, ethical, technological, social justice, and environmental concerns. The focus is on developing a plan for an organization that makes progress in all of these areas as well as a means of measuring improvement on all three outcomes.

Credit: 5

### **ESS830 Advanced Action Research for ESS**

This experience centers on guiding the participants through an advanced action research project domestically or internationally in an organization. Students will learn about the culture and the organization prior to entrance. The class will monitor and guide the entire action research cycle from diagnosis through evaluation and reflection during the class.

Credit: 5

### **ESS835 Policy and Governance in Trans-Organizational Collaboration for ESS**

The course will explore how trans-organizational policy is formed and created. Using the case study method, students will analyze multiple cases from diverse perspectives. The course utilizes an intentional interdisciplinary focus (sociology, psychology, anthropology, economics, and political science) and requires students to do a project with a client organization engaged in Environmental and Social Sustainability.

Credit: 5

### **ESS850 Strategic Thinking for ESS**

Develops and expands students' ability to think strategically within the discipline of ESS. This will involve various typologies and methods of exploration and an examination of heuristics and biases. Students will develop the capacity for concurrent action and 'birds-eye' perspectives of ongoing organizational activity.

Credit: 5

**ESS855 Futuring and Innovation for ESS**

This course develops skills in futuring via Delphi, Future Search, scenario building and other techniques. Students will talk with futurists and futures organizations, becoming involved in the World Futures Society and tech trending with leading electronics and aerospace companies. They will develop a socio-technology plan for the future of their division of ESS and will also look at formal models of innovation and diffusion of innovation.

Credit: 5

**HLS600 Homeland Security Fundamentals**

This course provides an overview of the essential ideas that constitute the emerging discipline of homeland security. It has two central objectives: to expand the way participants think, analyze and communicate about homeland security; and to assess knowledge in critical homeland security knowledge domains: including strategy, history, terrorism, fear management, crisis communication, conventional and unconventional threats, network leadership, weapons of mass destruction, lessons learned from other nations, civil liberties and security, intelligence and information, homeland security technology, and analytics.

Credit: 4

**HLS610 Dynamics of Terrorism**

The purpose of this course is to provide an introduction to the operational and organizational dynamics of terrorism. It considers those who act as individuals, in small groups or in large organizations; it considers indigenous actors as well as those who come to the United States to raise money, recruit or commit their acts of violence. In every instance, its focus is on violent clandestine activity that, whatever its motivation, has a political purpose or effect. The course addresses such specific topics as suicide terrorism, the role of the media, innovation and technology acquisition, the decline of terrorism and ways of measuring the effect of counterterrorism policies and strategies. The course also looks briefly at sabotage. By the end of the course, students should be able to design effective measures for countering and responding to terrorism based on an understanding of its organizational and operational dynamics.

Credit: 4

**HLS620 Technology Solutions for HLS**

In today's Information Age, Homeland Security (HLS) professionals and the agencies they lead are more dependent than ever on technology and information-sharing to strengthen national preparedness. The need to share information through the use of interoperable technologies and to collect and synthesize data in real time has become critical to our national security. This course provides HLS professionals with the requisite knowledge to be able to leverage technology to prevent, protect against, respond to, and recover from terrorist and natural-born incidents. It also provides an in-depth understanding of: inspection, detection, and surveillance technologies; information sharing and knowledge management systems; and communication systems. Students explore and analyze management challenges currently facing HLS professionals, such as: Information Assurance; voice, data and sensor interoperability; and technology implementation and acceptance. This knowledge will facilitate HLS



professionals to become more effective technology consumers and help them to recognize opportunities where the application of technology solutions can provide a strategic advantage. The ultimate objective of the course is to enable HLS professionals to effectively evaluate, select, and implement technology to better strengthen capability-specific national priorities.  
Credit: 4

### **HLS630 Organizational and Policy Challenges**

The War on Terror has focused the nation's attention on homeland security. This course examines key questions and issues facing the U.S. intelligence community and its role in homeland security and homeland defense. Students will have the opportunity to fully address policy, organizational and substantive issues regarding homeland intelligence support. Course reference materials will provide an overview of diverse intelligence disciplines and how the intelligence community operates. Course emphasis will be on issues affecting policy, oversight, and intelligence support to homeland defense/security and national decision-making. The 2004 *Intelligence Reform and Prevention of Terrorism Act* is addressed and the course is shaped to focus on homeland intelligence support issues at the State/Local/Tribal levels.  
Credit: 4

### **HLS640 Vulnerability Analysis and Protection**

Critical Infrastructure protection (CIP) is one of the cornerstones of homeland security. HSPD-7 lists 17 critical infrastructure and key resource sectors: Agriculture and Food, Banking and Finance, Chemical, Commercial Facilities, Communications, Dams, Defense Industrial Base, Emergency Services, Energy, Government Facilities, Information Technology, National Monuments and Icons, Nuclear Reactors, Materials and Waste, Postal and Shipping, Public Health and Healthcare, Transportation Systems, and Water. The course begins with an overview of risk, its definition and application to critical infrastructures as it relates to the National Infrastructure Protection Plan (NIPP). We then investigate measures, tool, and techniques for CIP assessment. The course develops a network theory of vulnerability analysis and risk assessment called Model-Based Risk Assessment (MBRA) used to extract the critical nodes from each sector, model the nodes' vulnerabilities by representing them in the form of a fault-tree, and then applying fault and financial risk reduction techniques to derive the optimal strategy for protection of each sector. The sectors are studied in detail in order to learn how they are structured, how regulatory policy influences protection strategies, and how to identify specific vulnerabilities inherent to each sector and its components. At the completion of the course, students will be able to apply CIP techniques (MBRA and others) to any critical infrastructure within their multi-jurisdictional region, and derive optimal strategies and draft policies for prevention of future terrorist attacks or natural disasters.  
Credit: 4

### **HLS650 Homeland Security and Government**

The purpose of this course is to provide participants with an insight into the structural, conceptual and intellectual underpinnings and implications of the homeland security project. Looking at a wide range of topics and problems, the course seeks to stimulate a comprehensive discussion of how homeland security professionals and the general public think about homeland security; whether/why there may be significant differences in professional and

public perceptions of homeland security; and how those differences constrain/leverage various elements of the homeland security effort. By incorporating a selection of key texts in Western political and social thought alongside current topical writings, the course seeks to equip participants with a deeper understanding of the prevailing discourse and its impact on the homeland security project.

Credit: 4

### **HLS660 Psychology of Fear Management**

This course serves as an introduction for homeland security professionals to terrorism as a psychological phenomenon. Government agencies involved in homeland security need to understand the psychological consequences of mass-casualty terrorist attacks and other disasters. This course provides a broad overview of psychological effects of terrorism; the status of and fallacies related to the interventions applied to victims of terrorism and the generalized fear and anxiety experienced by the public at large; current government strategies used to disseminate information to terrorist groups; psychological phenomena related to media coverage of terrorism; misconceptions and inaccuracies about the socio-political and religious motivations of terrorist groups; "profiling" and the typical psychological and cultural makeup of modern terrorists; and the social and cultural psychology of public conceptions of terrorists and acts of terror.

Credit: 4

### **HLS820 Contemporary Issues in HLS**

Using large scale systems thinking this course will explore the current reality of HLS challenges that embraces tribal, state, municipal and private efforts in addition to national. This team taught class uses a diverse cohort across representative organizations which enable Knowledge Sharing and Solving complex problems. The role is to create practitioners who not only create theory in HLS but understand the immediate application of large scale change techniques to complex crisis problems with no clear solutions spanning numerous organizations.

Credit: 5

### **HLS825 Network Organizations and Other Large Scale Interventions for HLS**

Network Organizations are developing quickly throughout the world and are becoming increasingly important in how work gets accomplished. Network organizations have been growing in the modern world because traditional organizations cannot respond to the complexity and speed of change facing today's organization. In the case of Homeland Security, where many interagency and inter-organizations must work together to respond to crisis, understanding Network Organizations and how to work between and with them is no longer a nicety but is absolutely essential.

The problems of working with diverse organizational cultures, communicating across organizations, communities, and social groups including rural versus urban and metropolitan cultures will be addressed. Unique planning, intervention, and communication problems involving case studies and simulations will be used to create an active learning involvement.

Students will be expected to build and develop their leadership skills necessary for working within and between Network Organizations while examining various methods used for operating within a parent organization as well as cooperatively with outside Homeland Security partners.

Credit: 5

### **HLS830 Crisis Planning and Operations Management**

The purpose of this course is to understand field operations and integrating trans-organizational operations planning and execution. The primary focus of the course is on communication and the importance of a detailed trans-organizational operations plan that has been shared and collaboratively developed before the crisis happens. A good operations plan and subsequent training is critical for timely response during an actual crisis. The course will also address how to effectively respond to a crisis as it erupts, manage the initial response, organize at the point of crisis for the short run, and establish critical on the spot contingencies as the crisis unfolds.

Credit: 5

### **HLS835 Policy and Governance in Trans-Organizational Collaboration for HLS**

The course will explore how trans-organizational policy is formed and created. Using the case study method, students will analyze multiple cases from diverse perspectives. The course utilizes an intentional interdisciplinary focus (sociology, psychology, anthropology, economics, and political science) and requires students to do a project with a client organization engaged in Homeland Security.

Credit: 5

### **HLS850 Strategic Thinking for HLS**

Develops and expands students' ability to think strategically within the discipline of HLS. This will involve various typologies and methods of exploration and an examination of heuristics and biases. Students will develop the capacity for concurrent action and 'birds-eye' perspectives of ongoing organizational activity.

Credit: 5

### **HLS855 Futuring and Innovation for HLS**

This course develops skills in futuring via Delphi, Future Search, scenario building and other techniques. Students will talk with futurists and futures organizations, becoming involved in the World Futures Society and tech trending with leading electronics and aerospace companies. They will develop a socio-technology plan for the future of their division of HLS and will also look at formal models of innovation and diffusion of innovation.

Credit: 5

### **HRMT415 Compensation and Benefits**

Compensation plays a critical role in modern organizations. An effective compensation system enables the organization to achieve organizational goals, improve productivity, and motivate employees. This course is designed to provide a working knowledge and a general understanding of compensation and benefits.

Prerequisite: HRMT210

Credit: 4

### **IRM200 Insurance and Risk Management Investigation and Interview Techniques**

This course covers basic auditing and interview techniques. Students will be mentored in a real-world project that integrates skills gained through the completion of the CPCU designation to solve an insurance business problem.

Prerequisite: Approval (see the AASAAC-IPA degree program description)

Credit: 4

### **IRM210 Insurance and Risk Management Capstone/Externship**

Students will gain valuable “hands-on” training through an externship, working in the premium auditing field. Students will analyze a work order to determine the type of insurance audit needed, properly apply classification rules to Workers’ Compensation classifications and General Liability Classifications, properly apply rules regarding exposure amounts, and develop a logical process for planning and writing up the audit report.

Credit: 4

### **MGMT605 Graduate Research Methods**

This course will provide a working knowledge of quantitative, qualitative, mixed, and action research approaches. The entire research process for each of these methods to include formulating research questions; developing research proposals; performing a literature search and analysis; sampling and measurement; research design; data analysis; and writing and presenting the research report will be analyzed.

Credit: 4

### **MGMT800 Fundamentals of Management**

The purpose of this course is to prepare new doctoral candidates for doctoral studies in management. The course design focuses on four critical aspects of a successful manager-leader – personal identity as a manager-leader, ability to embrace ambiguity, problem identification, and problem solving. Besides developing essential habits and skills necessary for success at the doctoral level the course will utilize readings in Organizational Behavior and Management Theory developing critical thinking and reflection in the context of action. Building on historical foundations in the field of organizational studies, students will enter into examination and conversations with a wide variety of contemporary management thinkers and researchers.

Credit: 5

### **MGMT801 Research and Writing I**

This course is one of a series of twelve research and writing courses that lead to publishable projects. Each term, the student must show progress toward completing one or more of the required research projects. A grade of “satisfactory,” awarded in this course by the mentor, certifies that the student has made progress, but each of the projects must be judged as being of publishable quality by the mentor and two readers before the project counts toward fulfillment of the research requirement necessary for the awarding of the doctoral degree.

Credit: 3

**MGMT805 Research Methods and Design**

This course is an examination of ‘full cycle research’ starting with a qualitative examination of an organizational phenomenon and then addressing how to measure it via survey, experiments, or other designs. It concludes with issues of verification and implementation based on the outcome of the quantitative phase. Also focuses on scale development skills involving reliability and validity measures, as well as confirmatory factor analysis, and issues of survey development and implementation.

Credit: 5

**MGMT806 Research and Writing II**

This course is one of a series of twelve research and writing courses that lead to publishable projects. Each term, the student must show progress toward completing one or more of the required research projects. A grade of “satisfactory,” awarded in this course by the mentor, certifies that the student has made progress, but each of the projects must be judged as being of publishable quality by the mentor and two readers before the project counts toward fulfillment of the research requirement necessary for the awarding of the doctoral degree.

Credit: 3

**MGMT810 Qualitative and Ethnographic Methods**

Instills and examines the fundamental principles of inquiry through active experimentation with ethnographic and quasi-ethnographic methods. Analysis of ethnographic descriptions and data via live, large datasets using automated methods

Credit: 5

**MGMT811 R&W III: Action Research Theory**

Action Research explores various methods and contexts for all fields of research. Students will examine their historical experience with research in a wide variety of forms, understanding their personal biases and values in the process. Drawing on readings and conversations with contemporary practitioner researchers, students will explore and understand the use of this methodology for solving complex problems in their own field.

Credit: 3

**MGMT815 Quantitative Methods**

Students will learn fundamental concepts of parametric and non-parametric statistics and develop a thorough understanding of the primary theorems of statistics. The course covers measures of central tendency, various forms of probability, ANOVA, and GLM. Exploration of multivariate statistics will be practiced via large datasets in live research projects. Particular attention is given to scale and survey development.

Credit: 5

**MGMT816 R&W IV: The Practice of Action Research**

This class will lead the student through the implementation of the Action Research Proposal that was developed and IRB approved in R&W III. Data will be collected, analyzed and a report for the organization prepared.

Credit: 3

**MGMT820 Strategic Organization Design**

As leaders in their organization, students will learn various methods and techniques of analysis and design, including methods of organizational change. They will examine the nature of 'clicks and bricks' as well as 'make or buy' decisions in outsourcing products and services.

Credit: 5

**MGMT821 R&W V: Process Consulting and Intervention Theory**

Starting with readings from classic authors, students will develop the models and thinking behind process interventions and tacit skill development of self-as-instrument. They will also explore various methods and techniques of consulting through active conversations with practicing consultants. The course covers the use of quantitative and qualitative methods to provide feedback and guidance in the management and leadership within their field.

Credit: 3

**MGMT825 Large Scale Transformational Change**

This class will explore the theory and techniques involved in large scale change interventions for corporations, multinationals, NGOs, PVOs, governmental, organizational institutions, and new forms of collaborative organizations. Such topics as trans-organizational and transformational theory and techniques will be explored in these larger systems. Case studies of large systems change efforts will be discussed, analyzed, and compared.

Credit: 5

**MGMT826 R&W VI: The Practice of Process Consulting and Intervention**

Students will be involved in live interventions in an organization within their field from entry and planning through delivery and follow-up based on the approved proposal developed in R&W V. These will start with basic interventions such as interview and feedback/action planning to Future Search, Appreciative Inquiry and related techniques.

Credit: 3

**MGMT830 Advanced Action Research**

This experience centers on guiding the participants through an advanced action research project domestically or internationally in an organization. Students will learn about the culture and the organization prior to entrance. The class will monitor and guide the entire action research cycle from diagnosis through evaluation and reflection during the class.

Credit: 5

**MGMT831 Research and Writing VII**

This course is one of a series of twelve research and writing courses that lead to publishable projects. Each term, the student must show progress toward completing one or more of the required research projects. A grade of "satisfactory," awarded in this course by the mentor, certifies that the student has made progress, but each of the projects must be judged as being of publishable quality by the mentor and two readers before the project counts toward fulfillment of the research requirement necessary for the awarding of the doctoral degree.

Credit: 3



**MGMT835 Special Topics in Organization Development**

This course covers advanced topics in organization development. Course topics will vary as determined by student interest and evolution of the discipline.

Credit: 5

**MGMT836 Research and Writing VIII**

This course is one of a series of twelve research and writing courses that lead to publishable projects. Each term, the student must show progress toward completing one or more of the required research projects. A grade of “satisfactory,” awarded in this course by the mentor, certifies that the student has made progress, but each of the projects must be judged as being of publishable quality by the mentor and two readers before the project counts toward fulfillment of the research requirement necessary for the awarding of the doctoral degree.

Credit: 3

**MGMT840 Philosophy of Science, Values and Ethics**

Starting with classic readings, and supplemented by contemporary readings in socio-technical systems from the global perspectives including; Eastern, Western, and indigenous approaches to appropriate technology, students will also look at moral dilemmas and choices in organizational life and professional careers. Examines how one can build or contribute to the development of the good, true and beautiful in organizations and careers

Credit: 5

**MGMT841 Research and Writing IX**

This course is one of a series of twelve research and writing courses that lead to publishable projects. Each term, the student must show progress toward completing one or more of the required research projects. A grade of “satisfactory,” awarded in this course by the mentor, certifies that the student has made progress, but each of the projects must be judged as being of publishable quality by the mentor and two readers before the project counts toward fulfillment of the research requirement necessary for the awarding of the doctoral degree.

Credit: 3

**MGMT845 Leadership**

This is an active course in leadership, building on critical and creative thinking. Students will be expected to build and develop their leadership with new doctoral students via cooperative research projects and programs of research.

Credit: 5

**MGMT846 Research and Writing X**

This course is one of a series of twelve research and writing courses that lead to publishable projects. Each term, the student must show progress toward completing one or more of the required research projects. A grade of “satisfactory,” awarded in this course by the mentor, certifies that the student has made progress, but each of the projects must be judged as being of publishable quality by the mentor and two readers before the project counts toward fulfillment of the research requirement necessary for the awarding of the doctoral degree.

Credit: 3

### **MGMT850 Strategic Thinking**

Develops and expands students' ability to think strategically. This will involve various typologies and methods of exploration and an examination of heuristics and biases. Students will develop the capacity for concurrent action and 'birds-eye' perspectives of ongoing organizational activity.

Credit: 5

### **MGMT851 Research and Writing XI**

This course is one of a series of twelve research and writing courses that lead to publishable projects. Each term, the student must show progress toward completing one or more of the required research projects. A grade of "satisfactory," awarded in this course by the mentor, certifies that the student has made progress, but each of the projects must be judged as being of publishable quality by the mentor and two readers before the project counts toward fulfillment of the research requirement necessary for the awarding of the doctoral degree.

Credit: 3

### **MGMT855 Futuring and Innovation**

This course develops skills in futuring via Delphi, Future Search, scenario building and other techniques. Students will talk with futurists and futures organizations, becoming involved in the World Futures Society and tech trending with leading electronics and aerospace companies. They will develop a socio-technology plan for the future of the organization and will also look at formal models of innovation and diffusion of innovation.

Credit: 5

### **MGMT856 Research and Writing XII**

This course is one of a series of twelve research and writing courses that lead to publishable projects. Each term, the student must show progress toward completing one or more of the required research projects. A grade of "satisfactory," awarded in this course by the mentor, certifies that the student has made progress, but each of the projects must be judged as being of publishable quality by the mentor and two readers before the project counts toward fulfillment of the research requirement necessary for the awarding of the doctoral degree.

Credit: 3

### **MGMT895 Research Continuation**

The doctoral candidate will enroll in this course to maintain registered status at CTU and to obtain extended time to complete the dissertation or publishable papers.

Prerequisite: Approval

Credit: 3

### **MGMT898 Advanced Topics in Management**

Taught on demand, this course covers advanced topics in management. The course may substitute for any course in the DM program and may be taken individually with approval from the Dean. Students may repeat this course for a total of 2 times for (10) credit hours.

Prerequisite: MGMT800, MGMT805, MGMT810, MGMT815, MGMT820 and MGMT825  
Credit: 5

### **MGMT899 Post Doctoral Study**

The student can take MGMT899 in order to complete an emphasis after completing their degree or to gain further experiences that will complement the previous learning. The student, Mentor and Dean will approve a learning contract that designs the knowledge base, research and experiences necessary to complete this Emphasis or additional learning. This class can be taken as many times as necessary to meet the requirements of the learning contract.

Prerequisite: Completed Terminal Degree in management related are (such as DM, Ph.D. or DBA) and approval

Credit: 5

### **MKTG446 Marketing Concepts in International Business**

In this course, students study the decision-making process in marketing products and services across national boundaries and explore the design and modification of marketing strategies for international, multinational, and global markets. This course introduces methods of adapting marketing efforts with consideration of product, price, promotion, and distribution decisions within the restraints of particular cultural, economic, and political environments.

Credit: 4

### **PM332 Organizational Leadership**

In this course, students will explore techniques for effective leadership. The course will focus on skills necessary in a project environment. Students will examine how to lead others, stimulate purposeful innovation, build culture and manage change.

Credit: 4

### **PM344 Project Risk Management**

Project Risk Management is a study of risk management in the context of projects and programs, with special focus on developing the competency of the project risk manager. This course addresses the area of non-speculative, business risk. Specific emphasis is placed on risk minimization, risk control, and risk management.

Prerequisite: PM401

Credit: 4

### **PM346 Contracts and Procurement**

This course covers the management of contracts and procurements for projects from the initial planning for contract work through contract close out. Special emphasis is provided on how procurement and proposals integrate into the project management process and how the project manager maintains control of the process.

Prerequisite: PM401

Credit: 4

**PM357 Project Performance and Quality Assurance**

In this course, students will explore quality assurance concepts and principles within the total quality management framework in manufacturing or service organizations. Students will also study benchmarking, the contractual aspects of quality, statistical process control, process improvement, yield management, quality issues of incoming material control and quality audits.

Prerequisite: PM401

Credit: 4

**PM401 Project Management Theory**

This course provides an overview and introduction to the discipline of project management, coupled with an examination of the techniques that project managers use to complete their projects on schedule, within budgeted cost, and according to specified scope. Using materials based on the PMBOK® (Guide to Project Management Body of Knowledge, published by the Project Management Institute or PMI®), students learn the operational framework of project management relating to the project lifecycle of project initiating, planning, executing, controlling, and closing. This course also provides the basis for the more advanced development of project management skills in subsequent project management courses.

Credit: 4

**PM415 HR Project Management**

This course builds on the foundations of HR management and project management and covers the three areas in the PMBOK® for project HR managers: organizational planning, staff acquisition, and team development. Within these areas emphasis is given to management and behavioral theories that impact change, communication, motivation, stress, conflict, negotiation, leadership and politics in a project-management environment.

Prerequisite: PM401

Credit: 4

**PM434 Project Scheduling and Cost**

This course exposes students to approaches, methods, and systems to ensure management success under demanding cost, schedule, and performance requirements. Conflict and risk management initiatives along with Gantt, PERT, and CPM scheduling methods are included.

Prerequisite: PM401

Credit: 4

# Revised Certificates

## **Information Systems Security (12 credits)**

CS651 Computer Systems Security Foundations

CS652 Operating Systems Security

CS661 Software Information Assurance

## **Information Systems Security Management (12 credits)**

CS651 Computer Systems Security Foundations

CS654 Security Management

CS661 Software Information Assurance

## **Software Development (12 credits)**

CS640 Software Project Management

CS649 Software Design

CS671 Software Systems Engineering Process

## **Database Design (12 credits)**

CS660 Database Systems

CS681 Database Design

CS683 Data Warehouse

# Revised Course Descriptions

## **CJFI430 Medico-Legal Death Investigations**

This course will provide a foundation for understanding death scene analysis. The manner, mechanism, and cause of death are explored, as well as postmortem changes. The course emphasis will be on investigation of sudden or unexpected deaths, homicides, suicides, accidental deaths, and trauma; this will include SIDS and child abuse cases.

Prerequisite: CJFI360

Credit: 4

## **CJUS365 Criminal Law**

This is a study of the general principles of criminal law. Specifically it includes both the policy and procedures of criminal law, giving students the ability to apply both the policy and procedures of criminal law principles to specific, substantive crimes.

Prerequisite: CJUS141 or PBAD200 or PALS200

Credit: 4

## **CJUS440 The Laws of Evidence**

In this course, the student will be provided a thorough examination of the laws of evidence for criminal justice professionals. Topics include circumstantial and opinion evidence, hearsay, character evidence, relevancy and materiality, privileged communications, expert witness testimony, objections to and exclusion of evidence, and chain of custody.

Prerequisite: CJUS375 or permission

Credit: 4

## **CS652 Operating Systems Security**

Operating Systems Security provides an in-depth analysis of the security components at the operating system level. The focus is on the development of a security policy and the basic elements that provide identification and authentication, access control and security auditing. In addition to general concepts, both the UNIX/Linux and Windows operating systems are studied. Students participate in hands-on lab assignments to reinforce the material as well as to gain familiarity with a number of available operating system security products and tools (both freeware and commercially available).

Credit: 4

Prerequisite: CS651

## **CS801 Research and Writing I**

This course is one of a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may



span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

### **CS802 Qualitative Analysis**

This course presents topics on a variety of qualitative analysis methods and techniques. The methods include structured interviews, surveys, action research, and case studies. Perspectives include ethnography, grounded theory, soft systems methodology, and deductive reasoning.

Credit: 5

### **CS805 Research Methods**

This course introduces experimental design and analysis of data. Topics include independent and dependent variables, how to collect data, hypothesis testing and other forms of data analysis. You will be expected to design and conduct an experiment, collect and analyze data, and then write a technical report on your effort.

Credit: 5

### **CS806 Research and Writing II**

This course is the second in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

### **CS810 Simulation & Modeling Techniques**

Complex computing applications are launched system wide only after simulation, modeling and testing have been conducted and the results analyzed. This course addresses fundamental issues in developing those processes and prepares students for their own project simulation or model. Students will be able to describe differences in various methods of central tendency, effectively use ANOVA and GLM for data analysis and demonstrate how different testing variables can affect simulations or models.

Credit: 5

### **CS811 Research and Writing III**

This course is the third in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style

consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.  
Credit: 3

### **CS812 Quantitative Analysis**

You will learn fundamental concepts of parametric and non-parametric statistics and develop a thorough understanding of the primary theorems of statistics. This course covers measures of central tendency, various forms of probability, ANOVA, and GLM. Exploration of multivariate statistics will be practiced via large datasets in live research projects. Particular attention is given to scale and survey development.  
Credit: 5

### **CS815 Foundations in Computer Science**

This course provides an overview and introduction to the remaining technical courses in the program. By offering a high-level view of where each of the more detailed courses fit, students can better understand various sub-disciplines within Computer Science and how the disciplines relate to one another. Students will also be able to discuss the state of the practice for each sub-discipline and better narrow their area of expertise or specialty for the remainder of the degree program.  
Credit: 5

### **CS816 Research and Writing IV**

This is the fourth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.  
Credit: 3

### **CS817 Foundations of Enterprise Information Systems**

This course provides an overview and introduction to the breadth of research in enterprise information systems. The purpose of this overview is: 1) to ensure that you are familiar with the entire discipline, and 2) to help you establish where your interest fits into the discipline.  
Credit: 5

### **CS820 Usability and Interaction**

This course investigates what qualities of a software product make it usable. Emphasis is placed on how one includes usability concerns throughout the software lifecycle, how one

designs for usability, how to determine experimentally the usability of a product, and the importance of early usability testing on a simple prototype. Students will be expected to design and conduct usability experiments and then analyze data in order to refine product design.

Credit: 5

### **CS821 Research and Writing V**

This course is the fifth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

### **CS822 Systems Analysis and Design**

This course covers the analysis and design of systems to support business processes. It evaluates alternative research methods on requirements gathering techniques.

Credit: 5

### **CS825 Advanced Topics in Database Systems**

Computer Science is dynamic; Moore’s Law tells us that today’s standard could very well be obsolete in 18 months. This course addresses the top three issues of current database theory and practice, identifying current trends and near future changes in the field. As such, the course content will vary according to the evolution of the discipline. Students will research major literature sources that address issues and trends, compare and contrast centralized database systems with distributed databases and identify principles behind data warehousing and data mining.

Credit: 5

### **CS826 Research and Writing VI**

This course is the sixth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

### **CS827 Enterprise Information Systems Governance**

This course presents an overview of the major structures found in a typical enterprise. Several organizational models such as COBIT and ITIL are studied. The course also explores governance, policy and control within the enterprise. Students learn to evaluate current research on enterprise information systems governance.

Credit: 5

### **CS830 Advanced Topics in Computer Science**

This is the second of two advanced topics classes, this one dealing with current trends in the computer industry. Topics will be mutually determined by the instructors and students as a group. Students will discuss the current state of the practice, research major literature sources, identify what are considered “best practices” within a particular field and assess how well an organization follows those practices.

Credit: 5

### **CS831 Research and Writing VII**

This course is the seventh in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

### **CS832 Business Alignment and Strategic Information Systems**

This course presents techniques and methods for building a strategic plan for an enterprise. This includes identifying potential strategies and evaluating their alignment with business goals and vision and approaches to bring IT into alignment with business goals. The discussions cover how to set a benchmark and its proper use; what are reasonable metrics for a business to use and their proper use; and environmental scanning. Students evaluate current research on IT strategy and business alignment.

Credit: 5

### **CS835 Directed Readings**

This course pinpoints the direction of research for the student’s final project (with approval of faculty). The student will determine his/her topic of research, identifying major literature sources for that topic and determining major contributors in industry, academia and/or research, ultimately leading a discussion of the topic with knowledgeable peers. Students will then present an overview of the topic area to peers who are not specialists, discussing the current state of the practice and future trends. This course may substitute for any course in the DCS programs.

Credit: 5

**CS836 Research and Writing VIII**

This course is the eighth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

**CS837 Requirements Engineering**

This course presents the state of the practice for requirements engineering. Topics such as requirements elicitation, documentation, verification and validation are included. Important aspects of quality such as usability and meeting the user’s needs are discussed. The basics of Human Computer Interaction, the software development lifecycle, prioritization, and communication skills are covered. Techniques such as use cases and prototyping are presented in the context of requirements engineering.

Credit: 5

**CS838 Concurrent and Distributed Systems**

This course covers the fundamentals of concurrent and distributed systems including threading, synchronization and deadlock prevention as well as logical clocks, group communication and distributed transactions. It also covers current topics such as web services and software for multiprocessors and multicore processors.

Credit: 5

**CS840 Software System Metrics and Risk Analysis**

Software development has risks – time, resources and change. Measuring and managing risk is essential to successful software development. In this course, students will investigate and analyze current and emerging best practices for managing risk and learn how a good metrics program can be developed. Students will also use metric data to support risk assessment and analyze risk exposure, while developing a risk mitigation plan for their organization.

Credit: 5

**CS841 Research and Writing IX**

This course is the ninth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable

quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

### **CS842 Business Intelligence**

This course presents decision making frameworks, their advantages and limitations. Topics include constructing a data warehouse and its use for data mining in order to do trend analysis; the development and protection of business intelligence; and knowledge management within an enterprise. These topics will lead a student to appreciate the value of the knowledge contained in the data gathered by an organization and its impact on the business.

Credit: 5

### **CS845 Systems Architecture**

Commonly known architecture patterns can often be combined to form large systems. This course teaches students to recognize these common architecture patterns and their functionalities then combine them into more complex patterns. Students will discuss the advantages of systems planning for an organization and identify the role played by the Systems Architect in the long term management of an information system.

Credit: 5

### **CS846 Research and Writing X**

This course is the tenth in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

### **CS847 Enterprise Systems Architecture Planning**

This course presents current approaches to the high level design of system architectures. The emphasis is placed on high-level design issues and opportunities for long-term systems planning.

Credit: 5

### **CS850 Security and Risk Analysis**

A generation ago, business referred to the shop owner down the street. Today’s business is global; companies have offices around the world, processing data twenty-four hours a day. Keeping software systems synchronized, online and *secure* is the ongoing challenge of computer professionals. In this course, students will assess the impact on security concerns when an organizations moves from a centralized system to a distributed system. This includes describing emerging security issues and risk factors and designing a secure information system.

Credit: 5



**CS851 Research and Writing XI**

This course is the eleventh in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

**CS852 Information Assurance**

This course presents topics of current interest in security and protection of assets. In addition, this course investigates current issues in system security and how security issues impact the systems design effort, the management of an organization’s resources and the mitigation of the risks posed by problems with security. Investigates and analyzes current and emerging best practices for managing risk factors associated with information systems.

Credit: 5

**CS855 Futuring and Innovation**

Develops the skills in futuring through a variety of techniques. Introduces formal methods of innovation and diffusion of innovation.

Credit: 5

**CS856 Research and Writing XII**

This course is the final one in a series of twelve research and writing courses that result in publishable projects. The projects are selected by the student in consultation with a faculty mentor and two readers. The project is intended to demonstrate an increasing mastery of an area of expertise within computer science and demonstrate the ability to write in a style consistent with the expectations of the target audience for the project. Upon completion, each project (which may span two or more research and writing courses) is reviewed by the faculty mentor and two additional faculty members and is graded on a satisfactory/unsatisfactory basis. A grade of “satisfactory” certifies that the project has been judged as being of publishable quality, applying computer science knowledge to the solution of a practical problem.

Credit: 3

**CS895 Dissertation Research Continuation**

The doctoral candidate will enroll in this course to maintain registered status at CTU and to provide extended time to complete any of the following courses: CS889, CS890, CS891 or CS892.

Credit: 3 per quarter

Prerequisite: Approval

**CS898 Advanced Topics in Computer and Information Sciences I**

Taught on demand, this course covers advanced topics in computer or information science. The course may substitute for any course in the DCS programs and may be taken individually with approval.

Credit: 5

**CS899 Advanced Topics in Computer and Information Sciences II**

Taught on demand, this course covers advanced topics in computer or information science. The course may substitute for any course in the DCS programs and may be taken individually with approval.

Credit: 5

**FINC400 Financial Management**

This course examines the process of budgeting. Students will examine the components of and develop budgets. Students will also utilize capital budgeting tools to evaluate investment opportunities.

Prerequisite: ACCT201, ACCT202, ACCT203

Credit: 4

**MKTG320 Advertising and Media Practices**

Students will gain an understanding of advertising, public relations and brand management. Specific topics covered include the planning, creation and use of these communication tools from the point of view of management and the market.

Prerequisite: MKTG210

Credit: 4

**PALS216 Legal Technology**

This course develops skills and a knowledge base necessary for students to appropriately use software and technology relevant to paralegal practice.

Credit: 4

**PALS225 Civil Litigation I**

This course introduces the basic concepts and procedure of civil litigation and develops the skills necessary to a paralegal in the initial phases of a law suit.

Credit: 4

**PALS230 Contract Law**

This course covers the basic legal concepts related to contract law. Students learn to perform tasks relevant to paralegal practice in contracts.

Credit: 4

**PALS250 Commercial Law**

This course covers the legal concepts involved in paralegal practice of commercial law, including the formation of business organizations, secured transactions, commercial paper, and the Uniform Commercial Code. Students learn to draft documents and perform tasks relevant

in the legal specialty.  
Prerequisite: PALS215  
Credit: 4

**PALS265 Property/Real Estate**

This course covers the basic legal concepts related to the practice of paralegals in property and real estate. Students learn to draft documents and perform tasks relevant in the legal specialty.  
Prerequisite: PALS215  
Credit: 4

**PALS275 Family Law**

This course covers the basic legal concepts related to the practice of family law. Students learn to perform tasks relevant in the legal specialty.  
Prerequisite: PALS215  
Credit: 4

**PALS285 Trusts, Wills and Estates**

This course covers the basic legal concepts related to wills, probate, trusts, and estate administration. Students learn to perform tasks relevant to paralegals in these legal specialties.  
Prerequisite: PALS215  
Credit: 4

**PALS400 Uniform Commercial Code and Securities Regulations**

This course covers advanced concepts and practice related to the Uniform Commercial Code and securities regulations. Students learn to draft documents, conduct legal research, and perform tasks relevant in the legal specialty.  
Prerequisite: PALS215, PALS250  
Credit: 4

**PALS480 Capstone**

This course provides a synthesis of the role of the paralegal in the context of the United States court system; the management, communications, and organizational issues relevant to effective paralegal practice, and obligations related to professional ethics. Students will complete a capstone project that utilizes the key components of paralegal practice.  
Prerequisite: Approval  
Credit: 4

**SOCL356 American Diversity**

The student will explore race, class, and gender in a global context with a special emphasis on American society and the multicultural experience. Descriptions and analysis of relevant historical context along with discussion of pertinent societal events are also included. The student will be introduced to principal terms, concepts and theories in the field.  
Credit: 4

# Colorado Technical University

## Page 249 - CAAHEP Language

Remove the following wording:

The Colorado Technical University Associate of Science in Medical Assisting Program, at the Sioux Falls, S.D. campus is accredited by the Commission on Accreditation of Allied Health Education Programs, [www.caahep.org](http://www.caahep.org).

Commission on Accreditation of Allied Health Education Programs:  
35 East Wacker Drive, Suite 1970  
Chicago, IL 60601-2208 (312) 553-9355  
Association of Medical Assistants Endowment, AAMAE.

**Leave of Absence (LOA)**

**Replaces wording on p. 406 of the 2008-2009 Catalog**

Students may submit a written request for a Leave of Absence to a campus academic official.

- Students attending a physical campus or students attending a physical campus and taking some courses through the Colorado Technical University Online Virtual Campus can submit a written request for a Leave of Absence to the appropriate academic official from their campus.
- Students enrolled through the Colorado Technical University Online Virtual Campus can submit their request for a Leave of Absence to [officeofstudentadvising@ctuonline.edu](mailto:officeofstudentadvising@ctuonline.edu).

The following conditions may be considered for an LOA:

- Family Care (loss of family member or unexpected medical care of family)
- Jury Duty
- Medical (including pregnancy)
- Military Duty
- Temporary out (one session off, does not apply to students enrolled through the Colorado Technical University Online Virtual Campus)

The following conditions must be met in order for a student to be eligible for a LOA:

The request must be submitted in writing/e-mail prior to the beginning of the leave and include the date of submission, the effective date, when the student expects to return to school, the reason for the leave of absence, and supporting documentation. Students enrolled through the Colorado Technical University Online Virtual Campus must submit a request in writing/e-mail by the end of Add or Drop week in order to be eligible for a LOA in the current session. Requests submitted after the Add or Drop week will be eligible for a LOA in the following session

- A student must have completed at least one quarter at the institution.
- A student must have completed his/her most recent quarter and received academic grades (A-F) for at least one class for that quarter. Students that participated in the Full Course Withdrawal in their previous session are not eligible for a Leave of Absence in the next session.
- A leave will begin on or after the institution's approval of the qualified request for students attending a physical campus, or students attending a physical campus and taking some courses through the Colorado Technical University Online Virtual Campus, and a leave must begin on the first day of the session, and end on the day prior to the first day of a session for students enrolled through the Colorado Technical University Online Virtual Campus.
- The total of all leaves of absence in a 12-month period may not exceed 180 days.

Students on a leave of absence may be required to complete additional financial aid documents and failure to return from a leave of absence may affect a student's loan repayment obligations. A leave of absence may also affect the disbursement of financial aid. If a student on a leave of absence fails to return from the leave of absence, the official withdrawal date will be the last day of the grading period prior to the date the leave of absence began.



**Undergraduate and Graduate Catalog  
Colorado Springs, Denver, Kansas City, Pueblo, and Sioux Falls Campuses**

**2008-2009**

**Addendum**

**Effective August 2009**



*The University of Choices*



## **Bachelor of Science in Radiologic Technology with a concentration in Advanced Clinical Modalities (BSRT-ACM) (replaces pp. 242-243)**

Radiology healthcare professionals work in a dynamic environment that is demonstrating an increasing demand for higher education within the profession. The BSRT degree is designed for the individual with an Associate's Degree in Radiography or completion of a comparable certificate program. This degree program is designed to help prepare radiology professionals who are interested in advancement into healthcare management positions or gaining knowledge in advanced clinical modalities within the radiology profession. The objective of this program is to provide trained healthcare workers with the appropriate general education, didactic theory, hands-on skills, and externship opportunity required for advancement into management or advanced radiology modalities.

### **PROGRAM OUTCOMES**

- Develop advanced clinical skills that support growth within the organization
- Demonstrate leadership in the health services organization with knowledge of forces shaping healthcare policy
- Assure the privacy, ethics, and challenges of securing confidential health information
- Demonstrate competence in applying models of communication, decision-making and counseling while delivering quality patient care
- Document advanced clinical modality examinations that identify the proper knowledge and skill used to practice, analyze, and study the field of interest.

### **ADMISSION REQUIREMENTS**

The student seeking a BSRT must have an Associate's Degree in Radiography from an accredited institution and be employed in a healthcare setting. If a student graduated from a certificate program, course work will be evaluated on by a course by course basis and the student must have successfully completed the ARRT examination. In all cases, the general education core required for CTU bachelor's degrees must be met. Applicants are encouraged to speak with an Admissions Advisor or Radiologic Technology Chair for more information.

Healthcare facilities may require that health science students have a drug screening test completed prior to attending clinical experiences. In addition, students may not be allowed to participate in clinical experiences if they test positive for illegal drugs or prescription drugs without physician authorization. Moreover, positive drug tests may prevent the health science graduate from taking certain national certification or licensing exams. Finally, healthcare facilities may not hire students or graduates who have a record of illegal drug use, abnormal drug tests or a felony conviction.

### **BSRT PROGRAM REQUIREMENTS**

#### **Years 1 and 2 (earned through completion of an accredited Associate's Degree in Radiologic Technology or Certificate in Radiography plus additional appropriate coursework)**

- General Education Component: approximately 32 quarter hours (see Note 1)
  - Radiography core component (associate's or certificate level): approximately 60 quarter hours
- Total quarter hours (years 1 and 2): 92**

#### **Years 3 and 4 (earned at Colorado Technical University or through appropriate transfer credit plus minimum required residence coursework at CTU)**

- General Education Component: approximately 32 quarter hours (see Note 1)
  - Professional Core (see listing below): 20 quarter hours
  - Advanced Clinical Modalities Component (see listing below): 36 quarter hours
- Total quarter hours (years 3 and 4): 88**

**All students in the BSRT program must complete all of the following courses *in residence* at CTU:**

| <b>Course No.</b>                 | <b>Course Name</b>                        | <b>Hrs.</b> |
|-----------------------------------|-------------------------------------------|-------------|
| <b>PROFESSIONAL CORE (20 hrs)</b> |                                           |             |
| HRMT210                           | Introduction to Human Resource Management | 4           |

|         |                                           |   |
|---------|-------------------------------------------|---|
| HRMT430 | Managing Diversity                        | 4 |
| HSS300  | Healthcare Law and Regulations            | 4 |
| MEDA223 | Pharmacology                              | 4 |
| BSRT450 | Quality Improvement in Radiology Capstone | 4 |

**All students in the BSRT program must complete 9 Advanced Clinical Modalities courses (total of 36 credits). This coursework may be completed *in residence* at CTU or may be met through appropriate transfer credit or by taking the appropriate courses at CTU. The University's residency requirement is 25% of the total credit hours for a bachelor's degree, and the student must be enrolled at the time of degree completion.**

**ADVANCED CLINICAL MODALITIES (Must choose 36 credits)**

CTU ACADEMIC CERTIFICATES INCLUDED IN THIS PROGRAM:

| <b>Course No.</b>                                | <b>Course Name</b>                         | <b>Hrs.</b> |
|--------------------------------------------------|--------------------------------------------|-------------|
| <b>CERTIFICATE IN MAMMOGRAPHY</b>                |                                            |             |
| MAM100                                           | Breast Anatomy, Physiology and Pathology   | 1           |
| MAM102                                           | Patient Care and Procedures in Mammography | 1           |
| MAM104                                           | Mammography Technique and Quality Control  | 1           |
| MAM106                                           | Mammography Equipment                      | 1           |
| MAM108                                           | Mammography Externship                     | 4           |
| <b>CERTIFICATE IN BONE DENSITOMETRY</b>          |                                            |             |
| BSRT350                                          | Bone Densitometry                          | 4           |
| BSRT351                                          | Bone Densitometry Externship               | 4           |
| <b>CERTIFICATE IN COMPUTED TOMOGRAPHY</b>        |                                            |             |
| SUR150                                           | Introduction to Pathophysiology            | 4           |
| BSRT360                                          | Cross-Sectional Anatomy                    | 4           |
| BSRT361                                          | An Introduction to CT Procedures           | 4           |
| BSRT362                                          | CT Physics and Instrumentation             | 4           |
| BSRT363                                          | Computed Tomography Externship             | 4           |
| <b>CERTIFICATE IN MAGNETIC RESONANCE IMAGING</b> |                                            |             |
| SUR150                                           | Introduction to Pathophysiology            | 4           |
| BSRT360                                          | Cross-Sectional Anatomy                    | 4           |
| BSRT370                                          | An Introduction to MRI Procedures          | 4           |
| BSRT371                                          | MRI Physics and Instrumentation            | 4           |
| BSRT372                                          | MRI Externship                             | 4           |
| <b>CERTIFICATE IN PACS</b>                       |                                            |             |
| BSRT380                                          | PACS                                       | 4           |
| BSRT381                                          | PACS Externship                            | 4           |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS</b>        |                                            | <b>180</b>  |

Note 1: *General Education Requirements.* The following minimum general education requirements must be met in order to graduate with a Colorado Technical University BSRT degree. All of these requirements may be met through appropriate transfer credit or by taking the appropriate courses at CTU.

| <b>Course Category</b>     | <b>Minimum Qtr Hrs</b> | <b>CTU Equivalent Course No.</b> |
|----------------------------|------------------------|----------------------------------|
| English Composition I & II | 8                      | ENGL111/112                      |
| Technical Writing          | 4                      | ENGL200                          |
| Speech                     | 4                      | ENGL210                          |
| History                    | 4                      | HIST150                          |

|                                      |           |                    |
|--------------------------------------|-----------|--------------------|
| Interdisciplinary                    | 4         | INTD111            |
| Psychology or Sociology              | 4         | PSYC100 or SOCL101 |
| College or Business Algebra          | 4         | MATH103 or MATH143 |
| Statistics                           | 4         | MATH306            |
| Science                              | 4         | SCI120             |
| Business                             | 4         | BADM100            |
| Ethics (healthcare)                  | 4         | HCM325             |
| Economics                            | 4         | ECO201             |
| Literature                           | 4         | LITR220            |
| Information Technology               | 4         | IT105              |
| Spreadsheet Applications             | 4         | IT254              |
| <b>Total general education hours</b> | <b>64</b> |                    |

## **Bachelor of Science in Radiologic Technology with a concentration in Healthcare Management (BSRT-HCM)**

Radiology healthcare professionals work in a dynamic environment that is demonstrating an increasing demand for higher education within the profession. The BSRT degree is designed for the individual with an Associate's Degree in Radiography or completion of a comparable certificate program. This degree program is designed to help prepare radiology professionals who are interested in advancement into healthcare management positions using skills in finance, supervision and human resource management. The objective of this program is to provide trained healthcare workers with the appropriate general education, didactic theory and hands-on skills required for advancement into management within healthcare.

### **PROGRAM OUTCOMES**

- Develop business management skills that support growth within the organization
- Demonstrate leadership in the health services organization with knowledge of forces shaping healthcare policy
- Assure the privacy, ethics, and challenges of securing confidential health information
- Demonstrate competence in applying models of communication, decision-making and counseling within management culture
- Analyze a health services department while recognizing a variety of factors affecting personnel in the workforce

### **ADMISSION REQUIREMENTS**

The student seeking a BSRT must have an Associate's Degree in Radiography from an accredited institution and be employed in a healthcare setting. If a student graduated from a certificate program, course work will be evaluated on by a course by course basis and the student must have successfully completed the ARRT examination. In all cases, the general education core required for CTU bachelor's degrees must be met. Applicants are encouraged to speak with an Admissions Advisor or Radiologic Technology Chair for more information.

Healthcare facilities may require that health science students have a drug screening test completed prior to attending clinical experiences. In addition, students may not be allowed to participate in clinical experiences if they test positive for illegal drugs or prescription drugs without physician authorization. Moreover, positive drug tests may prevent the health science graduate from taking certain national certification or licensing exams. Finally, healthcare facilities may not hire students or graduates who have a record of illegal drug use, abnormal drug tests or a felony conviction.

### **BSRT PROGRAM REQUIREMENTS**

#### **Years 1 and 2 (earned through completion of an accredited Associate's Degree in Radiologic Technology or Certificate in Radiography plus additional appropriate coursework)**

- General Education Component: approximately 32 quarter hours (see Note 1)
- Radiography core component (associate's or certificate level): approximately 60 quarter hours

**Total quarter hours (years 1 and 2): 92**

#### **Years 3 and 4 (earned at Colorado Technical University or through appropriate transfer credit plus minimum required residence coursework at CTU)**

- General Education Component: approximately 32 quarter hours (see Note 1)
- Professional Core (see listing below): 20 quarter hours
- Healthcare Management and/or Clinical Courses (see listing below): 36 quarter hours

**Total quarter hours (years 3 and 4): 88**

All students in the BSRT program must complete all of the following courses *in residence* at CTU:

| <b>Course No.</b>                 | <b>Course Name</b>                        | <b>Hrs.</b> |
|-----------------------------------|-------------------------------------------|-------------|
| <b>PROFESSIONAL CORE (20 hrs)</b> |                                           |             |
| HRMT210                           | Introduction to Human Resource Management | 4           |
| HRMT430                           | Managing Diversity                        | 4           |

|         |                                           |   |
|---------|-------------------------------------------|---|
| HSS300  | Healthcare Law and Regulations            | 4 |
| MEDA223 | Pharmacology                              | 4 |
| BSRT450 | Quality Improvement in Radiology Capstone | 4 |

All students in the BSRT program must complete either the 9 Healthcare Management courses (total of 36 credits) or a combination of 8 Healthcare Management courses (32 credits) *and* the Radiography Clinical Courses (4 credits). All of this coursework must be completed *in residence* at CTU.

| Course No.                                               | Course Name                                | Hrs.       |
|----------------------------------------------------------|--------------------------------------------|------------|
| <b>HEALTHCARE MANAGEMENT (32/36 hrs)</b>                 |                                            |            |
| HSS310                                                   | Economics in Healthcare                    | 4          |
| HSS320                                                   | Administration in Healthcare Services      | 4          |
| HSS350                                                   | Healthcare Systems                         | 4          |
| HCM400                                                   | Healthcare Management and Supervision      | 4          |
| HSS410                                                   | Fiscal Management in Healthcare Services   | 4          |
| HCM415                                                   | Health Information Systems                 | 4          |
| HSS481                                                   | Externship/Project I                       | 4          |
| HSS482                                                   | Externship/Project II                      | 4          |
| HRMT440                                                  | Managing Organizational Change             | 4          |
| <b>RADIOGRAPHY CLINICAL COURSES (4 hrs. if selected)</b> |                                            |            |
| MAM100                                                   | Breast Anatomy, Physiology and Pathology   | 1          |
| MAM102                                                   | Patient Care and Procedures in Mammography | 1          |
| MAM104                                                   | Mammography Technique and Quality Control  | 1          |
| MAM106                                                   | Mammography Equipment                      | 1          |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS</b>                |                                            | <b>180</b> |

Note 1: *General Education Requirements.* The following minimum general education requirements must be met in order to graduate with a Colorado Technical University BSRT degree. All of these requirements may be met through appropriate transfer credit or by taking the appropriate courses at CTU.

| Course Category                      | Minimum Qtr Hrs | CTU Equivalent Course No. |
|--------------------------------------|-----------------|---------------------------|
| English Composition I & II           | 8               | ENGL111/112               |
| Technical Writing                    | 4               | ENGL200                   |
| Speech                               | 4               | ENGL210                   |
| History                              | 4               | HIST150                   |
| Interdisciplinary                    | 4               | INTD111                   |
| Psychology or Sociology              | 4               | PSYC100 or SOCL101        |
| College or Business Algebra          | 4               | MATH103 or MATH143        |
| Statistics                           | 4               | MATH306                   |
| Science                              | 4               | SCI120                    |
| Business                             | 4               | BADM100                   |
| Ethics (healthcare)                  | 4               | HCM325                    |
| Economics                            | 4               | ECO201                    |
| Literature                           | 4               | LITR220                   |
| Information Technology               | 4               | IT105                     |
| Spreadsheet Applications             | 4               | IT254                     |
| <b>Total general education hours</b> | <b>64</b>       |                           |

## **Associate of Applied Science in Radiologic Technology (AAS-RT) (replaces pp. 256-257)**

The field of Radiologic Technology is undergoing a remarkable transformation. This healthcare profession continues to be at the forefront in the diagnosis and treatment of injury and disease. The AASRT degree can provide you with the skills and confidence you need to enter the field of general radiography. This education also can form the foundation for further education and cross-training. Advanced opportunities include Nuclear Medicine, Ultrasound, Radiation Therapy, MRI, CT, breast, cardiac and abdominal imaging and neuro-interventional radiology.

### **PROGRAM OUTCOMES**

- Communicate effectively with all members of the health care team
- Demonstrate professionalism within the clinical setting
- Perform routine radiographic procedures
- Produce a quality radiograph with applied knowledge of anatomy, positioning, technical factors, and image quality
- Analyze a finished radiograph
- Implement the proper procedures for non-routine examinations
- Apply safe and effective radiation protection practices
- Provide age appropriate patient care and safety
- Meet the clinical requirements of an entry level practitioner as indicated by employers

### **ADMISSION REQUIREMENTS**

- Complete entrance testing
- Provide three (3) references, professional and/or personal. It is recommended that one be from a former instructor
- Complete and submit the Interview Questionnaire
- Provide a Letter of Intent
- Complete a criminal background check
- International students must demonstrate proficiency in the English language as, as measured by a TOEFL score of 550 or above; 213 or higher on the computer based exam

**Note:** Students will be required to complete a physical exam and provide documentation of required immunizations prior to the start of their clinical education.

### **PREPARATORY REQUIREMENTS**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

### **AASRT PROGRAM REQUIREMENTS**

#### **Required Courses**

All students in the AASRT program must complete all of the following courses:

| <b>Course No.</b>          | <b>Course Name</b>                  | <b>Hrs.</b> |
|----------------------------|-------------------------------------|-------------|
| GENERAL EDUCATION (32 hrs) |                                     |             |
| IT105                      | Information and Technology Literacy | 4           |
| ENGL111                    | English Composition I               | 4           |



|         |                                            |   |
|---------|--------------------------------------------|---|
| ENGL112 | English Composition II                     | 4 |
| INTD111 | Creating Academic and Professional Success | 4 |
| MATH143 | Business Algebra                           | 4 |
| PSYC100 | Introduction to Psychology                 | 4 |
| HSS134  | Medical Law and Ethics                     | 4 |
| BADM100 | Introduction to Business                   | 4 |

#### CORE REQUIREMENTS (70 hrs)

|         |                                                                                 |   |
|---------|---------------------------------------------------------------------------------|---|
| BIO141  | Anatomy and Physiology I                                                        | 4 |
| BIO142  | Anatomy and Physiology II                                                       | 4 |
| RADG101 | Radiographic Procedures of the Appendicular Skeleton                            | 4 |
| RADG102 | Radiographic Clinical Education I                                               | 3 |
| RADG103 | Radiographic Image Production and Evaluation I                                  | 4 |
| RADG104 | Radiographic Procedures of the Axial Skeleton                                   | 4 |
| RADG105 | Radiographic Clinical Education II                                              | 3 |
| RADG106 | Radiographic Image Production and Evaluation II                                 | 5 |
| RADG107 | Radiographic Equipment Operation and Maintenance                                | 4 |
| RADG108 | Radiographic Procedures of the Soft Tissues Viscera, and Other Systems          | 4 |
| RADG111 | Radiobiology                                                                    | 2 |
| RADG112 | Registry Review                                                                 | 4 |
| RADG115 | Radiographic Procedures of the Cranium, Central Nervous and Circulatory Systems | 2 |
| RADG119 | Radiographic Clinical Education III                                             | 5 |
| RADG121 | Introduction to Radiologic Science and Patient Care                             | 4 |
| RADG122 | Patient Care and Radiographic Sciences Clinical Lab                             | 4 |
| RADG123 | Advanced Modalities                                                             | 2 |
| RADG211 | Radiographic Clinical Education IV                                              | 5 |
| RADG212 | Radiographic Clinical Education V                                               | 3 |

**TOTAL PROGRAM QUARTER CREDIT HOURS: 102**

The Colorado Technical University Radiology Technology Program in Kansas City, Missouri, is also accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), [www.jrcert.org](http://www.jrcert.org).

Joint Review Committee on Education in Radiologic Technology  
20 North Wacker Drive, Suite 2850  
Chicago, IL 60601-2208  
(312) 704-5300

## **Associate of Science in Surgical Technology (AS-ST) (replaces pp. 252-253)**

The mission of the program is to prepare competent entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains and to help satisfy the need for surgical technologists in local and regional communities. The Surgical Technology program involves learning surgical procedures, exercising critical thinking skills and effectively communicating in the operating room environment. The Surgical Technologist is an active member of the surgical team. By using technology in the operating room suite, the student can learn the practical skills to successfully work in today's fast-paced operating room.

### **PROGRAM OUTCOMES**

- Earn an Associate of Science Degree in Surgical Technology (AS-ST)
- Practice as an entry-level Surgical Technologist
- Provide high-quality patient care pre, intra, and post surgery
- Participate as a competent team member working with surgeons, anesthesiologists, operating room nurses and other surgical personnel
- Develop competency as a scrub second assist surgical technologist and circulator
- Demonstrate expertise in maintaining a sterile field and assuring aseptic technique throughout the surgical procedure
- Have the knowledge and skills necessary to pursue employment opportunities in operating, delivery, and emergency rooms at hospitals, medical offices, and clinics
- Exhibit caring and ethical behavior
- Communicate effectively and in a professional manner
- Utilize critical thinking skills
- Express enthusiasm and a sense of pride in team work
- Demonstrate the ability to apply theoretical knowledge and a surgical conscience
- Practice the role of patient advocate
- Demonstrate knowledge of technology within the operating room to include computer systems and surgical robotics.

### **ADMISSION REQUIREMENTS**

- Satisfactory completion of entrance testing – Must achieve a score of 65 on Math and on English composite tests on the REACH exam within the same test
- International students must demonstrate proficiency in the English Language, as measured by a TOEFL score of 550 or above; 213 or higher on the computer based exam
- Personal interview with the Surgical Technology Faculty Committee
- Physical examination including vision and hearing with documentation of immunizations and TB skin testing must be provided prior to admission
- Completed Criminal Background Check

Healthcare facilities may require that health science students have a drug screening test completed prior to attending clinical experiences. In addition, students may not be allowed to participate in clinical experiences if they test positive for illegal drugs or prescription drugs without physician authorization. Moreover, positive drug tests may prevent the health science graduate from taking certain national certification or licensing exams. Finally, healthcare facilities may not hire students or graduates who have a record of illegal drug use, abnormal drug tests or a felony conviction.

### **PREPARATORY REQUIREMENTS**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| MATH060           | Pre-Algebra                     | 4           |

|         |                    |   |
|---------|--------------------|---|
| MATH080 | Elementary Algebra | 4 |
|---------|--------------------|---|

#### **AS-ST PROGRAM REQUIREMENTS**

##### **Required Courses**

All students in the AS-ST program must complete all of the following courses:

| <b>Course No.</b>                          | <b>Course Name</b>                         | <b>Hrs.</b> |
|--------------------------------------------|--------------------------------------------|-------------|
| <b>GENERAL EDUCATION (34 hrs)</b>          |                                            |             |
| IT105                                      | Information and Technology Literacy        | 4           |
| ENGL111                                    | English Composition I                      | 4           |
| ENGL112                                    | English Composition II                     | 4           |
| INTD111                                    | Creating Academic and Professional Success | 4           |
| INTD140                                    | Customer Service                           | 2           |
| MATH143                                    | Business Algebra                           | 4           |
| Or                                         |                                            |             |
| MATH103                                    | College Algebra                            | 4           |
| LITR220                                    | Values in World Literature                 | 4           |
| HIST150                                    | World History Since 1500                   | 4           |
| Or                                         |                                            |             |
| HIST210                                    | World History and Culture I                | 4           |
| PSYC100                                    | Introduction to Psychology                 | 4           |
| <b>CORE REQUIREMENTS (56 hrs)</b>          |                                            |             |
| HSS121                                     | Medical Terminology                        | 4           |
| BIO141                                     | Anatomy and Physiology I                   | 4           |
| BIO142                                     | Anatomy and Physiology II                  | 4           |
| HSS134                                     | Medical Law and Ethics                     | 4           |
| SUR102                                     | Introduction to Surgical Technology*       | 4           |
| SUR105                                     | Surgical Pharmacology                      | 4           |
| SUR110                                     | Surgical Techniques*                       | 4           |
| SUR120                                     | Microbiology and Infection Control         | 4           |
| Or                                         |                                            |             |
| BIO200                                     | Applied Microbiology                       | 4           |
| SUR150                                     | Introduction to Pathophysiology            | 4           |
| SUR205                                     | Surgical Procedures I*                     | 4           |
| SUR210                                     | Surgical Procedures II**                   | 4           |
| SUR235                                     | Surgical Clinical Practicum I**            | 4           |
| SUR245                                     | Surgical Clinical Practicum II**           | 4           |
| SUR255                                     | Surgical Clinical Practicum III**          | 4           |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>90</b>   |

\* These courses include a laboratory component and will require 20 contact hours in the classroom and 40 contact hours in the lab (1 credit = 10 classroom contact hours for 2 credits or 20 contact hours; 1 credit = 20 lab contact hours for 2 credits or 40 contact hours for a total of 4 credits/60 contact hours)

\*\* These courses require a minimum of 176 hours at a clinical surgical setting, i.e. hospital, ambulatory care facility, etc. (1 credit = 44 contact hours for a total of 4 credits/176 contact hours)

All other courses will consist of 40 contact hours in the classroom.

The Colorado Technical University Surgical Technology Program in Pueblo, Colorado, is accredited by the Commission on Accreditation of Allied Health Education Programs, [www.caahep.org](http://www.caahep.org), upon recommendation of the Accreditation Review Committee on Education in Surgical Technology.

Commission on Accreditation of Allied Health Education Programs:

1361 Park Street  
Clearwater, FL 33765  
(712) 210-2350

## **Associate of Applied Science in Surgical Technology (AAS-ST) (replaces pp. 258-259)**

The mission of the program is to prepare competent entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains and to help satisfy the need for surgical technologists in local and regional communities. The Surgical Technology program involves learning surgical procedures, exercising critical thinking skills and effectively communicating in the operating room environment. The Surgical Technologist is an active member of the surgical team. By using technology in the operating room suite, the student can learn the practical skills to successfully work in today's fast pace operating room.

### **PROGRAM OUTCOMES**

- Earn an Associate of Applied Science Degree in Surgical Technology (AAS-ST)
- Practice as an entry-level Surgical Technologist
- Provide high-quality patient care pre, intra, and post surgery
- Participate as a competent team member working with surgeons, anesthesiologists, operating room nurses and other surgical personnel
- Develop competency as a scrub second assist surgical technologist and circulator
- Demonstrate expertise in maintaining a sterile field and assuring aseptic technique throughout the surgical procedure
- Have the knowledge and skills necessary to pursue employment opportunities in operating, delivery, and emergency rooms at hospitals, medical offices, and clinics
- Exhibit caring and ethical behavior
- Communicate effectively and in a professional manner
- Utilize critical thinking skills
- Express enthusiasm and a sense of pride in team work
- Demonstrate the ability to apply theoretical knowledge and a surgical conscience
- Practice the role of patient advocate
- Demonstrate knowledge of technology within the operating room to include computer systems and surgical robotics.

### **ADMISSION REQUIREMENTS**

- Satisfactory completion of entrance testing
- International students must demonstrate proficiency in the English Language, as measured by a TOEFL score of 550 or above; 213 or higher on the computer based exam
- Personal interview with the Surgical Technology Faculty Committee
- Physical examination including vision and hearing with documentation of immunizations and TB skin testing must be provided prior to admission
- Completed Criminal Background Check

Healthcare facilities may require that health science students have a drug screening test completed prior to attending clinical experiences. In addition, students may not be allowed to participate in clinical experiences if they test positive for illegal drugs or prescription drugs without physician authorization. Moreover, positive drug tests may prevent the health science graduate from taking certain national certification or licensing exams. Finally, healthcare facilities may not hire students or graduates who have a record of illegal drug use, abnormal drug tests or a felony conviction.

### **PREPARATORY REQUIREMENTS**

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admissions Advisor to arrange for credit.

| <b>Course No.</b> | <b>Course Name</b>              | <b>Hrs.</b> |
|-------------------|---------------------------------|-------------|
| ENGL080           | English Composition Preparation | 4           |
| MATH060           | Pre-Algebra                     | 4           |
| MATH080           | Elementary Algebra              | 4           |

## AAS-ST PROGRAM REQUIREMENTS

### Required Courses

All students in the AAS-ST program must complete all of the following courses:

| Course No.                                 | Course Name                                | Hrs.      |
|--------------------------------------------|--------------------------------------------|-----------|
| GENERAL EDUCATION (34 hrs)                 |                                            |           |
| IT105                                      | Information and Technology Literacy        | 4         |
| ENGL111                                    | English Composition I                      | 4         |
| ENGL112                                    | English Composition II                     | 4         |
| INTD111                                    | Creating Academic and Professional Success | 4         |
| INTD140                                    | Customer Service                           | 2         |
| MATH143                                    | Business Algebra                           | 4         |
| Or                                         |                                            |           |
| MATH103                                    | College Algebra                            | 4         |
| LITR220                                    | Values in World Literature                 | 4         |
| HIST150                                    | World History Since 1500                   | 4         |
| or                                         |                                            |           |
| HIST210                                    | World History and Culture I                | 4         |
| PSYC100                                    | Introduction to Psychology                 | 4         |
| CORE REQUIREMENTS (56 hrs)                 |                                            |           |
| HSS121                                     | Medical Terminology                        | 4         |
| BIO141                                     | Anatomy and Physiology I                   | 4         |
| BIO142                                     | Anatomy and Physiology II                  | 4         |
| HSS134                                     | Medical Law and Ethics                     | 4         |
| SUR102                                     | Introduction to Surgical Technology*       | 4         |
| SUR105                                     | Surgical Pharmacology                      | 4         |
| SUR110                                     | Surgical Techniques*                       | 4         |
| SUR120                                     | Microbiology and Infection Control         | 4         |
| SUR150                                     | Introduction to Pathophysiology            | 4         |
| SUR205                                     | Surgical Procedures I*                     | 4         |
| SUR210                                     | Surgical Procedures II**                   | 4         |
| SUR235                                     | Surgical Clinical Practicum I**            | 4         |
| SUR245                                     | Surgical Clinical Practicum II**           | 4         |
| SUR255                                     | Surgical Clinical Practicum III**          | 4         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                            | <b>90</b> |

\* These courses include a laboratory component and will require 20 contact hours in the classroom and 40 contact hours in the lab (1 credit = 10 classroom contact hours for 2 credits or 20 contact hours; 1 credit = 20 lab contact hours for 2 credits or 40 contact hours for a total of 4 credits/60 contact hours)

\*\* These courses require a minimum of 176 hours at a clinical surgical setting, i.e. hospital, ambulatory care facility, etc. (1 credit = 44 contact hours for a total of 4 credits/176 contact hours)

All other courses will consist of 40 contact hours in the classroom.

The Colorado Technical University Surgical Technology Program in Kansas City, Missouri, is accredited by the Commission on Accreditation of Allied Health Education Programs, [www.caahep.org](http://www.caahep.org), upon recommendation of the Accreditation Review Committee on Education in Surgical Technology.

Commission on Accreditation of Allied Health Education Programs:

1361 Park Street  
Clearwater, FL 33765  
(712) 210-2350



## Diploma in Practical Nursing (PN) (replaces p. 275-276)

This program is designed to prepare students to enter the field of nursing. Students learn basic patient care techniques, assessment skills, IV therapy, how to assist clients with life/wellness needs and the study of disease pathologies. Students will practice skills in acute care, long-term care and community settings.

### PROGRAM OUTCOMES

- Practice within the role of the PN in Healthcare settings (hospitals, long-term care, physician clinics, community and home healthcare)
- Provide safe, competent, efficient and effective nursing care for individuals and groups across the lifespan
- Promote rehabilitation and health promotion
- Practice within ethical and legal frameworks consistent with the Nurse Practice Act and other standards of nursing practice
- Function effectively as a team member of the nursing and healthcare staff
- Demonstrate proficiency in medication knowledge, communication skills, therapeutic interventions and computer skills
- Demonstrate the ability to successfully pass the National Council Licensing Exam for Practical Nurses (NCLEX-PN exam)

### ADMISSIONS REQUIREMENTS

- Application to the Nursing Program
- Basic computer skills (Microsoft Word, internet searching, and email)
- Satisfactory completion of entrance testing
- Completion of criminal background check

### PREPARATORY REQUIREMENTS

The following courses are required for success in the program but do not count in the total program hours. They may be satisfied by placement, experience or taking the course. See your Admission's Advisor to arrange for credit.

| Course No. | Course Name                     | Hrs. |
|------------|---------------------------------|------|
| ENGL080    | English Composition Preparation | 4    |
| IT080      | Introduction to Computing       | 4    |
| MATH060    | Pre-Algebra                     | 4    |
| MATH080    | Elementary Algebra              | 4    |

### PN DIPLOMA PROGRAM REQUIREMENTS

#### Required Courses

All students in the PN Diploma program must complete all of the following courses:

| Course No.                 | Course Name                                                   | Hrs. |
|----------------------------|---------------------------------------------------------------|------|
| GENERAL EDUCATION (8 hrs)  |                                                               |      |
| ENGL111                    | English Composition I                                         | 4    |
| INTD111                    | Creating Academic and Professional Success                    | 4    |
| CORE REQUIREMENTS (71 hrs) |                                                               |      |
| BIO141                     | Human Anatomy & Physiology I                                  | 4    |
| BIO142                     | Human Anatomy & Physiology II                                 | 4    |
| PN100                      | Personal and Vocational Concepts I                            | 1    |
| PN101                      | Fundamentals of Nursing I                                     | 4    |
| PN102                      | Fundamentals of Nursing II                                    | 4    |
| PN103                      | Protective Function Throughout the Lifespan                   | 4    |
| PN104                      | Medical-Surgical Clinical I                                   | 3    |
| PN105                      | Pharmacology for Practical Nurses                             | 4    |
| PN106                      | Respiratory & Cardiovascular Function Throughout the Lifespan | 4    |
| PN107                      | Medical-Surgical Clinical II                                  | 3    |

|                                            |                                                              |           |
|--------------------------------------------|--------------------------------------------------------------|-----------|
| PN108                                      | Mental Health Nursing Throughout the Lifespan                | 3         |
| PN109                                      | Mental Health Clinical                                       | 1         |
| PN110                                      | Regulatory Functions Throughout the Lifespan                 | 4         |
| PN111                                      | Musculoskeletal, Cognition & Sensory Throughout the Lifespan | 4         |
| PN112                                      | Nutrition & Diet Therapy                                     | 2         |
| PN113                                      | Medical-Surgical Clinical III                                | 4         |
| PN114                                      | IV Therapy for the Practical Nurse                           | 4         |
| PN115                                      | Maternal-Newborn Nursing                                     | 3         |
| PN116                                      | Maternal-Newborn Clinical                                    | 1         |
| PN117                                      | Digestion & Elimination Throughout the Lifespan              | 4         |
| PN118                                      | Medical-Surgical Clinical IV                                 | 2         |
| PN119                                      | Personal & Vocational Concepts II                            | 2         |
| PN120                                      | Leadership Clinical                                          | 1         |
| PN121                                      | NCLEX-PN Review                                              | 1         |
| <b>TOTAL PROGRAM QUARTER CREDIT HOURS:</b> |                                                              | <b>79</b> |

**The Practical Nursing program at the North Kansas City campus is fully approved by the Missouri State Board of Nursing.**

**The State Board of Nursing to which the student applies for the initial Practical Nursing License will determine the eligibility to sit for the NCLEX-PN licensure exam. This will be done upon proof of successful completion of a qualified Practical Nursing Program.**

**RADG101 Radiographic Procedures of the Appendicular Skeleton**

This course is an in-depth study in the concepts and principles of radiographic positioning and procedures involving the appendicular skeleton. Content will include, but is not be limited to: body habitus, regions, planes, and lines. Radiographic positioning terminology will be utilized. A review of anatomy and physiology of the appendicular skeleton will be included. The laboratory portion of this course will include hands-on positioning of the upper and lower extremities as well as the chest and abdomen. Radiographs will be produced utilizing the radiographic phantoms. These radiographs will be evaluated and critiqued for diagnostic quality. The presentation and discussion of pathological conditions affecting the appendicular skeleton will be included.

Credit: 4

Prerequisites: BIO142, RADG121, RADG122

**RADG102 Radiographic Clinical Education I**

This portion of clinical training is used to orientate the student with the organization and function of the healthcare facility. The students will be introduced to the clinical setting and begin to develop proficiency in order to complete clinical competencies. Students will perform, under the supervision of an assigned clinical instructor, basic radiographic procedures, equipment manipulation, room maintenance and patient care. This clinical rotation will be the practical application of the principles and theories presented in the didactic portion of the program. The learner should start to make a transition from the passive mode of observation to a more active mode in assisting the radiographer perform patient care competencies and perform examinations of the chest, abdomen, upper and lower extremities.

Credit: 3

Prerequisites: RADG101, RADG103, RADG108

**RADG103 Radiographic Image Production & Evaluation I**

This course presents the study of film, image receptors, and film processing. The basic principles of radiographic exposure techniques used in the production of radiographs will be introduced. Basic principles of digital image production will be discussed. The laboratory portion of the course is designed for the investigation and study of theoretical concepts associated with the production of quality diagnostic radiographs.

Credit: 4

Prerequisites: MATH143, BIO142, RADG121, RADG122

**RADG104 Radiographic Procedures of the Axial Skeleton**

This course is a continuation of radiographic positioning and procedures and includes: bony thorax, shoulder girdle, pelvis, hip, and the entire vertebral column. Anatomy and physiology of the axial skeleton will be included. Radiographic positioning terminology will be utilized and enhanced. The laboratory portion of this course will include hands-on positioning of the axial skeleton and the production of radiographs using the radiographic phantoms. Radiographs will be evaluated and critiqued for diagnostic quality. Pathological conditions that affect the axial skeleton will be discussed.

Credit: 4

Prerequisites: RADG101, RADG103, RADG108

**RADG105 Radiographic Clinical Education II**

In this course, the student will continue to develop skills for proficiency in the clinical setting. The student will investigate upper and lower extremities, shoulder girdle, spine, bony thorax, pelvis and Hip. The student should now be assisting with most examinations and have the abilities to start doing procedural competencies that have been reviewed within the didactic portion. The student should be making the transition from a passive mode to a more active mode of performing extremity, thoracic, abdominal, appendicular skeletal, and spine. The focus will be on meeting the necessary requirements for mandatory competencies.

Credit: 3

Prerequisites: RADG102, RADG104, RADG106

**RADG106 Radiographic Image Production & Evaluation II**

In this course, characteristics of quality radiographs will be presented to include: density, contrast, detail, distortion, and technical factors. A comprehensive review of basic and common pathology of all systems of the human body

and their effects on radiographic images will be discussed. The laboratory portion of this course is designed for the investigation and study of theoretical concepts associated with the production of quality diagnostic radiographs.

Credit: 5

Prerequisites: RADG101, RADG103, RADG108

### **RADG107 Radiographic Equipment Operations and Maintenance**

The focus of this course is on principles of radiation physics as they relate to the production of x-radiation and the operation of the radiographic unit. Topics will include: fluoroscopy, tomography, mobile radiography, digital imaging, and the advanced modalities. In addition, the student will be instructed in the various diagnostic imaging quality assurance programs and quality control procedures. Students will have the opportunity to perform tests in the energized lab setting.

Credit: 4

Prerequisites: MATH143, RADG105, RADG106

### **RADG108 Radiographic Procedures of the Soft Tissues, Viscera & Other Systems**

This course covers radiographic positioning and procedures of the GI, biliary tract, urinary tract, reproductive system, long bone measurement, foreign body localization, salivary glands, and the anterior neck region. Anatomy and physiology of the above systems will be reviewed. Pathological conditions that affect these systems and regions of the body will be presented. The effect of basic radiopharmaceuticals on each system will be presented.

Credit: 4

Prerequisites: BIO141, BIO142, RADG121, RADG122

### **RADG111 Radiobiology**

This course presents the theories and concepts associated with the utilization of radiation and its effect on biological systems. Radiation interactions, radiosensitivity, radiation dose/response relationships, early and late radiation effects, radiation detection, instrumentation, radiation protection and health physics are presented.

Credit: 2

Prerequisite: RADG107

### **RADG112 Registry Review**

This course presents an overview of all program objectives. Students will review various content areas and complete mock examinations in preparation for the registry examination.

Credit: 4

Prerequisite: RADG111

### **RADG115 Radiographic Procedures of the Cranium, Central Nervous, and Circulatory Systems**

This course covers radiographic anatomy, positioning and procedures of the skull. In-depth discussion will focus on trauma radiography positioning and procedures of the skull, facial bones, paranasal sinuses, and temporal bones. Pathological conditions that affect the skull will be presented. Review of the central nervous system and circulatory systems will be presented.

Credit: 2

Prerequisites: RADG104, RADG106, RADG108

### **RADG119 Radiographic Clinical Education III**

This clinical course provides an opportunity for students to continue to perform radiographic procedures and patient care skills required for proficiency in the clinical setting. Students should be putting emphasis on contrast studies, skull radiography, trauma, mobile, and surgical radiography as well as special procedures. Students may rotate through various advanced modality areas in order to gain an understanding of advanced technologies. The focus will be on meeting the necessary requirements for mandatory competencies.

Credit: 5

Prerequisites: RADG105, RADG116

### **RADG121 Introduction to Radiologic Science and Patient Care**

This course introduces students to the skills required for a career in Radiological Sciences. Course content includes an introduction to healthcare systems, professional organizations, and cultural diversity. Students will discuss and

relate the differences between the needs of patients along with proper history taking techniques and gain knowledge of infection control. Students will also identify the basis of pharmacology and contrast media administration.

Credit: 4

Prerequisite: BIO141

### **RADG122 Patient Care and Radiographic Sciences Clinical Lab**

This course introduces students to the clinical skills required for a career in Radiological Sciences. Course content includes promotion of safety, first aid, and CPR certification. Students will also learn to demonstrate proper patient transfer, immobilization, aseptic and non-aseptic techniques. This course will also introduce medical emergencies and situational training for students within the radiology department. The student will review basic radiology terminology and positioning concepts that prepare them to transition into the core curriculum.

Credit: 4

Prerequisite: BIO141

### **RADG123 Advanced Modalities**

This course encompasses the concepts and applications within the advanced modality areas of radiology including: Mammography, Computed Tomography, Bone Densitometry, MRI, Nuclear Medicine, PET, and Radiation Therapy.

Credit: 2

Prerequisites: RADG111, RADG211

### **RADG211 Radiographic Clinical Education IV**

In this course, the student will continue to develop proficiency in the clinical setting. Students should be performing all radiographic and patient care procedures at the clinical site to meet mandatory competencies. An emphasis should be placed on special procedures, additional diagnostic procedures, and advanced modalities. All students will rotate through advanced modality areas to gain an understanding of these advanced technologies. Students should also routinely be using techniques from: image production and evaluation, quality assurance/quality control, equipment operation and maintenance, and proper radiation protection in performing examinations.

Credit: 5

Prerequisites: RADG107, RADG119

### **RADG212 Radiographic Clinical Education V**

In this course, the student will continue to develop proficiency in skills used in the clinical setting. Students will continue to perform radiographic and patient care procedures on the clinical site to meet mandatory competencies. All students will rotate through advanced modality areas to gain an understanding of advanced technologies.

Credit: 3

Prerequisites: RADG111, RADG211

### **SUR102 Introduction to Surgical Technology**

This course is an introduction to the principles and practices of surgical technology. Professionalism and standards of conduct will be reviewed. Basic surgical procedures and surgical anatomy will be studied and discussed. The student will demonstrate the techniques of opening and preparing supplies and instruments needed for operative procedures with emphasis on asepsis.

Prerequisite: HSS121

Credit: 4

### **SUR105 Surgical Pharmacology**

This surgical pharmacology course provides the knowledge needed by students to function safely, accurately, and efficiently at the surgical field. This course presents the actions and usage of commonly used medications, anesthetic agents, and solutions and the methods by which they are administered. Hands-on experience includes measuring and calculating medication dosages.

Prerequisite: MATH103 or MATH143

Credit: 4

**SUR110 Surgical Techniques**

This is an introduction to fundamental surgical principles. An emphasis will be placed on perioperative care concepts for general and specific surgical practices. Perioperative patient care, non-sterile and sterile responsibilities, and basic surgical interventions will be examined.

Prerequisite: SUR102, BIO141, BIO142

Credit: 4

**SUR120 Microbiology and Infection Control**

This course will examine microbiology and the infection process. Control of infectious agents and universal precautions will be examined.

Prerequisite: HSS121, BIO141

Credit: 4

**SUR150 Introduction to Pathophysiology**

Pathophysiology is the study of abnormal function in living tissue. Physiological principles underlying the causes, signs, symptoms, and pattern of development of human disease processes will be examined.

Prerequisite: None

Credit: 4

**SUR205 Surgical Procedures I**

This course covers basic surgical procedures. The student will learn the procedures through classroom and simulated operating room lab experiences.

Prerequisite: SUR110, SUR120

Credit: 4

**SUR210 Surgical Procedures II**

This course covers intermediate and advanced surgical procedures. The student will learn the procedures through classroom study and simulated lab practice.

Prerequisite: SUR205

Credit: 4

**SUR235 Surgical Clinical Practicum I**

This phase of clinical practicum is designed as a transitional period for the student. The student will become acclimated to the surgical environment and will participate in the routines and duties of the surgical technologist.

Prerequisite: SUR205

Credit: 4

**SUR245 Surgical Clinical Practicum II**

In this course, the student will become involved in the surgical technologists role while under the supervision of the surgical team. Students will assist with the preoperative, intraoperative, and postoperative duties of the surgical team. Student will function in the first scrub role with assistance and the first scrub solo role.

Prerequisite: SUR235

Credit: 4

**SUR255 Surgical Clinical Practicum III**

This course provides opportunity for the student to participate in surgical procedures in a more advanced surgical technologist role. Students will apply theoretical knowledge and clinical skills in advanced surgical procedures and specialty areas to meet the minimum number of cases required to complete each ST Program.

Prerequisite: SUR245

Credit: 4