

# Colorado Technical University

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Effective as of 11/13/2011

## **Changes to page 6 of University Policies**

### **Licensure**

#### Alabama Residents

*Colorado Technical University is authorized by the Alabama Department of Postsecondary Education to operate a private school pursuant to the Alabama Private School License Law.*

#### Arkansas Residents

*Colorado Technical University is certified to offer online degree programs by the Arkansas Higher Education Coordinating Board. Arkansas Higher Education Coordinating Board certification does not constitute an endorsement of any institution, course or degree program. Such certification merely indicates that certain minimum standards have been met under the rules and regulations of institutional certification as defined in Arkansas Code §6-61-301.*

#### Kansas Residents

*Colorado Technical University is approved by the Kansas Board of Regents, 1000 SW Jackson St., Ste. 520, Topeka, 66612, 785.296.3421.*

## **Changes to page 12 of University Policies**

### **Grievance Policy**

#### Alabama Residents

*Alabama students may contact the Alabama Department of Postsecondary Education  
<http://www.accs.cc/complaintform.aspx>*

#### Arkansas Residents

*Within 20 days of completing the institution's grievance procedures, the student may file the complaint in writing with the ICAC Coordinator, Arkansas Department of Higher Education, 114 East Capitol, Little Rock, AR 72201.*

*The grievant must provide a statement from the institution verifying that the institution's appeal process has been followed. ADHE will notify the institution of the grievance within 15 days of the filing. Within 10 days after ADHE notification, the institution must submit a written response to ADHE. Other action may be taken by ADHE as needed.*

#### Kansas Residents

*Kansas students may contact the Kansas Board of Regents  
1000 SW Jackson, Suite 520  
Topeka, KS 66612-1368  
(785) 296-4917*

## Changes to page 13 of University Policies

### Student Records

*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. These student records are also maintained after a student is no longer enrolled. Access to a student's education records is afforded to school officials who have a legitimate educational interest in the records. A school official is defined as a person employed or engaged by the institution in an administrative, supervisory, academic or support staff position (including law enforcement unit and health staff); a person or company (including its employees) with whom the school has contracted (such as an attorney, auditor, consultant or collection agent); a trustee serving on a governing board; or a person assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record to fulfill his or her professional responsibility or commitment to the school.*

## Changes to page 22 of University Policies

### Attendance Policy

*The University recognizes that regular attendance has a positive impact on a student's success in his or her degree program of study. Students are expected to be in class for all regularly scheduled class periods and to report to class on time. The University posts attendance for each course every week to support academic success and properly administer financial aid. Absences of five days or more are correlated with increased risk of not finishing a course.*

*Academic participation includes attending scheduled classes and labs, engaging in the online environment, reading materials, working problems, using the library and other resources, viewing videos, and other academically related activities supporting learning as well as personal and professional developmental activities. 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 or lab.*
- The student has participated in the learning environment including submitting an assignment, taken a knowledge check, or participated in a graded online discussion board).*

*Attendance is recorded in the Virtual Campus for the online component of a course (up to 100% online), will have a grade associated with the activity. Fully online courses require three online academic activities per week to receive full credit. Blended (with an on ground requirement) courses require one online academic activity per week.*

*Students should note that Healthcare programs may have more rigorous attendance requirements. Specific requirements can be found in the appropriate Health Sciences programmatic handbook.*

## **Changes to page 25 of University Policies**

### **Grading System**

*Grade reports are available to students via the Virtual Campus, Mycampus portal, or the Registrar's Office 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 grade 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 grade point value of B (3)). The Cumulative Grade Point Average (CGPA) is calculated by dividing the total earned quality points by the total attempted credits. The following pages provide an illustration of letter grades, description, percentage points, meaning and quality points.*

## **Changes to page 35 of University Policies**

### **Warning and Probationary Periods**

Notification of academic dismissal will be in writing. *The Student Conduct Policy section of this catalog describes other circumstances that could lead to student dismissal for non-academic reasons. A tuition refund may be due in accordance with the institution's stated refund policy.*

## **Changes to page 45 of University Policies**

### **Records Retention Policy**

*Colorado Technical University maintains a permanent record for each student for 50 years from the last date of the student's attendance. Records include a student's academic transcript, documents, and files containing student data about academic credits earned, courses completed, grades awarded, degrees awarded, and periods of attendance.*

## **Changes to page 47 of University Policies**

### **CAREER SERVICES**

*The U.S. Department of Education requires that we report and disclose certain information about our school programs in a clear, prominent, user-friendly, and easily understood manner. The intent of the requirement is to enable students to make an informed choice about a program of study. To this end, we have developed documents containing the following information:*

- 1. The on-time completion rate;*
- 2. The graduation rate;*
- 3. The employment rate(s);*
- 4. The tuition and fees;*

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5. *The median loan debt incurred by students; and*
6. *The occupations that the program may prepare students to enter, along with links to the O\*NET occupational profiles.*

*U.S. Department of Education references from 34 Code of Federal Regulations:*

- *Occupation (Sections 600.2, 600.4, 600.5, 600.6, 668.6, and 668.8)*
- *Gainful Employment Reporting and Disclosure Requirements (Section 668.6)*
- *Student Right-to-Know Act (Section 668.45(d)(3))*

*This information is located at <http://www.coloradotech.edu/Disclosures>*

*School records and information are released to employers with prior authorization from the student. These records include resume, portfolio, dates of attendance and degree program.*

## **Changes to page 8 of Financial Aid Insert for students enrolled through the Virtual Campus**

### **Tuition, Fees and Refunds**

*Students may have the ability to make cash installments payments directly to the institution for balances owed. For more information concerning the terms and conditions of the installment plans, please contact the financial aid office.*

## **Changes to page 10 of Financial Aid Insert for students enrolled through the Virtual Campus**

### **Cancellation/Withdrawal Policy**

*Cancellation: A student who cancels his/her enrollment within three business days (72 hours, until midnight of the third day excluding Saturdays, Sundays, and legal holidays) after signing the Enrollment Agreement will receive a refund of all monies paid within 10 business days. 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 this Enrollment Agreement is not accepted by the University or if the University cancels the enrollment 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 e-mailed to the Student Affairs Department.*

## **Changes to page 10 of Financial Aid Insert for students enrolled through the Virtual Campus**

### **Refund Policy**

#### *Alabama Residents Only*

*In the event that a student withdraws or is dismissed from all classes during the quarter, a pro rata refund will be made on all unearned tuition which will be based on the student's last date of recorded attendance, divided by the total days in the University's quarter.*

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## *Hypothetical Refund Example:*

*At the time of the last day of recorded attendance, the student has been charged \$3,000 in tuition for the quarter, and has attended 31 of the total 77 days (46 days remaining in the quarter). Tuition charges will be reduced by \$1,792 (46/77 times \$3000). The student is responsible for \$1208.*

## **Changes to pages 214, 216, 218, 221, 223, and 265 of Degree Programs**

The following degree programs will no longer be accepting new enrollments on or after the November 13, 2011 start:

Denver & Denver North: *Bachelor of Science in Digital Media Design*  
Colorado Springs: *Bachelor of Science in Advertising and Digital Media Design*  
Colorado Springs: *Associate of Science in Digital Media Design*  
Colorado Springs: *Bachelor of Science in Digital Media Design – Advertising Media*  
Colorado Springs: *Bachelor of Science in Digital Media Design – Career Emphasis*  
Colorado Springs: *Bachelor of Science in Digital Media Design – Emerging Media*

## **Changes to page 28 of Degree Programs**

### **Executive Master of Business Administration**

#### **Courses: Core**

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### **Courses: Concentration**

EMBA630	Decisions in Management: Navigating Uncertainty	4
EMBA640	Entrepreneurship/Intrapreneurship and Innovation	4
EMBA650	Emerging Markets	4
MGMT655	<i>Management Capstone</i>	4
		<b>16</b>

***Total Program Credits:*** **48**

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## Changes to page 28 of Degree Programs

### Master of Business Administration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### Courses: Concentration

Concentration Choices:	Select 12 credit hours from 600-level Business or Management courses	12
<i>MGMT655</i>	<i>Management Capstone</i>	4
		<b>16</b>

***Total Program Credits:*** **48**

## Changes to page 29 of Degree Programs

### Master of Business Administration Accounting Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### Courses: Concentration

ACCT618	Taxation and Business Decisions	4
ACCT628	Financial Reporting	4
ACCT644	Management Control and Auditing	4
ACCT650	<i>MBA Accounting Capstone</i>	4
		<b>16</b>

***Total Program Credits:*** **48**

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## Changes to page 30 of Degree Programs

### Master of Business Administration Environmental and Social Sustainability Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### Courses: Concentration

ESS600	Foundations of Sustainable Business	4
ESS610	Implementing the Triple Bottom Line	4
ESS620	Sustainable Operations	4
MGMT655	<i>Management Capstone</i>	4
		<b>16</b>

**Total Program Credits:** **48**

## Changes to page 31 of Degree Programs

### Master of Business Administration Finance Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### Courses: Concentration

FINC600	Financial Statement Analysis	4
FINC605	Corporate Portfolio Management	4
FINC610	Financial Management for Multinational Enterprises	4
FINC650	MBA Finance Capstone	4
		<b>16</b>

**Total Program Credits:** **48**

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## Changes to page 32 of Degree Programs

### Master of Business Administration Healthcare Management Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### Courses: Concentration

HCM612	Managing the Healthcare Organization	4
HCM621	Ethics, Policy and Law in Healthcare Management	4
HCM631	Systems in Healthcare	4
HCM650	MBA Healthcare Management Capstone	4
		<b>16</b>

**Total Program Credits:** 48

## Changes to page 34 of Degree Programs

### Master of Business Administration Human Resource Management Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### Courses: Concentration

HRMT645	Operational Human Resource Management	4
HRMT650	Current Legal Issues in Human Resource Management	4
HRMT655	Managing Organizational Development and Change	4
MGMT655	Management Capstone	4
		<b>16</b>

**Total Program Credits:** 48



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## Changes to page 35 of Degree Programs

### Master of Business Administration Insurance and Risk Management Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
		<b>28</b>

#### Courses: Concentration

CPCU Designation	CPCU Transfer Credit	16
<i>FINC650</i>	<i>MBA Finance Capstone</i>	4
		<b>20</b>

***Total Program Credits:*** **48**

## Changes to page 35-36 of Degree Programs

### Master of Business Administration Logistics/Supply Chain Management Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### Courses: Concentration

SCM610	Logistics/SCM Inventory and Distribution	4
SCM620	Impact on Design & Production	4
SCM630	Supply Chain/Logistics Cost Analysis	4
<i>PM665</i>	<i>Project Management Capstone</i>	4
		<b>16</b>

***Total Program Credits:*** **48**

**Changes to page 36 of Degree Programs**

**Master of Business Administration  
Marketing Concentration**

**Courses: Core**

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

**Courses: Concentration**

MKTG618	Marketing Research Methods	4
MKTG628	Marketing in the Digital Age	4
MKTG638	International Marketing	4
MGMT655	<i>Management Capstone</i>	4
		<b>16</b>

***Total Program Credits:*** **48**

**Changes to page 37 of Degree Programs**

**Master of Business Administration  
Mediation and Dispute Resolution Concentration**

**Courses: Core**

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

**Courses: Concentration**

APM Designation	APM Transfer credit (campus validation required)	12
MGMT655	<i>Management Capstone</i>	4
		<b>16</b>

***Total Program Credits:*** **48**

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## Changes to page 38 of Degree Programs

### Master of Business Administration Operations Management Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

#### Courses: Concentration

MGMT640	Operations Management	4
MGMT646	Managing Service Operations	4
MGMT647	Operations Strategy	4
PM665	Project Management Capstone	4
		<b>16</b>

***Total Program Credits:*** **48**

## Changes to page 39 of Degree Programs

### Master of Business Administration Project Management Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
		<b>28</b>

#### Courses: Concentration

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
PM665	Project Management Capstone	4
		<b>20</b>

***Total Program Credits:*** **48**

**Changes to page 40 of Degree Programs**

**Master of Business Administration  
Technology Management Concentration**

**Courses: Core**

ACCT614	Applied Managerial Accounting	4
ECON616	Applied Managerial Economics	4
EMBA690	Strategic Management in Dynamic Environments	4
FINC615	Applied Managerial Finance	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MKTG630	Applied Managerial Marketing	4
		<b>32</b>

**Courses: Concentration**

IT600	IT Management	4
IT610	Relational Database Management Systems	4
IT640	Networking and Telecommunications	4
MGMT655	<i>Management Capstone</i>	4
		<b>16</b>

**Total Program Credits:** **48**

**Changes to page 41 of Degree Programs**

**Master of Science in Accounting**

**Courses: Core**

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
ACCT655	<i>International Financial Reporting Standards</i>	4
ECON616	Applied Managerial Economics	4
FINC615	Applied Managerial Finance	4
MGMT600	Applied Managerial Decision-Making	4

**Total Program Credits:** **48**

**Changes to page 42 of Degree Programs**

**Master of Science in Management**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Environments	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MGMT655	<i>Management Capstone</i>	4
		<b>20</b>

**Courses: Concentration**

Concentration Choices:	Select 28 credit hours of 600 Level Business and Management Courses	28
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**Total Program Credits:** 48

**Changes to page 43 of Degree Programs**

**Master of Science in Management  
Enterprise Information Systems Concentration**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Environments	4
IT697	<i>Information Technology Capstone</i>	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
		<b>24</b>

**Courses: Concentration**

CS651	Computer Systems Security Foundations	4
CS660	Database Systems	4
CS663	Enterprise Systems Architecture	4
INTD670	Leadership and Ethical Decision-Making	4
IT605	Enterprise Information Systems	4
IT660	Information Technology Systems Development	4
		<b>24</b>

**Total Program Credits:** 48

**Changes to page 44 of Degree Programs**

**Master of Science in Management  
Homeland Security Concentration**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Environments	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
		<b>16</b>

**Courses: 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
HLS685	<i>Homeland Security Capstone</i>	4
		<b>32</b>

**Total Program Credits:** **48**

**Changes to page 45 of Degree Programs**

**Master of Science in Management  
Information Systems Security Concentration**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Environments	4
INTD670	Leadership and Ethical Decision-Making	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
IT697	<i>Information Technology Capstone</i>	4
		<b>28</b>

**Courses: Concentration**

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
		<b>20</b>

**Total Program Credits:** **48**

**Changes to page 46 of Degree Programs**

**Master of Science in Management  
Information Technology Management Concentration**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Environments	4
IT697	<i>Information Technology Capstone</i>	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

**24**

**Courses: Concentration**

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	IT Systems Implementation	4

**24**

***Total Program Credits:* 48**

**Changes to page 47-48 of Degree Programs**

**Master of Science in Management  
Information Technology and Project Management Concentration**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Environments	4
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	IT Systems Implementation	4
IT697	<i>Information Technology Capstone</i>	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 Credits:* 48**

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## Changes to page 48-49 of Degree Programs

### Master of Science in Management Project Management Concentration

#### Courses: Core

EMBA690	Strategic Management in Dynamic Environments	4
MGMT604	Organizational Behavior	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MGMT640	Operations Management	4
MKTG630	Applied Managerial Marketing	4
PM665	<i>Project Management Capstone</i>	4
		<b>32</b>

#### Courses: Concentration

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
		<b>16</b>

***Total Program Credits:*** **48**

## Changes to page 49-50 of Degree Programs

### Master of Science in Management Organizational Leadership and Change Concentration

#### Courses: Core

ACCT614	Applied Managerial Accounting	4
EMBA690	Strategic Management in Dynamic Environments	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
MGMT605	Graduate Research Methods	4
MGMT655	<i>Management Capstone</i>	4
		<b>24</b>

#### Courses: Concentration

MGMT604	Organizational Behavior	4
MGMT671	Introduction to Organizational Leadership and Change	4
MGMT672	Strategic Change Management	4
MGMT673	Foundation of Organizational Design	4
MGMT674	Organizational Analysis and Strategies	4
MGMT675	Leadership and Organizational Power	4
		<b>24</b>

***Total Program Credits:*** **48**



**Changes to page 50-51 of Degree Programs**

**Master of Science in Computer Engineering**

**Courses: Core**

CE605	Modern Computer Architecture	4
CE660	Modern Computer Design	4
CE690	<i>Computer Engineering Capstone</i>	4
CS651	Computer Systems Security Foundations	4
CS671	Software Systems Engineering Process	4
EE600	Modern Solid State Devices	4
EE660	Modern Electronic Design	4
INTD670	Leadership and Ethical Decision-Making	4
PM600	Project Management Processes in Organizations	4
PM610	Project Planning, Execution and Closure	4
		<b>40</b>

**Courses: Electives**

CS Elective	Select one CS 600-level course	4
EE Elective	Select one EE 600-level course	4
		<b>8</b>

**Total Program Credits:** **48**

**Changes to page 51-52 of Degree Programs**

**Master of Science in Computer Science  
Computer Systems Security Concentration**

**Outcomes: Core**

- 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
- Demonstrate a breadth of knowledge and understanding of the field of computer science
- Select analytical and critical thinking skills for effective decision analysis and problem solving in a specific situation

**Outcomes: Concentration**

- Assess the need for, and make recommendations on the technical requirements necessary for the implementation of an effective security infrastructure
- Recommend and defend the implementation of security components at the operating system and network level to include considerations for cloud computing and virtualization.
- Develop effective enterprise level security policies, standards and procedures including business continuity

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## Courses: Core

CS630	<i>Modern Operating Systems</i>	4
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
		<b>28</b>

## Courses: Concentration

CS652	Operating Systems Security	4
CS653	Network Security	4
CS654	Security Management	4
CS661	Software Information Assurance	4
CS698 or Elective	Computer Science Capstone or any 600 level course	4
		<b>20</b>

**Total Program Credits:** **48**

## Changes to page 53 of Degree Programs

### Master of Science in Computer Science

#### Computer Systems Security Concentration (Program delivered via Virtual Campus)

##### Outcomes: Core

- 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.
- Demonstrate a breadth of knowledge and understanding of the field of computer science.
- Select analytical and critical thinking skills for effective decision analysis and problem solving in a specific situation

##### Outcomes: Concentration

- Assess the need for, and make recommendations on the technical requirements necessary for the implementation of an effective security infrastructure.
- Recommend and defend the impact of implementation of security components at the operating system and network level to include considerations for cloud computing and virtualization
- Develop effective enterprise level security policies, standards and procedures including business continuity.

## Courses: Core

CS630	<i>Modern Operating Systems</i>	4
CS635	Computer Networking	4
CS640	Software Project Management	4

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CS651	Computer Systems Security Foundations	4
CS660	Database Systems	4
CS672	Systems Engineering Methods	4
INTD670	Leadership and Ethical Decision-Making	4
		<b>28</b>

## **Courses: Concentration**

CS652	Operating Systems Security	4
CS653	Network Security	4
CS654	Security Management	4
CS661	Software Information Assurance	4
CS698	<i>Computer Science Capstone</i>	4
		<b>20</b>

**Total Program Credits:** **48**

## **Changes to page 54-55 of Degree Programs**

### **Master of Science in Computer Science Database Systems Concentration**

#### **Outcomes: Core**

- Apply effective leadership strategies and skills
- Critically evaluate the issues that affect the development and modification of complex software systems
- Conduct a professional, scholarly, applied research report.
- Demonstrate a breadth of knowledge and understanding of the field of computer science
- Select analytical and critical thinking skills for effective decision analysis and problem solving in a specific situation

#### **Outcomes: Concentration**

- Analyze and compare database models, database languages, and database management systems
- Design and implement databases and data warehouses to support an organization's information needs
- Evaluate, monitor, manage resources of database systems with respect to availability, reliability, integrity, performance, and security.
- Assess design, implementation, use, and performance of distributed database systems

#### **Courses: Core**

CS630	<i>Modern Operating Systems</i>	4
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
		<b>28</b>

**Courses: Concentration**

CS681	Database Design	4
CS682	Database Administration	4
CS683	Data Warehouse	4
CS685	Distributed Databases	4
CS698 or	Computer Science Capstone	4
ELE	Any 600 level course	4
		<b>20</b>

**Total Program Credits:** **48**

**Changes to page 56 of Degree Programs**

**Master of Science in Computer Science  
Database Systems Concentration (Program delivered via Virtual Campus)**

**Outcomes:**

- Apply effective leadership strategies and skills.
- Critically evaluate the issues that affect the development and modification of complex software systems.
- Conduct a professional, scholarly, applied research report.
- Demonstrate a breadth of knowledge and understanding of the field of computer science.
- Select analytical and critical thinking skills for effective decision analysis and problem solving in a specific situation

**Outcomes: Concentration**

- Analyze and compare database models, database languages, and database management systems.
- Design and implement databases and data warehouses to support an organization's information needs
- Evaluate, monitor, manage resources of database systems with respect to availability, reliability, integrity, performance, and security.
- Assess design, implementation, use, and performance of distributed database systems.

**Courses: Core**

CS630	Modern Operating Systems	4
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
		<b>28</b>

**Courses: Concentration**

CS681	Database Design	4
CS682	Database Administration	4

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CS683	Data Warehouse	4
CS685	Distributed Databases	4
CS698	<i>Computer Science Capstone</i>	4
		<b>20</b>

***Total Program Credits:*** **48**

## Changes to page 57-58 of Degree Programs

### Master of Science in Computer Science Software Engineering Concentration

#### Outcomes: Core

- Apply effective leadership strategies and skills
- Critically evaluate the issues that affect the development and modification of complex software systems
- Conduct a professional, scholarly, applied research report.
- Demonstrate a breadth of knowledge and understanding of the field of computer science
- Select analytical and critical thinking skills for effective decision analysis and problem solving in a specific situation

#### Outcomes: Concentration

- Perform at the project lead level concerning software systems
- Formulate an approach for the organization and control of software development efforts
- Compose state-of-the-practice software engineering techniques requiring a multi-person effort
- Analyze 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

#### Courses: Core

CS630	<i>Modern Operating System</i>	4
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
		<b>28</b>

#### Courses: Concentration

CS641	Software Requirements Engineering	4
CS644	Computer Systems Architecture	4
CS649	Software Design	4
CS671	Software Systems Engineering Process	4
CS698 or	Computer Science Capstone	

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ELE	Any 600 level course	4
		<b>20</b>
<b>Total Program Credits:</b>		<b>48</b>

## Changes to page 59 of Degree Programs

### Master of Science in Computer Science Software Engineering Concentration (Program delivered via Virtual Campus)

#### Outcomes: Core

- Apply effective leadership strategies and skills.
- Critically evaluate the issues that affect the development and modification of complex software systems.
- Conduct a professional, scholarly, applied research report.
- Demonstrate a breadth of knowledge and understanding of the field of computer science.
- Select analytical and critical thinking skills for effective decision analysis and problem solving in a specific situation.

#### Outcomes: Concentration

- Perform at the project lead level concerning software systems.
- Formulate an approach for the organization and control of software development efforts.
- Compose state-of-the-practice software engineering techniques requiring a multi-person effort.
- Analyze 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.

#### Courses: Core

CS630	Modern Operating Systems	4
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
		<b>28</b>

#### Courses: Concentration

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
		<b>20</b>

<b>Total Program Credits:</b>		<b>48</b>
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**Changes to page 60 of Degree Programs**

**Master of Science in Electrical Engineering**

**Courses: Core**

CE605	Modern Computer Architecture	4
CE660	Modern Computer Design	4
EE600	Modern Solid State Devices	4
EE605	Digital Signal Processing	4
EE625	Spread-Spectrum Systems	4
EE645	Digital Communications	4
EE650	Space Communications	4
EE660	Modern Electronic Design	4
EE692	<i>Electrical Engineering Capstone</i>	4
INTD670	Leadership and Ethical Decision-Making	4
PM600	Project Management Processes in Organizations	4
PM610	Project Planning, Execution and Closure	4

**Total Program Credits:** 48

**Changes to page 62 of Degree Programs**

**Master of Science in Information Technology**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Environments	4
CS651	Computer Systems Security Foundations	4
CS663	Enterprise Systems Architecture	4
IT621	Enterprise Data Management	4
IT640	Networking and Telecommunications	4
PM600	Project Management Processes in Organizations	4
		<b>24</b>

**Courses: Specialization**

ELE	<i>Select 4 credit hours from 600-level Business, CS or IT</i>	4
ELE	Select 16 credit hours of electives from the list below	16
IT697	<i>Information Technology Capstone</i>	4
		<b>24</b>

**Total Program Credits:** 48

**Changes to page 63 of Degree Programs**

**Master of Science in Information Technology  
Data Management Technology Specialization**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Organizations	4
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CS651	Computer Systems Security Foundations	4
CS663	Enterprise Systems Architecture	4
IT621	Enterprise Data Management	4
IT640	Networking and Telecommunications	4
PM600	Project Management Processes in Organizations	4
		<b>24</b>

## **Courses: Specialization**

CS632	Data and Applications Security	4
CS660	Database Systems	4
CS683	Data Warehouse	4
IT622	Business Intelligence Systems & Methods	4
IT697	<i>Information Technology Capstone</i>	4
IT698	Advanced Research & Study in Data Management	4
		<b>24</b>

**Total Program Credits: 48**

## **Changes to page 64 of Degree Programs**

### **Master of Science in Information Technology Network Management Specialization**

#### **Courses: Core**

EMBA690	Strategic Management in Dynamic Organizations	4
CS651	Computer Systems Security Foundations	4
CS663	Enterprise Systems Architecture	4
IT621	Enterprise Data Management	4
IT640	Networking and Telecommunications	4
PM600	Project Management Processes in Organizations	4
		<b>24</b>

#### **Courses: Specialization**

CS653	Network Security	4
IT642	Network Administration	4
IT643	Enterprise Network Architecture	4
IT644	IT Governance and Risk Management	4
IT645	Virtual Systems	4
IT697	<i>Information Technology Capstone</i>	4
		<b>24</b>

**Total Program Credits: 48**



**Changes to page 65 of Degree Programs**

**Master of Science in Information Technology  
Security Management Specialization**

**Courses: Core**

EMBA690	Strategic Management in Dynamic Organizations	4
CS651	Computer Systems Security Foundations	4
CS663	Enterprise Systems Architecture	4
IT621	Enterprise Data Management	4
IT640	Networking and Telecommunications	4
PM600	Project Management Processes in Organizations	4

**24**

**Courses: Specialization**

CS631	Digital Forensics	4
CS632	Data and Applications Security	4
CS652	Operating Systems Security	4
CS653	Network Security	4
CS654	Security Management	4
IT697	<i>Information Technology Capstone</i>	4

**24**

**Total Program Credits: 48**

**Changes to page 66-67 of Degree Programs**

**Master of Science in Systems Engineering**

**Courses: Core**

MGMT600	Applied Managerial Decision-Making	4
PM610	Project Planning, Execution and Closure	4
PM620	Schedule and Cost Control Techniques	4
SCM620	Impact on Design & Production	4
SE600	Systems Engineering I	4
SE610	Systems Engineering II	4
SE612	<i>Quantitative Analysis for Systems</i>	4
SE620	System Dynamics, Modeling, and Simulation	4
SE630	Systems Acquisition Processes and Standards	4

**34**

**Courses: Electives**

ELE	Select 12 hours of electives from CS/CE/IT/EE 600-level	12
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**Total Program Credits: 48**

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## Changes to page 68 of Degree Programs

### Master of Science in Systems Engineering (Program delivered via Virtual Campus)

#### Courses: Core

ECON616	Applied Managerial Economics	4
INTD670	Leadership and Ethical Decision-Making	4
MGMT600	Applied Managerial Decision-Making	4
PM610	Project Planning, Execution and Closure	4
PM620	Schedule and Cost Control Techniques	4
SCM620	Impact on Design & Production	4
SE600	Systems Engineering I	4
SE610	Systems Engineering II	4
SE612	Quantitative Analysis for Systems	4
SE620	System Dynamics, Modeling, and Simulation	4
SE630	Systems Acquisition Processes and Standards	4
SE690	<i>Systems Engineering Capstone</i>	4

**Total Program Credits:** 48

## Change to page 131 of Degree Programs

Correction of Total Concentration Credits in AS-Accounting to 24 credits

## Changes to page 195 of Degree Programs

### Associate of Science in Health Administration Services

#### (Program delivered via Virtual Campus)

The Associate of Science in Health Administration Services (ASHAS) program delivered through Colorado Technical University's (CTU) online delivery platform is designed to provide training in the principles and techniques used in the administrative side of healthcare industry. The curriculum is structured to include didactic and professional learning experience components. The didactic component of the program is delivered 100% online and includes instruction in several areas, including healthcare finance, human resources, healthcare administration, reimbursement systems and healthcare records, as well as regulatory, ethical and legal issues affecting healthcare organizations. *However, it does not include medical coding instruction. The Professional Learning Experience (PLE) component of the program is designed to help students gain professional experience in a healthcare setting prior to graduation. Except for those students who reside in Iowa, Louisiana, Maryland, New Hampshire, New Mexico, Ohio, Washington, West Virginia, Texas, Tennessee, Idaho, Connecticut, Indiana, Massachusetts, Oklahoma, Pennsylvania, Oregon, and North Dakota, the PLE component of the program must be completed in an acceptable physical healthcare setting chosen by the students. For students residing in one of the states listed above, the PLE component of the program must be completed online in a virtual learning environment due to the state licensure requirements in these states and the new Department of Education regulations. At the completion of the program, graduates who diligently*

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*attend class, study, complete the PLE (virtual or physical), and practice their skills should be able seek entry-level employment in the field of health administration services.*

## **Change to page 170 of Degree Programs**

CS245 no longer available as Programming Breadth Elective

## **Changes to page 236, 242, 245, 249, 252, 257, 262 of Degree Programs**

Correction of MATH103 course name to College Algebra

## **Changes to page 237, 241, 245, 249, 254, 258, 262 of Degree Programs**

Correction of INTD340 course name to Career Planning

## **Changes to page 267 of Degree Programs**

Correction of Introduction to Project Management course credit to 6 credits

## **Changes to page 275-487 of Degree Programs**

### **ACCT650**

#### **MBA Accounting Capstone**

The MBA Accounting Capstone uses the functional skills students have developed in previous core and concentration courses in this program - including accounting, business management and business strategy - to complete an in-depth project. The course requires the student to perform comprehensive research, analysis, and study on either a desired area of interest or a major business problem or issue that impacts the student's own company or organization. The student will utilize research methodologies to prepare a formal research report. Credits: 4

Prerequisite: None

Availability: Colorado Springs, Denver, Denver North, Sioux Falls

### **ACCT655**

#### **International Financial Reporting Standards**

This is a graduate level overview of International Financial Reporting Standards intended for students in the Master of Science in Accounting program who are preparing for the Certified Public Accountant (CPA) examinations. The course will cover the structure of International Financial Reporting Standards (IFRS), similarities and differences between IFRS and United States Generally Accepted Accounting Principles (US GAAP), issues for U.S. companies arising out of converting to IFRS, issues for converting accounting information systems to IFRS and regulatory issues for global IFRS reporting.

Credits: 4

Prerequisite: ACCT614, ACCT634, ACCT638, ACCT644

Availability: Colorado Springs, Denver, Denver North

## **CE690**

### **Computer Engineering Capstone**

The Computer Engineering Capstone course provides the student the opportunity to integrate skills developed throughout the MSCE program by completing a project or study that focuses on a technical problem or current issue in engineering. The students will define the problem or opportunity, identify constraints, complete an analysis, and prepare and deliver a professional report and presentation.

Credits: 4

Prerequisite: Approval

Availability: Colorado Springs

## **CS630**

### **Modern Operating Systems**

This is an advanced operating systems (OS) course to present the current progress of modern OS. Internal structure and mechanisms as well as the design principles of multi-processor and multi-core OS are evaluated. Technologies of extending the kernel OS functions to solve technical challenges associated with concurrency, synchronization, virtualization, scheduling, clustering, security, client-server, service-orientation, communication and distribution, etc. are discussed. Students will also conduct an applied research or a case study on extending OS to support various types of computing technologies, such as grid computing, cloud computing, embedded computing, distributed and network computing, and/or any new type of computer system architecture.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **CS635**

### **Computer Networking**

Emerging technologies continuously change the way we network. This course analyzes the foundational concepts in computer networking along with the current state of the practice and assesses the changes required by new technologies. The layers of the OSI Reference Model are compared and contrasted with the TCP/IP protocol suite. Network issues, such as addressing and routing, security, and reliability are appraised. Emerging technologies, such as Voice over IP, Multimedia on Demand, Cloud Computing and Virtualization will be evaluated and incorporated into design projects.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **CS640**

### **Software Project Management**

Advances in Agile Project Management utilizing methodologies such as Scrum has redefined the more traditional approaches to Software Project Management. This course presents the principles and concepts associated with software development projects applying agile project management approaches. Students are given the opportunity to apply project planning, risk management, estimation, cost

modeling, scheduling, control, resource management, and utilize project management tools and techniques in the context of developing software projects.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **CS641**

### **Software Requirements Engineering**

With the continued demand to develop software applications faster and for more emerging media environments, requirements engineering is essential to the overall software development process. Software Requirements Engineering focuses on the elicitation, analysis, and specification of software requirements with the end goal of developing a quality product with high customer satisfaction. Topics include requirements traceability, requirements management, software validation and verification, use case scenario development, software quality, configuration management and quality control.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **CS644**

### **Computer Systems Architecture**

This is an advanced computer software architecture course. The course presents the current progress of the architectural paradigms for various types of software systems. In addition to the fundamentals of software architecture, the course will discuss the impact of a software architecture on the software development process, teach various principles, methods and techniques commonly used in software architecture analysis, design and validation, such as architectural styles, frameworks, and patterns. Students will also be required to explore how to apply architectural strategies to address technical challenges associated with web services, mobile computing, virtualization, cloud computing, security and trust in computing systems.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **CS649**

### **Software Design**

This course provides in-depth knowledge to analyze and transform functional and nonfunctional requirements into well-designed, scalable and cost-effective workable software. It evaluates software design processes, design principles, design methods, design patterns, design tools, design quality and metrics, software verification and validation, software architecture, software framework, and modeling languages. Students will apply this knowledge to create a software design for a real world software application.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **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 research project and formal paper are required.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **CS653**

### **Network Security**

Students are provided with a brief overview of the basic elements of networking concepts, topologies, protocols and threats necessary to understand network security issues and make security relevant decisions. An in-depth analysis of the Open Systems Interconnection (OSI) model and layered network security mechanisms needed to provide Confidentiality, Integrity, Availability, Authorization, Authentication and Non-repudiation within a network environment is included. This course includes a thorough treatment of cryptography and cryptographic services. An implementation plan and formal paper are required.

Credits: 4

Prerequisite: Approval

Availability: Colorado Springs, Denver, Denver North, Pueblo, Sioux Falls, Virtual Campus

## **CS660**

### **Database Systems**

This course explores current database systems and provides a foundation for future study. Techniques for the design and implementation of relational databases are presented and applied using SQL and a DBMS. Other data models such as the object-oriented and object-relational models are examined and compared to the relational model. Database systems using data warehouses and data marts, distributed databases, and web-based databases are discussed.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **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. A whole new set of intrusion risks present themselves with the newer emerging media and application environments such as cloud computing, social media venues, and mobile computing. Students will also conduct research into these areas. The need for security driven life cycle development models and security standards for programming and scripting languages are presented.

Credits: 4

Prerequisite: CS651

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **CS671**

### **Software Systems Engineering Process**

This course presents the current research and application of the principles of the software development process and process improvement. The in-depth analysis of the basic principles behind software process improvement provides a framework for further investigation. The software engineering integrated approach focuses on the concepts of software development, configuration management, quality assurance, metrics and risk management.

Credits: 4

Prerequisite: CS500 or Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **CS672**

### **Systems Engineering Methods**

Systems engineering methods provides a robust focus on functionality, design, creation, operational performance and operating systems that address the needs and requirements of customers. SEM provides an overview of techniques, methodologies, and approaches to system engineering. Topics include SE foundational models and the newest concepts, evaluation methods and key tools. Focus also includes key stages in SEM such as system processes, eliciting customer requirements, system design, system quality, system integration, and deployment, maintenance, and system disposal.

Credits: 4

Prerequisite: CS500 or Approval

Availability: *Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus*

## **CS681**

### **Database Design**

This course provides an in-depth study of various aspects of database design. The principles, processes and tools used for transforming business and system requirements into conceptual, logical and physical designs for relational, object-oriented, object-relational, and semi-structured databases are evaluated. Requirements capture and analysis, data modeling, schema normalization are discussed. Advanced topics such as data model conversion, schema evolution, database refactoring, and database integration are explored. Completion of a significant project is required.

Credits: 4

Prerequisite: CS660

Availability: Colorado Springs, Denver, Denver North, Virtual Campus

## **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, online analytical processing (OLAP), data warehouse

applications, and the relationship between data warehouses and traditional database. Completion of a significant project is required.

Credits: 4

Prerequisite: CS660 or Approval

Availability: Colorado Springs, Denver, Denver North, Pueblo, Sioux Falls, Virtual Campus

## **CS698**

### **Computer Science Capstone**

The Capstone course demonstrates mastery and critical knowledge from the MSCS program. The content, concepts, and knowledge from the MSCS is critically applied by completing an in-depth project focusing on a major technical problem or major issue that impacts the student's own organization or in a desired area of study. The course gives the student the opportunity to perform a comprehensive analysis and study in a selected area of interest. The student will prepare a formal technical report of the detailed research and application of prior course concepts.

Credits: 4

Prerequisite: Approval

Availability: Colorado Springs, Denver, Denver North, Sioux Falls

## **EE692**

### **Electrical Engineering Capstone**

The Electrical Engineering Capstone course provides the student the opportunity to integrate skills developed throughout the MSEE program by completing a project or study that focuses on a technical problem or current issue in engineering. The students will define the problem or opportunity, identify constraints, complete an analysis and prepare and deliver a professional report and presentation.

Credits: 4

Prerequisite: Approval

Availability: Colorado Springs

## **FINC650**

### **MBA Finance Capstone**

The MBA Finance Capstone uses the functional skills students have developed in previous core and concentration courses to complete an in-depth project. The course requires the student to perform comprehensive research, analysis, and study on either a desired area of interest or a major business problem or issue that impacts the student's own company or organization. The student will utilize research methodologies to prepare a formal research report.

Credits: 4

Prerequisite: None

Availability: Colorado Springs, Denver, Denver North, Pueblo, Sioux Falls, Virtual Campus

## **HCM650**

### **MBA Healthcare Management Capstone**

The MBA Healthcare Management Capstone uses the functional skills students have developed in previous core and concentration courses in this program – including healthcare, business management, and business administration - to complete an in-depth project. The course requires the student to perform comprehensive research, analysis, and study on either a desired area of interest or a major business



problem or issue that impacts the student's own company or organization. The student will utilize research methodologies to prepare a formal research report.

Credits: 4

Prerequisite: None

Availability: Denver, Denver North, Pueblo, Sioux Falls, Virtual Campus

## **HLS685**

### **Homeland Security Capstone**

The Homeland Security Capstone is designed to integrate and synthesize all coursework in the MSM-HLS program and related areas, allowing the student to demonstrate the professional competencies associated with a broad conceptual and practical understanding of the homeland security field. Students will evaluate case studies and other materials to demonstrate written competency in the areas of research, law, policy, critical infrastructure protection, and planning, allowing students to incorporate knowledge and experience as they apply ethical principles in developing effective strategies to confront issues facing practitioners within the realm of homeland security.

Credits: 4

Prerequisite: HLS600

Availability: Colorado Springs, Denver, Denver North, Virtual Campus

## **HSS260**

### **Healthcare Legal Concepts**

This course provides an introduction into the legal forces facing the health care practitioner and organizations. Students learn how common law, statutes and court decisions impact health care 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. A special concentration is placed on provisions of federal mandates of the Health Insurance Portability & Accountability Act (HIPAA).

Credits: 4

Prerequisite: None

Availability: Denver, Denver North, Pueblo

## **MGMT655**

### **Management Capstone**

In the Management Capstone, students will demonstrate the application of content, concepts, and knowledge developed in previous core and concentration courses in their specific academic program. The course requires the completion of comprehensive research, analysis, and study in either a selected area of interest or a current business issue impacting the learner's organization or company. Students will complete an in-depth project utilizing discipline-specific strategies. Research methodologies are used to prepare a formal report.

Credits: 4

Prerequisite: Last Quarter

Availability: Colorado Springs, Denver, Denver North, Virtual Campus

## **NRSG129**

### **Foundations of Patient Centered Practice**

This course introduces professional nursing roles designed to meet healthcare needs of diverse individuals, families, groups and communities in contemporary society. Content includes concepts related to the history of the nursing profession, health, illness, patient-centered care, teamwork and collaboration, informatics, safety, evidenced-based practice, quality improvement and competencies of the entry level Associate Degree Nurse with emphasis on professional behaviors and values clarification.

Credits: 4

*Prerequisite:* ENGL112, BIO143, BIO200, MATH153

*Co-requisite:* NRSG130, NRSG131

*Availability:* Pueblo

## **PM665**

### **Project Management Capstone**

In the Project Management Capstone, students will demonstrate the application of content, concepts, and knowledge developed in previous core and concentration courses in their specific academic program. The course requires the completion of comprehensive research, analysis, and study in either a selected area of interest or a current business issue impacting the learner's organization or company. Students will complete an in-depth project utilizing discipline-specific strategies. Research methodologies are used to prepare a formal report.

Credits: 4

*Prerequisite:* Last Quarter

*Availability:* Colorado Springs, Denver, Denver North, Pueblo, Sioux Falls, Virtual Campus

## **SE690**

### **Systems Engineering Capstone**

The Systems Engineering Capstone provides the student the opportunity to integrate skills developed throughout the MSSE program by completing a project or study that focuses on a technical problem or current issue in engineering. The students will define the problem or opportunity, identify constraints, complete an analysis and prepare and deliver a professional report and presentation.

Credits: 4

*Prerequisite:* Approval

*Availability:* Colorado Springs, Denver, Denver North, Sioux Falls, Virtual Campus

## **UNIV202**

### **Career Planning and Exploration**

This course provides the framework for effective career management as ASHAS students gain insight into themselves and potential health care careers. Students will also be introduced to the Professional Learning Experience (PLE) program and will develop a plan of action to complete this program requirement.

Credits: 4

*Prerequisite:* None

*Availability:* Virtual Campus

## **UNIV202-v**

### **Career Planning and Exploration**

This course provides the framework for effective career management as ASHAS students gain insight into themselves and potential health care careers. Students will also be introduced to the Virtual Professional Learning Experience (PLE) program.

Credits: 4

Prerequisite: None

Availability: Virtual Campus

## **UNIV203**

### **Career and Employment Management**

This course provides the framework for effective career management as ASHAS students gain a full understanding of how to advance their career immediately following graduation. Students are engaged in an intensive preparation experience for gainful employment related to their degree program. Lastly, students will develop a plan of action to execute an effective job search or advance in their current organization.

Credits: 4

Prerequisite: UNIV202

Availability: Virtual Campus

## **UNIV203-v**

### **Career and Employment Management**

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Credits: 4

Prerequisite: UNIV202-v

Availability: Virtual Campus