COMPUTER INFORMATION SYSTEMS (BS)

Degree: Bachelor of Science
Major: Computer Information Systems
Program Code: 3165

About This Major . . .

The Bachelor of Science in Computer Information Systems is a degree required today as organizations face the challenges of technology management. This program provides graduates with business management skills and computer information expertise to manage computer systems in today's organizations. Graduates of this program are employed in occupations such as systems analysts, analyst/programmers, database administrators, network administrators, web page designers, help desk specialists, and IT Managers.

Graduates assist businesses with creating, obtaining, and maintaining computer information systems that solve problems and assist in facilitating routine business events. As businesses increasingly rely on technology to provide a competitive advantage, employees with an understanding of both business concepts and computer systems are necessary. Computer information systems studies require students to examine computer systems from organizational, social, psychological, and technical perspectives. Graduates from this program will have taken a variety of courses that were developed based on national guidelines for quality degrees in information systems.

For more information on what you can do with this major, visit Career Services' *What to Do with a Major?* (https://www.coloradomesa.edu/career/students/explore/major.html) resource.

All CMU baccalaureate graduates are expected to demonstrate proficiency in specialized knowledge/applied learning, quantitative fluency, communication fluency, critical thinking, personal and social responsibility, and information literacy. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Integrate knowledge from multiple functional areas of business to solve business problems and to develop sound business strategies. (Specialized Knowledge)
2. Apply business knowledge and skills in appropriate business contexts and transfer knowledge and skills to new business situations. (Critical Thinking)
3. Communicate clearly, appropriately, and persuasively to the business audience, both orally and in writing, including individual presentations. (Communication Fluency)
4. Analyze business data critically, reason logically, and apply quantitative analysis methods correctly to develop appropriate business conclusions. (Quantitative Fluency)
5. Effectively work as a team. (Applied Learning)
6. Strategically apply information across functional areas of business. (Applied Learning)
7. Produce professional business work products. (Applied Learning)
8. Practice principle-based ethics in decision making both personally and professionally. (Applied Learning)
9. Identify, formulate, and correctly solve information systems problems. (Specialized Knowledge)

Institutional Degree Requirements

The following institutional degree requirements apply to all CMU baccalaureate degrees. Specific programs may have different requirements that must be met in addition to institutional requirements.

- 120 semester hours minimum.
- Students must complete a minimum of 30 of the last 60 hours of credit at CMU, with at least 15 semester hours in major discipline courses numbered 300 or higher.
- 40 upper-division credits (an alternative credit limit applies to the Bachelor of Applied Science degree).
- 2.00 cumulative GPA or higher in all CMU coursework.
- A course may only be used to fulfill one requirement for each degree/certificate.
- No more than six semester hours of independent study courses can be used toward the degree.
- Non-traditional credit, such as advanced placement, credit by examination, credit for prior learning, cooperative education and internships, cannot exceed 30 semester credit hours for a baccalaureate degree. A maximum of 15 of the 30 credits may be for cooperative education, internships, and practica.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Capstone exit assessment/projects (e.g., Major Field Achievement Test) requirements are identified under Program-Specific Degree Requirements.
- The Catalog Year determines which program sheet and degree requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements you should follow.
- See "Requirements for Undergraduate Degrees and Certificates" in the catalog for a complete list of graduation requirements.

Essential Learning Requirements

(31 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is an Essential Learning option and a requirement for your major, you must use it to fulfill the major requirement and make a different selection for the Essential Learning requirement.

Code	Title	Semester Credit Hours
English [1]		
ENGL 111	English Composition-GTCO1	3
ENGL 112	English Composition-GTCO2	3
Mathematics [1]		
MATH 113	College Algebra-GTMA1 [2]	3
History		
Select one History course		3
Humanities		
Select one Humanities course		3
Social and Behavioral Sciences		

Select one Social and Behavioral Sciences course	3
Select one Social and Behavioral Sciences course	3
Fine Arts	
Select one Fine Arts course	3
Natural Sciences [3]	
Select one Natural Sciences course	3
Select one Natural Sciences course with a lab	4
Total Semester Credit Hours	31

1 Must receive a grade of "C" or better and must be complete by the time the student has 60 semester hours.

2 This is a 4 credit course. 3 credits apply to the Essential Learning requirements and 1 credit applies to elective credit.

3 7 semester hours, one course must include a lab.

Other Lower Division Requirements

Code	Title	Semester Credit Hours
Wellness Requirement		
KINE 100	Health and Wellness	1
Select one Activity course		1
Essential Learning Capstone [1]		
ESSL 290	Maverick Milestone	3
ESSL 200	Essential Speech	1
Total Semester Credit Hours		6

1 Essential Learning Capstone must be taken after completion of the Essential Learning English and Mathematics requirements, and when a student has earned between 45 and 75 hours.

Foundation Courses

(12 semester hours)

Code	Title	Semester Credit Hours
ACCT 201	Principles of Financial Accounting	3
CISB 205	Advanced Business Software	3
Select one of the following courses:		3-4
CISB 206	Introduction to Business Application Programming	
CSCI 111	CS1: Foundations of Computer Science	
Other Object-Oriented Programming Course approved by advisor		
CISB 210	Fundamentals of Information Systems	3
Total Semester Credit Hours		12-13

Program Specific Degree Requirements

(54 semester hours, must earn a grade of “C” or better in each course)

Code	Title	Semester Credit Hours
Core Courses		
Computer Information Systems Core		
Select one of the following courses:		3
CISB 101	Business Information Technology	
CISB 305	Solving Problems Using Spreadsheets	
CISB 306	Solving Problems Using Databases	
CISB 309	Enterprise Systems	3
CISB 315	Information Systems Infrastructure	3
CISB 331	Advanced Business Programming	3
CISB 410	Project Management	3
CISB 442	Systems Analysis and Design	3
CISB 451	Database Administration	3
CISB 470	Management of Information Systems	3
CISB 471	Advanced Information Systems	3
Business Support Classes		
ACCT 202	Principles of Managerial Accounting	3
BUGB 349	Legal Environment of Business	3
ECON 201	Principles of Macroeconomics-GTSS1	3
ECON 202	Principles of Microeconomics-GTSS1	3
FINA 301	Managerial Finance	3
MANG 201	Principles of Management	3
MARK 231	Principles of Marketing	3
Quantitative Analysis Courses		
CISB 241	Introduction to Business Analysis	3
or STAT 241	Introduction to Business Analysis	
CISB 341	Quantitative Decision Making	3
Total Semester Credit Hours		54

General Electives

All college level courses appearing on your final transcript, not listed above that will bring your total semester hours to 120 hours. 16-17 semester hours, 4-7 hours of upper division may be needed. It is highly recommended that at least 3 hours must be individualized studies such as Cooperative Education, Directed Readings, or Independent Study. Recommended: TECI 260, CISB 460, CISB 305, or CISB 306.

Code	Title	Semester Credit Hours
MATH 113	College Algebra-GTMA1	1
General Elective Courses		15-16
Total Semester Credit Hours		16-17

Course	Title	Semester Credit Hours
First Year		
Fall Semester		
Select one of the following:		3
CISB 101	Business Information Technology	
CISB 305	Solving Problems Using Spreadsheets	
CISB 306	Solving Problems Using Databases	
ENGL 111	English Composition-GTCO1	3
MATH 113	College Algebra-GTMA1	4
Essential Learning - History		3
Essential Learning - Humanities		3
	Semester Credit Hours	16
Spring Semester		
CISB 205	Advanced Business Software	3
ENGL 112	English Composition-GTCO2	3

CISB 210	Fundamentals of Information Systems	3
Essential Learning - Fine Arts		3
Essential Learning - Social and Behavioral Science		3
	Semester Credit Hours	15
Second Year		
Fall Semester		
ACCT 201	Principles of Financial Accounting	3
CISB 206 or CSCI 111	Introduction to Business Application Programming or CS1: Foundations of Computer Science	3
CISB 309	Enterprise Systems	3
ECON 201	Principles of Macroeconomics-GTSS1	3
MANG 201	Principles of Management	3
	Semester Credit Hours	15
Spring Semester		
ACCT 202	Principles of Managerial Accounting	3
CISB 315	Information Systems Infrastructure	3
ECON 202	Principles of Microeconomics-GTSS1	3
MARK 231	Principles of Marketing	3
CISB 241 or STAT 241	Introduction to Business Analysis or Introduction to Business Analysis	3
	Semester Credit Hours	15
Third Year		
Fall Semester		
CISB 410	Project Management	3
CISB 341	Quantitative Decision Making	3
CISB 331	Advanced Business Programming	3
Essential Learning - Social and Behavioral Science		3
ESSL 290	Maverick Milestone	3
ESSL 200	Essential Speech	1
	Semester Credit Hours	16
Spring Semester		
CISB 470	Management of Information Systems	3
CISB 442	Systems Analysis and Design	3
Essential Learning - Natural Science with Lab		4
KINE 100	Health and Wellness	1
KINA Activity		1
General Elective		3
	Semester Credit Hours	15
Fourth Year		
Fall Semester		
CISB 451	Database Administration	3
BUGB 349	Legal Environment of Business	3
FINA 301	Managerial Finance	3
Essential Learning - Natural Science		3
General Elective		3
	Semester Credit Hours	15
Spring Semester		
CISB 471	Advanced Information Systems	3
General Electives		10
	Semester Credit Hours	13
	Total Semester Credit Hours	120

Advising Process and DegreeWorks

Documentation on the pages related to this program is intended for informational purposes to help determine what courses and associated requirements are needed to earn a degree. The suggested course sequencing outlines how students could finish degree requirements. Some courses are critical to complete in specific semesters, while others may be moved around. Meeting with an academic advisor is essential in planning courses and altering the suggested course sequencing. It is ultimately the student's responsibility to understand and fulfill the requirements for her/his intended degree(s).

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar's Office to evaluate progress towards a degree and determine eligibility for graduation. Students are responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head. Discrepancies in requirements should be reported to the Registrar's Office.

Graduation Process

Students must complete the following in the first two months of the semester prior to completing their degree requirements:

- Review their DegreeWorks audit and create a plan that outlines how unmet requirements will be met in the final semester.
- Meet with their advisor and modify their plan as needed. The advisor must approve the final plan.
- Submit the "Intent to Graduate" form to the Registrar's Office to officially declare the intended graduation date and commencement ceremony plans.
- Register for all needed courses and complete all requirements for each degree sought.

Submission deadlines and commencement details can be found at http://www.coloradomesa.edu/registrar/graduation.html.

If a student's petition for graduation is denied, it will be her/his responsibility to consult the Registrar's Office regarding next steps.