COMPUTER INFORMATION SYSTEMS BS

The Bachelor of Science in Computer Information Systems is a combination of a traditional computer science degree and a traditional business information systems degree. Students complete the core of the computer science degree and the business administration minor. Students perform less software development than a computer science degree and are exposed to several additional topics.

The degree prepares students for a wide range of fulfilling careers from software development to managing the computing systems of large companies. Many Fortune 100 companies employ our computer information systems alumni. Graduates enjoy a strong reputation of hitting the ground running—being productive employees right from the start.

 The Computer Information Systems program is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org (http://www.abet.org/).

Advising Requirement

Advising is mandatory for this program. Consult your department advisor or program coordinator for information.

E-advising Tools

Use the interactive e-advising tools designed to help students graduate within four years. These tools can be accessed through the Student Center in the Portal (https://portal.csuchico.edu).

Grading Requirement

All courses taken to fulfill program course requirements must be taken for a letter grade except those courses specified by the department as credit/no credit grading only.

A grade of C- or higher is required in all Computer Science (CSCI), Electrical/Electronic Engineering (EECE), Business Information Systems (BSIS), or Management Information Systems (MINS) courses used for the major.

Each Computer Science (CSCI) course may be attempted no more than three times. After a third attempt with a grade below C- in any single required CSCI course, a student will not be able to complete the major.

Course Requirements for the Major: 84 units

Completion of the following courses, or their approved transfer equivalents, is required of all candidates for this degree. Courses in this program may complete more than one graduation requirement.

Completion of these requirements also satisfies requirements for a minor in Business Administration.

Course	Title	Units
Lower Division		
CSCI 111	Programming and Algorithms I	4
CSCI 211	Programming and Algorithms II	4
CSCI/MATH 217	Discrete Mathematics	3
CSCI 220	Introduction to Cloud Infrastructure and Security	3
MATH 105	Introduction to Statistics	3
Select one of the following:		3-4
MATH 109	Survey of Calculus	
MATH 120	Analytic Geometry and Calculus	
MATH 315	Applied Statistical Methods I	
Upper Division		
CSCI 301W	Computer's Impact on Society (W)	3
CSCI 311	Algorithms and Data Structures	4
CSCI 370	Introduction to Databases	3
CSCI 430	Software Engineering	3
or MINS 350	Business Systems Analysis	
CSCI 448	Cybersecurity	3
CSCI 490	Capstone	3
CSCI 565	Server Side App Development	3
or CSCI 567	Client Side App Development	
Networks:		
Select one of the following:		3
CSCI/EECE 446	Introduction to Computer Networks and Network Management	
MINS 346	Data Communications and Networking	
Data Management/Analytics:		
Select one of the following:		3
CSCI 385	Introduction to Data Science	
CSCI 570	Advanced Database Management Systems	
CSCI 582	Bioinformatics	
MINS 522	Enterprise Resource Planning: Systems Administration	
MINS 535	Database Administration	
Advanced Networking/Security		
Select one of the following:		3-4
CSCI 546	Network Forensics	
CSCI 548	Digital Forensics	
EECE 555	Advanced Computer Networks	
MATH 317	Cryptography	
MINS 536	Security and Privacy Issues in Information Technology	
MINS 546	E-Commerce and Cloud Computing in Business	
Systems/Artificial Intelligence:		
Select one of the following:		3
CSCI 344	Shell Programming	
CSCI 345	Linux System Administration	
CSCI 515	Compiler Design	
CSCI 580	Artificial Intelligence	
CSCI 581	Machine Learning	
CSCI 582	Bioinformatics	
CSCI 585	Robotics and Machine Intelligence	
Elective		
Select sufficient upper-division units from Computer Science (CSCI) to ensure at least 84 units in the major. [1]		4-6
Formal Business Minor Requirements		

The following courses, or their approved transfer equivalents, also fulfill requirements for a Minor in Business Administration. [2]

ACCT 201	Introduction to Financial Accounting	3
ACCT 202	Introduction to Managerial Accounting	3
BLAW 203	Introduction to Business Law	3
ECON 103	Principles of Microeconomic Analysis	3
FINA 307	Survey of Finance	3
MGMT 303	Survey of Management	3
MINS 301	Corporate Technology Integration	3
MKTG 305	Survey of Marketing	3

[1] A maximum of three units may be taken for credit/no credit grading.

[2] Students are responsible for formally declaring the Minor in Business Administration.

Additional Computer Information Systems Graduation Requirement

Graduating seniors must complete an exit exam as a requirement for graduation. Passing the exam is not required for the degree; the scores will be used for program assessment. Consult the department office for examination details.

Honors in the Major

Honors in the Major is a program of independent work in your major. It requires six units of honors coursework completed over two semesters.

The Honors in the Major program allows you to work closely with a faculty mentor in your area of interest on an original performance or research project. This year-long collaboration allows you to work in your field at a professional level and culminates in a public presentation of your work. Students sometimes take their projects beyond the University for submission in professional journals, presentation at conferences, or academic competition. Such experience is valuable for graduate school and professional life. Your honors work will be recognized at your graduation, on your permanent transcripts, and on your diploma. It is often accompanied by letters of commendation from your mentor in the department or the department chair.

Some common features of Honors in the Major program are:

- You must take six units of Honors in the Major coursework. All six units are honors courses (marked by a suffix of H), and at least three of these units are independent study (399H, 499H, 599H) as specified by your department. You must complete each course with a minimum grade of B.
- You must have completed 9 units of upper-division coursework or 21 overall units in your major before you can be admitted to Honors in the Major. Check the requirements for your major carefully, as there may be specific courses that must be included in these units.
- Your cumulative#GPA should be at least 3.5 or within the top 5% of majors in your department.
- Your GPA in your major#should be at least 3.5 or within the top 5% of majors in your department.
- Most students apply for or are invited to participate in Honors in the Major during the second semester of their junior year. Then they complete the six units of coursework over the two semesters of their senior year.
- Your honors work culminates with a public presentation of your honors project.

Honors in the Major is not part of the Honors Program. Each department administers its own program. Please contact your major department or major advisor to apply.

Well-qualified students majoring in computer information systems are encouraged to apply for Honors in Computer Information Systems. The program is open to junior and senior computer information systems majors who have completed nine upper-division units in computer science, including CSCI 311 with a grade of B or higher. Honors students take the honors version of one required course (many 400/500-level courses have an honors version, check with your major advisor) and complete an honors project CSCI 499H in the same subject as their honors course. The six units of honors courses replace CSCI 490 and one additional required course.

See Bachelor's Degree Requirements (https://catalog.csuchico.edu/undergraduate-requirements/bachelors-degree-requirements/) for complete details on general degree requirements. A minimum of 39 units, including those required for the major, must be upper division.

General Education Requirements: 43 units

See General Education (https://catalog.csuchico.edu/colleges-departments/undergraduate-education-academic-success/general-education/#gerequirementstext) and the Class Schedule (http://www.csuchico.edu/schedule/) for the most current information on General Education requirements and course offerings.

This major has approved GE modification(s). See below for information on how to apply these modification(s).

- CSCI 217/MATH 217 is an approved major course substitution for Critical Thinking (1B).
- CSCI 301W is an approved major course substitution for Upper Division Arts and Humanities (UD-3).

The following GE courses also meet major requirements:

- MATH 105 Mathematical Concepts and Quantitative Reasoning (2)
- ECON 103 Social and Behavioral Sciences (4)

American Institutions Course Requirements: 6 units

The American Institutions graduation requirement, as mandated in Title 5, Section 40404 (https://govt.westlaw.com/calregs/Document/I56C041434C6911EC93A8000D3A7C4BC3/?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPage) requires that students satisfactorily complete courses in United States history, the US Constitution, and government and American ideals (including California state and local government). At Chico State, HIST 130 meets the US history requirement (US-1), and POLS 155 meets the US Constitution and government requirement (US-2) and the California state and local government requirement (US-3). POLS 155 also fulfills three units of GE Area 4, Social and Behavioral Sciences. See Bachelor's Degree Requirements (https://catalog.csuchico.edu/undergraduate-requirements/bachelors-degree-requirements/#amin) for more information.

Diversity Course Requirements: 6 units

You must complete a minimum of two courses that focus primarily on cultural diversity. At least one course must be in US Diversity (USD) and at least one in Global Cultures (GC). See Diversity Requirements

(https://catalog.csuchico.edu/undergraduate-requirements/diversity-requirements/) for a full list of courses. Many courses taken to satisfy these requirements may also apply to General Education (https://catalog.csuchico.edu/colleges-departments/undergraduate-education-academic-success/general-education/).

Upper-Division Writing Requirement

Writing Across the Curriculum (EM 17-009 (https://www.csuchico.edu/pres/em/2017/17-009.shtml/)) is a graduation requirement and may be demonstrated through satisfactory completion of four Writing (W) courses, two of which are designated by the major department. See Writing and Math Requirements (https://catalog.csuchico.edu/undergraduate-requirements/writing-math-requirements/) for more details on the four courses. The first of the major designated Writing (W) courses is listed below.

- Any upper-division Writing (W) course.

The second major-designated Writing course is the Graduation Writing Assessment Requirement (GW) (EO 665 (https://calstate.policystat.com/policy/9585618/latest/)). Students must earn a C- or higher to receive GW credit. The GE English Composition (1A) (https://catalog.csuchico.edu/colleges-departments/undergraduate-education-academic-success/general-education/#1A) requirement must be completed before a student is permitted to register for a GW course.