The Bachelor of Science in Computer Information Systems

Total Course Requirements for the Bachelor's Degree: 120 units

See Bachelor's Degree Requirements in the *University Catalog* for complete details on general degree requirements. A minimum of 40 units, including those required for the major, must be upper division.

A suggested Major Academic Plan (MAP) has been prepared to help students meet all graduation requirements within four years. You can view MAPs on the Degree MAPs page in the *University Catalog* or you can request a plan from your major advisor.

General Education Pathway Requirements: 48 units

See General Education in the *University Catalog* and the Class Schedule for the most current information on General Education Pathway Requirements and course offerings.

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

- CSCI 217 is an approved major course substitution for Critical Thinking (A3).
- MATH 109 is an approved advanced course substitution for Quantitative Reasoning (A4).
- CSCI 301 is an approved major course substitution for Upper Division Social Science.
- CSCI 301 is also an approved GE Capstone substitution.

Diversity Course Requirements: 6 units

See Diversity Requirements in the *University Catalog*. Most courses taken to satisfy these requirements may also apply to General Education .

Literacy Requirement:

See Mathematics and Writing Requirements in the *University Catalog*. Writing proficiency in the major is a graduation requirement and may be demonstrated through satisfactory completion of a course in your major which has been designated as the Writing Proficiency (WP) course for the semester in which you take the course. Students who earn below a C- are required to repeat the course and earn a C- or higher to receive WP credit. See the Class Schedule for the designated WP courses for each semester. You must pass ENGL 130I or JOUR 130I (or equivalent) with a C- or higher before you may register for a WP course.

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.

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

Lower-Division Requirements: ~~24 units~~ 27 units

8 ~~7~~ **courses required:**

~~CINS 110 Introductory Web Programming~~		~~3.0~~	~~FA~~
CINS 220	PCs and Peripherals	3.0	SP
CINS 242	Information Systems Design	3.0	FA
Prerequisites: CSCI 111 with a grade of C- or higher.			
CSCI 111	Programming and Algorithms I	4.0	FS
Prerequisites: At least one year of high school algebra and strong computer skills or CSCI 101.			
CSCI 211	Programming and Algorithms II	4.0	FS

Prerequisites: CSCI 111 with a grade of C- or higher.				
CSCI 217	Foundations of Computing	3.0	SP	
Prerequisites: CSCI 111 with a grade of C- or higher, MATH 109 or MATH 120.				
MATH 105	Statistics	3.0	FS	GE
Prerequisites: Completion of ELM requirement.				
MATH 109	Survey of Calculus	4.0	FS	GE
Prerequisites: Completion of ELM requirement; MATH 118, MATH 119 (or High School equivalents).				

Upper-Division Requirements: ~~36 units~~ 33 units

7 ~~8~~ **courses required:**

CINS 370	Introduction to Databases	3.0	SP	
Prerequisites: CSCI 211 with a grade of C- or higher.				
CINS 448	Computer Security	3.0	FS	
Prerequisites: Any upper-division computer networking course.				
CSCI 301	Computer's Impact on Society	3.0	FS	WP
Prerequisites: ENGL 130 or JOUR 130 (or equivalent) with a grade of C- or higher; Junior standing.				
CSCI 311	Algorithms and Data Structures	4.0	FS	
Prerequisites: CSCI 211 with a grade of C- or higher, CSCI 217 or MATH 217 recommended.				
~~CSCI 340~~	~~Operating Systems~~	~~4.0~~	~~SP~~	
Prerequisites: Grade of C- or better in CSCI 311.				
CSCI 446	Introduction to Computer Networks and Network Management	3.0	FS	
Prerequisites: CSCI 111 and either CINS 220 or CSCI 221 or EECE 237 (all with a C- or higher for CSCI/CINS majors).				
CINS 465	Web Programming Fundamentals	3.0	FA	
Prerequisites: ~~CINS 370 with a grade of C- or higher.~~ CINS 110 and CINS 370, both with a grade of C- or higher.				
CINS 490	Computer Information Systems Capstone	3.0	FS	
Prerequisites: CSCI 311 with a grade of C- or higher, senior standing.				

Database/ERP:

Note that prerequisites for the BSIS/MINS courses are waived for CINS students, but course content is unchanged.

1 course selected from:

CINS 570	Advanced Database Management Systems	3.0	FA	
Prerequisites: CINS 370 with a grade of C- or higher or MINS 235.				
CINS 574	Advanced Database Architecture and Administration I	3.0	INQ	
Prerequisite: CINS 370 with a grade of C- or higher.				
MINS 522	Enterprise Resource Planning: Systems Administration	3.0	FS	
Prerequisites: MINS 235, MINS 346.				

Networking/Security:

1 course selected from:

CINS 548	Advanced Computer Security	3.0	FA	

Prerequisites: CINS 448 with a grade of C- or higher.				
CSCI 546	Computer Network Management	3.0	FA	
Prerequisite: CSCI 446 with a grade of C- or higher.				
EECE 555	Advanced Computer Networks	4.0	FA	
Prerequisites: CSCI 446.				

Systems:

1 course selected from:

CSCI 344	Shell Programming	3.0	SP	
Prerequisites: Grade of C- or higher in either CSCI 144 or CSCI 211.				
CSCI 444	Fundamental UNIX System Administration	3.0	FA	
Prerequisites: CSCI 144 or CSCI 211 with a grade of C- or higher.				
CSCI 540	Systems Programming	3.0	FA	
Prerequisites: CSCI 340 with a grade of C- or higher.				

Elective:

2 ~~1~~ **units selected from:**

Select from upper-divison Computer Science (CSCI) or Computer Information Systems (CINS) courses.

Formal Business Minor Requirements: 24 units

The following courses, or their approved transfer equivalents, also fulfill requirements for a Minor in Business Administration. Students are responsible for formally declaring the Minor in Business Administration.

8 courses required:

ACCT 201	Introduction to Financial Accounting	3.0	FS	
ACCT 202	Introduction to Managerial Accounting	3.0	FS	
Prerequisites: ACCT 201 (or ABUS 261 for ABUS majors only).				
BLAW 302	Managing the Legal Environment	3.0	FS	
Prerequisites: At least junior standing.				
ECON 103	Principles of Microeconomic Analysis	3.0	FS	GE
FINA 307	Survey of Finance	3.0	FS	
Prerequisites: ACCT 201, ECON 103.				
MGMT 303	Survey of Management	3.0	FS	
MINS 301	Corporate Technology Integration	3.0	FS	
MKTG 305	Survey of Marketing	3.0	FS	

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.

Grading Requirement:

All courses taken to fulfill major 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 better is required in all computer science (CSCI) or Computer Information Systems (CINS) courses used for the major.

Advising Requirement:

Advising is mandatory for all majors in this degree program. Consult your undergraduate advisor for specific information.

Honors in the Major:

Honors in the Major is a program of independent work in your major. It requires 6 units of honors course work 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:

1. You must take 6 units of Honors in the Major course work. All 6 units are honors classes (marked by a suffix of H), and at least 3 of these units are independent study (399H, 499H, 599H) as specified by your department. You must complete each class with a minimum grade of B.
2. You must have completed 9 units of upper-division course work 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.
3. Your *cumulative* GPA should be at least 3.5 or within the top 5% of majors in your department.
4. Your GPA *in your major* should be at least 3.5 or within the top 5% of majors in your department.
5. 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 6 units of course work over the two semesters of their senior year.
6. Your honors work culminates with a public presentation of your honors project.

While Honors in the Major is part of the Honors Program, each department administers its own program. Please contact your major department or major advisor to apply.

Honors in Computer Information Systems

In addition to the common requirements for the Honors in the Major program given above, the Honors in Computer Information Systems program includes the following:

1. You must be recommended by a faculty member.
2. Students who are admitted to the department's Honors in the Major program must complete 3 units of CINS 548H, CINS 570H, CSCI 465H, CSCI 511H, CSCI 540H, or CSCI 547H with a minimum grade of B. Unless other arrangements are made, the professor instructing the course you take becomes your faculty mentor. It is during this time that you must define a research problem or performance area and develop an Honors Research Project/Thesis proposal in preparation for work in CSCI 499H. You must also maintain a minimum GPA of 3.0 in your senior year.
3. Each Honors in the Major class requires completion of the course plus an additional Honors project and culminates with a public presentation of your Honors project.