

COMPUTER INFORMATION SCIENCES (B.S.)

Degree: Bachelor of Science

Major: Computer Information Sciences

Concentration: None

Total Hours: 120

The Computer Information Sciences program has an overall emphasis on information networking and technology. An interplay of knowledge from areas such as distributed computing, software engineering, expert systems, information retrieval and database management systems define the information technology concept. Information networks are becoming an integral and strategic component of such industries as petrochemicals, transportation, space technology, education, banking and finance, medical applications, manufacturing and retailing. Graduates of this program will possess an integrated set of skills from the fields of engineering, computer science and business.

Students are required to take the ETS Computer Science Field Exam during the semester in which they are graduating. Graduates of this program will be prepared to respond to the varied and changing needs of an information society. Such positions as Database Administrator, Network Manager, and Chief Information Officer are among the careers that are open to graduates in this field.

Code	Title	Hours
General Education Core Curriculum		
<i>Communication</i>		
ENGL 1301	Composition I	3
Select one of the following:		3
COMM 1315	Public Speaking I	
COMM 1321	Business and Professional Speech	
DSDE 1371	ASL I	
ENGL 1302	Composition II	
FREN 1311	Beginning French I	
SPAN 1311	Beginning Spanish I	
<i>Mathematics - 3 hours</i>		
MATH 2413	Calculus and Analytical Geometry I	4
<i>Life and Physical Sciences - 6 hours</i>		
Select two from the following:		6
BIOL 1308	General Biology (Non-Science Majors)	
BIOL 1315	Plants and Human Society (Non-Majors)	
BIOL 2306	Environmental Science	
CHEM 1306	Chemistry for Allied Health Sciences	
CHEM 1308	Biochemistry for Allied Health Sciences	
CHEM 1311	General Chemistry I	
CHEM 1312	General Chemistry II	
GEOG 1390	Introductory Environmental & Physical Geology	
PHYS 1305	Elementary Physics I Lecture	
PHYS 1307	Elementary Physics II Lecture	
PHYS 1311	Introduction to Astronomy Lecture	
SPSC 1301	Space Exploration	

Language, Philosophy and Culture

Select three hours from the following:		3
DSDE 1374	Introduction to Deaf Studies	
ENGL 2300	Close Reading II	
ENGL 2322	British Literature	
ENGL 2326	American Literature	
ENGL 2331	World Literature	
ENGL 2376	African-American Literature	
FREN 2312	Intermediate French II	
PHIL 1370	Philosophy of Knowledge	
PHIL 2306	Ethics	
SPAN 2312	Intermediate Spanish II	

Creative Arts

Select three hours from the following:		3
ARTS 1301	Art Appreciation	
ARTS 1303	Art History I	
COMM 1375	Film Appreciation	
COSC 1324	The Art of Computer Game Development	
DANC 2304	Dance Appreciation	
MUSI 1306	Music Appreciation	
MUSI 1309	Jazz History and Appreciation	
MUSI 1310	History of Rock and Roll	
PHIL 1330	Arts and Ideas	
THEA 1310	Theatre Appreciation	

American History

Select six hours from the following:		6
HIST 1301	U S History I 1763-1877	
HIST 1302	U S History II Since 1877	
HIST 2301	Texas History	

Government/ Political Science

POLS 2301	Intro to American Government I	3
POLS 2302	Intro/American Government II	3

Social and Behavioral Sciences

ECON 1301	Principles and Policies	3
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Component Area Option

ENGL 1302	Composition II	3
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Required Major Courses

Computer Science Courses

ACCT 2301	Introduction to Financial Accounting	3
ACCT 2302	Introduction to Managerial Accounting	3
COSC 1172	Thinking, Speaking, and Writing	1
COSC 1173	Programming Lab	1
COSC 1174	Fundamentals of Computing II Lab	1
COSC 1336	Programming Fundamentals I	3
COSC 1337	Programming Fundamentals II	3
COSC 2325	Computer Organization	3
COSC 2336	Programming Fundamentals III	3
COSC 2375	Discrete Structures	3
COSC 3304	Algorithms Design and Analysis	3
COSC 3325	Computer Law and Ethics	3
COSC 4272	Senior Assessment	2
COSC 4302	Operating Systems	3

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CPSC 4315	Network System Administration	3
CPSC 4317	Computer Networks	3
CPSC 4340	Database Design	3
CPSC 4360	Software Engineering	3
FINC 3310	Principles of Finance	3
MATH 2318	Linear Algebra	3
MGMT 3310	Principles of Organizational Behavior and Management	3
MGMT 3320	Production Management	3

Electives

Select three hours from the following:		3
MATH 1342	Statistics	
MATH 3370	Introduction to the Theory of Statistical Inference	
BUAL 2305	Business Statistics	
COSC 4319	Computer Graphics	3
or CPSC 4330	Multimedia Processing	
Select three hours from the following:		3
COSC 4345	Cybersecurity Networks	
CPSC 4361	Secure Software Engineering	
CPSC 4363	Cybersecurity: Systems	
Select six hours from the following:		6
COSC 3302	Intro to Computer Theory	
COSC 3306	UNIX/C++	
COSC 3308	Design Programming Languages	
COSC 3325	Computer Law and Ethics	
COSC 4301	Special Topics	
COSC 4310	Introduction to Computer Architecture	
COSC 4319	Computer Graphics	
COSC 4324	Computer Game Development I	
COSC 4345	Cybersecurity Networks	
CPSC 4330	Multimedia Processing	
CPSC 4361	Secure Software Engineering	
CPSC 4363	Cybersecurity: Systems	
CPSC 4370	Artificial Intelligence	
Select six hours of general electives (any course)		6

Total Hours **120**

Course	Title	Hours
First Year		
Fall		
COSC 1336	Programming Fundamentals I	3
COSC 1173	Programming Lab	1
COSC 1172	Thinking, Speaking, and Writing	1
ENGL 1301	Composition I	3
MATH 2413	Calculus and Analytical Geometry I	4
HIST 1301	U S History I 1763-1877	3
Hours		15
Spring		
COSC 1337	Programming Fundamentals II	3
COMM or Modern Language		3
ECON 1301	Principles and Policies	3
ENGL 1302	Composition II	3
COSC 2375	Discrete Structures	3
COSC 1174	Fundamentals of Computing II Lab	1
Hours		16

Second Year		
Fall		
COSC 2336	Programming Fundamentals III	3
Academic Elective		3
Select one of the following:		3
MATH 1342	Statistics	
MATH 3370	Introduction to the Theory of Statistical Inference	
BUAL 2310	Business Analysis I	
Lab Science		3
Language, Philosophy and Culture		3
Hours		15

Spring		
COSC 2325	Computer Organization	3
COSC 3304	Algorithms Design and Analysis	3
MATH 2318	Linear Algebra	3
Lab Science		3
HIST 1302	U S History II Since 1877	3
Hours		15

Third Year		
Fall		
CPSC 4317	Computer Networks	3
CPSC 4340	Database Design	3
POLS 2301	Intro to American Government I	3
ACCT 2301	Introduction to Financial Accounting	3
COSC 3325	Computer Law and Ethics	3
Hours		15

Spring		
Select one of the following:		3
CPSC 4363	Cybersecurity: Systems	
COSC 4345	Cybersecurity Networks	
CPSC 4361	Secure Software Engineering	
CPSC 4315	Network System Administration	3
POLS 2302	Intro/American Government II	3
MGMT 3310	Principles of Organizational Behavior and Management	3
Academic Elective		3
Hours		15

Fourth Year		
Fall		
CPSC 4330	Multimedia Processing	3
or COSC 4319	or Computer Graphics	
COSC or CPSC elective		3
ACCT 2302	Introduction to Managerial Accounting	3
FINC 3310	Principles of Finance	3
Creative Arts		3
Hours		15

Spring		
CPSC 4360	Software Engineering	3
COSC 4302	Operating Systems	3
COSC/CPSC Elective		3
COSC 4272	Senior Assessment	2
MGMT 3320	Production Management	3
Hours		14
Total Hours		120