

COMPUTER INFORMATION SYSTEMS: CYBER SECURITY CONCENTRATION, BACHELOR OF SCIENCE

The Bachelor of Science in Computer Information Systems (BS-CIS) with a cyber security concentration prepares students for a variety of IT managerial and technical cyber security and cyber defense positions. Students will gain working knowledge in a multitude of areas such as identifying cyber threats, cyber-exploits, network and server side attacks, defensive IT countermeasures, wireless network security, cryptography, password cracking, web exploitation, cyber terrorism, and various aspects of identifying threat vulnerabilities, IT security risk management, disaster recovery planning, cyber law, information assurance (IA), and more.

Cyber security concentration students will acquire the core cyber security knowledge that is required for key technical and managerial IT security positions. Students will develop the foundational skills needed to be successful in their chosen cyber security career path.

Program Objectives

The program seeks to develop a deeper understanding of the role of information systems within organizations and the processes that support technology-enabled business development.

At the conclusion of the CIS program, students will demonstrate the ability to:

1. Analyze, design, implement, and maintain an information system.
2. Communicate clearly and effectively in writing and speaking.
3. Work effectively as a team member for a common purpose.
4. Identify ethical issues and provide alternatives or solutions.

Specific Program Requirements

CIS majors must complete a total of 120 credits.

These credits include 36 credit hours of general education, 10 credits of quantitative analysis, 9 credits of non-CIS related courses, 52 credits in CIS major courses, 1 open elective, and 12 credits of Cyber Security Concentration.

CIS majors are encouraged to complete a minor in Business Administration or another Business-related minor.

Course	Title	Credits
General Education ¹		36
Quantitative Analysis Requirement		10
MATH 220	Quantitative Analysis for Business	4
BSAD 265	Inferential Statistics & Problem Solving	3
BSAD 360	Advanced Business Statistics	3
Required Related Courses		9
BSAD 270	Business Communications	3
MGMT 201	Principles of Management	3
MGMT 368	Project Management	3
CIS Major Courses		52

CIS 105	Introduction to Access DBMS	1
CIS 150	Introduction to Computer Information Systems	3
CIS 171	Introduction to Java Programming	4
CIS 210	Introduction to Cyber Security	3
CIS 240	SYSTEMS ANALYSIS & DESIGN	3
CIS 250	Introduction to Business Analytics	3
CIS 271	Advance Program Design With Java	4
CIS 289	Network Concepts	3
CIS 311	Introduction to Web Development	3
CIS 315	Linux Fundamentals	3
CIS 350	Database Management	3
CIS 432	Senior Professional Project	6
CIS 493	Senior Seminar	1
Open Electives		1
Cyber Security Concentration		12
CIS 401	Network Systems Administration	3
CIS 460	Cyber Security & Defense	3.0
CIS 461	IT Security Risk Management	3
CIS 462	Computer Forensics	3
Total Credits		120

¹ General Education courses must include the courses listed under "Specific General Education Requirements."

Specific General Education Requirements

Course	Title	Credits
Humanities		
CID 103	Speaking & Listening	3
Social Science		
ECON 201 & ECON 202	Principles of Macroeconomics (GT-SS1) and Principles of Microeconomics (GT-SS1)	6
Mathematics		
MATH 101	Introductory College Mathematics (GT-MA1)	3

Specific Graduation Requirements

- Students majoring in computer information systems must maintain grades of C or higher in all CIS courses. In addition, all required CIS prerequisites must be completed with a grade of C or higher.
- Students must complete at least 120 semester hours in an approved program of study, including 52 hours in the major.
- Students must complete a minimum of 21 credits of CIS upper-division course work. At least 16 of these upper-division CIS credits must be taken in residence.
- Students must complete a course planning worksheet and participate in the advisement process with a CIS faculty advisor.

Summary of Graduation Requirements (CIS)

General Education: 36¹
 Quantitative Analysis Requirement: 10
 Required Related: 9
 Open Electives: 13
 Major: 52

TOTAL (minimum credits): 120

Planning Sheet

Disclaimer: The Planning Sheet is designed as a guide for student's planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of an academic advisor. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should become familiar with the catalog in effect at the time in which they entered the institution.

Course	Title	Credits
Year 1		
Fall		
CIS 100	Introduction to Word	1
CIS 103	Introduction to PowerPoint	1
CIS 104	Introduction to Excel Spreadsheets	1
CIS 105	Introduction to Access DBMS	1
CIS 150	Introduction to Computer Information Systems	3
ENG 101	Rhetoric & Writing I (GT-CO1)	3
MATH 101	Introductory College Mathematics (GT-MA1)	3
Credits		13
Spring		
CIS 171	Introduction to Java Programming	4
CIS 185	PC Architecture	3
ENG 102	Rhetoric & Writing II (GT-CO2)	3
MATH 220	Quantitative Analysis for Business	4
Credits		14
Year 2		
Fall		
CID 103	Speaking & Listening	3
CIS 240	Systems Analysis & Design	3
CIS 315	Linux Fundamentals	3
ECON 201	Principles of Macroeconomics (GT-SS1)	3
General Education		4
Credits		16
Spring		
BSAD 265	Inferential Statistics & Problem Solving	3
CIS 271	Advanced Program Design with Java	4
CIS 289	Network Concepts	3
MGMT 201	Principles of Management	3
General Education		3
Credits		16
Year 3		
Fall		
BSAD 360	Advanced Business Statistics	3
CIS 311	Introduction to Web Development	3
CIS 350	Database Management	3
ECON 202	Principles of Microeconomics (GT-SS1)	3
General Education		4
Credits		16
Spring		
BSAD 270	Business Communications	3
General Education		6
Elective	3 credits must be upper division CIS course.	6
Credits		15
Year 4		
Fall		
MGMT 368	Project Management	3
CIS 401	Network Systems Administration	3
CIS 462	Computer Forensics	3

Elective		7
Credits		16
Spring		
CIS 432	Senior Professional Project	6
CIS 493	Senior Seminar	1
CIS 460	Cyber Security & Defense	3
CIS 461	IT Security Risk Management	3
Credits		13
Total Credits		119