

COMPUTER INFORMATION SYSTEMS, B.S.

Computer Information Systems at St. Scholastica is an innovative alternative to the computer science programs offered at many colleges and universities. Students in the program learn current and emerging computer technologies and the means to apply these system technologies in solving organizational problems. In addition to the core computer concepts, students select a specific application concentration in business analysis, cyber security, health informatics, mathematics, or software development. Students also may seek departmental approval for a custom-designed concentration.

Graduates find work in a variety of large and small organizations as software developers, data analysts, web developers, application programmers, database specialists and business/system analysts. Some graduates are working for computer consulting firms or working as entrepreneurs, while others are managing the information systems of large and small organizations.

Contact Information

cis@css.edu

Learning Outcomes

The student completing the Computer Information Systems major will be able to:

- Analyze, design, and construct solutions to simple and complex problems.
- Research, evaluate, select and apply technologies and methodologies to meet organizational needs.
- Effectively communicate technical ideas with team members and stakeholders through oral presentations, written documents, and software documentation.
- Articulate and apply personal and organizational values within the context of professional codes of ethics and the Benedictine values.

Requirements

Students must achieve the following program requirements for all courses listed under Program Requirements and Program Required Courses for the Computer Information Systems major.

Program Requirements

Major Credits: 61-65

Major Residency Credits: 16

Minimum GPA: 2.0

Program Required Courses

CIS majors must complete the following required courses and at least one of the concentrations below.

Code	Title	Credits
Required Courses		
CIS 1001	Computer Science Principles	4
CIS 2011	Computer Architectures	4
CIS 2085	Programming I with/Java	4
CIS 3107	Database Modeling	4

CIS 3108	Systems Analysis and Design	4
CIS 4042	Computer Security	2
CIS 4108	Project Management	2
CIS 4109	Capstone Project	4
CIS 4555	Systems Development Internship	1
ENG 3364/ MGT 3150	Management Communication: Written	4
Total Credits		33

Business Analysis Concentration

Code	Title	Credits
Core Courses		
33		
Concentration Courses		
ACC 2210	Principles of Financial Accounting	4
CIS 3205	Information Systems	4
CIS 4041	Web Design	4
MGT 2120	Principles of Management	4
Select one of the following:		
FIN 3550	Business Statistics	
MGT 3130	Business Research & Decision-Making	
MTH 2442	Introduction to Data Analysis and Applied Statistics	
MTH 4411	Probability and Statistics I	
PSY 3331	Statistics	
Elective Courses		12
CME 2200	Presentation and Impact	
CME 2221	Conflict in Communication	
CME 3101	Small Group Communication	
FIN 3420	Financial Management	
MGT 3550	Organizational Behavior	
MGT 4160	Legal Aspects of Management	
MKT 2320	Principles of Marketing	
Total Credits		65

Custom Concentration

Code	Title	Credits
Core Courses		
33		
Concentration Courses		
A 32-credit concentration approved by the CIS department chairperson		32
Total Credits		65

Cybersecurity Concentration - Online Campus Only

Code	Title	Credits
Core Courses		
33		
Concentration Courses		
CIS 2777	Topics (CIS 1745 Network Administration: Unix)	3
CIS 2777	Topics (CIS 1810 Network Administration: Security)	3
CIS 2777	Topics (CIS 1946 CISCO Networking I)	3
CIS 2777	Topics (CIS 1947 CISCO Networking II)	3
CIS 3777	Topics (CIS 2811 Intrusion Detection & Prevention Systems Fundamentals)	3

CIS 3777	Topics (CIS 2812 Network Security Fundamentals)	3
CIS 3777	Topics (CIS 2813 Network Forensics & Incident Response)	3
CIS 3777	Topics (CIS 2814 Ethical Hacking & System Defense)	3
CIS 3777	Topics (CIS 2815 Cloud Computing)	3
CIS 3777	Topics (CIS 2976 Emerging Technologies in Information Systems)	1
Total Credits		61

Health Informatics Concentration

Code	Title	Credits
Core Courses		33
CIS 3205	Information Systems	4
HIM 2101	Medical Language	3
HIM 2102	Introduction to Pharmacotherapeutics	1
HIM 2110	Concepts and Principles of Health Information Management	2
HIM 2111	HIM Technologies in Practice	2
HIM 3132	Medicolegal Issues	4
HIM 4222	Clinical Data Management	3
HIM 4415	Health Data Analytics	4
HSC 2203	U.S. Healthcare System	4
Select one of the following:		4
FIN 3550	Business Statistics	
MTH 2442	Introduction to Data Analysis and Applied Statistics	
MTH 4411	Probability and Statistics I	
PSY 3331	Statistics	
Total Credits		64

Mathematics Concentration - Duluth Campus Only

Code	Title	Credits
Core Courses		33
Concentration Courses		
CIS 2087	Programming II w/Java	4
CIS 3089	Data Structures and Algorithm Analysis	4
CIS 3115	Machine Learning for Data Science	4
MTH 2221	Calculus I	4
MTH 2222	Calculus II	4
MTH 2401	Discrete Mathematics I	4
MTH 3322	Linear Algebra	4
Select one of the following:		4
MTH 2442	Introduction to Data Analysis and Applied Statistics	
MTH 4411	Probability and Statistics I	
Total Credits		65

Software Development Concentration

Code	Title	Credits
Core Courses		33
Concentration Courses		
CIS 2087	Programming II w/Java	4

CIS 3089	Data Structures and Algorithm Analysis	4
CIS 3115	Machine Learning for Data Science	4
CIS 3230	Game Design and 3-D Modeling	4
CIS 3285	Software Design	4
CIS 3334	Mobile Device Programming	4
CIS 4041	Web Design	4
CIS 4200	Full-Stack Web Development	4
Total Credits		65

Degree Requirements

To graduate from The College of St. Scholastica, baccalaureate students must meet the following minimum degree requirements.

Total Credits: 128

Upper Division Credits: 42

Residency Requirement: 32

Minimum GPA: 2.0