

Software Development

The Software Development major prepares students to be Software Development professionals who apply computer science, business, and information systems to create solutions for various application areas. Students will learn both the theory and practice of the profession, how to work in groups to complete large software projects, and appropriate ethical standards.

Computer science is a rapidly changing profession, and the Mount Mercy computer science program endeavors to teach, model, and demonstrate the most modern professional practices. Students with a Computer Information Systems degree find excellent employment opportunities in almost all industries.

* NOTE: Computer science courses taken seven or more years ago are subject to review by the department before awarding credit for a major or minor in Software Development.

SOFTWARE DEVELOPMENT MAJOR

Required:

BA 250	Technology & Communication In Business	3
BN 204	Principles Of Management	3
BN 340	Management Information Systems	3
BN 377	Project Management	3
CS 105	Fundamentals Of Computer Science	4
CS 106	Data Structures	4
CS 190	Computer Organization	4
CS 203	Information Ethics	3
CS 235	Systems Programming Concepts	4
CS 326	Information Systems Analysis	3
CS 388	Database Systems	4
CS 435	Senior Project: Computer Science	4
DS 101	Introduction to Data Science I	3
MA 162	Discrete Mathematics	3

Choose One of the Following: 3-4

CS 302	Programming Languages	
CS 389	Algorithm Analysis	
CS 395	Web Programming	

Choose One of the Following: 4

CS 340	Game Design and Development	
CS 341	Mobile Development	

Free Elective: 3

Choose one elective with course code BA, BC, BK, BN, CS, or EC (or other approved course)		
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Total Hours 58-59

Academic Requirements

A grade of C or above (C- does not count) is required in all courses in the major and their prerequisites.

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CS 105	Fundamentals Of Computer Science	4
CS 106	Data Structures	4
CS 203	Information Ethics	3
CS 326	Information Systems Analysis	3

CS 388	Database Systems	4
MA 162	Discrete Mathematics	3

Choose One of the Following: 3-4

CS 302	Programming Languages	
CS 389	Algorithm Analysis	
CS 340	Game Design and Development	
CS 341	Mobile Development	
CS 395	Web Programming	

Total Hours 27-28

The following is the typical sequence of courses required for the major*:

Freshman

Fall	Hours	Winter	Hours	Spring	Hours
CS 105	4	Domain	3	CO 101	3
MA 162	3			CS 106	4
Writing Competency	4			DS 101	3
Portal	3			Domain	3
		14			13

Sophomore

Fall	Hours	Winter	Hours	Spring	Hours
CS 190	4	CS 203	3	BA 250	3
BN 204	3			BN 340	3
Domain	3			CS 235	4
Domain	3			Domain	3
				Domain	3
		13			16

Junior

Fall	Hours	Winter	Hours	Spring	Hours
CS 326	3	Elective	3	CS 395 or 302	4
CS 388	4			Science Domain with Lab	4
Domain	3			Domain	3
Domain	3			Domain	3
Elective	1				
		14			14

Senior

Fall	Hours	Winter	Hours	Spring	Hours
CS 341	4	BN 377	3	CS 435	4
ME 450	1			Elective	3
Elective	3			Elective	3
Elective	3			Elective	3
Elective	3				
		14			13

Total Hours: 123

Note: Elective courses could be used for a second major, a minor, a course of interest, internship or study abroad experience.

Note: See the Curriculum section (<http://catalog.mtmercy.edu/curriculum/#corecurriculumtext>) for more information on Portal, Competency, Domain, and Capstone courses.

***Disclaimer**

The course offerings, requirements, and policies of Mount Mercy University are under continual examination and revision.

This *Catalog* presents the offerings, requirements, and policies in effect at the time of publication and in no way guarantees that the offerings, requirements, and policies will not change.

This plan of study represents a typical sequence of courses required for this major. It may not be applicable to every student. Students should contact a department faculty member to be sure of appropriate course sequence.