

Bachelor of Science in Computer & Information Technology - Software Development Emphasis

Program Curriculum

120 credits

DSU General Education Requirements

All DSU General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements, but courses must be equivalent to DSU's minimum General Education standards in American Institutions, English, and Mathematics.

Code	Title	Hours
General Education Core Requirements (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		
English		3-7
Mathematics		3-5
American Institutions		3-6
Life Sciences		3-10
Physical Sciences		3-5
Laboratory Science		0-1
Fine Arts		3
Literature/Humanities		3
Social & Behavioral Sciences		3
Exploration		3-5

Code	Title	Hours
Core Discipline Requirements		
CS 1400	Fundamentals of Programming	3
CS 1410	Object Oriented Programming	3
CS 2420	Introduction to Algorithms and Data Structures	3
CS 2450	Software Engineering	3
CS 2810	Computer Organization and Architecture	3
CS 3005	Programming in C++	3
CS 3200	Web Application Development I	3
CS 4307	Database Design & Management	3
CS 4600	Senior Project	3
ENGL 3010	Business Communication and Ethics	3
IT 1100	Introduction to Unix/Linux	3
MATH 1210	Calculus I (MA)	4
WEB 1400	Web Design I: Fundamentals	3

Discipline Elective Requirements

Complete eight of the following courses:

CS 3010	Mobile Application Development for Android	3
CS 3020	Mobile Application Development: iOS	3
CS 3400	Operating Systems	3
CS 3410	Distributed Systems	3
CS 3440	Software Practices	3
CS 3500	Application Development	3
CS 3520	Programming Languages	3
CS 3600	Graphics Programming	3
CS 4200	Web Application Development II	3
CS 4300	Artificial Intelligence	3
CS 4550	Compilers	3
IT 2400	Intro to Networking	3

Complete nine credits from the following courses: (Choices from above may not be repeated here)

CS 3010	Mobile Application Development for Android	3
CS 3020	Mobile Application Development: iOS	3
CS 3310	Discrete Mathematics	3
CS 3400	Operating Systems	3
CS 3410	Distributed Systems	3
CS 3440	Software Practices	3
CS 3500	Application Development	3
CS 3510	Advanced Algorithms/Data Structures	3
CS 3520	Programming Languages	3
CS 3530	Computational Theory	3
CS 3600	Graphics Programming	3
CS 4200	Web Application Development II	3
CS 4300	Artificial Intelligence	3
CS 4550	Compilers	3
CS 4920R	Internship	1-3
CS 4990	Sem in Computer Science	3
CS 4991R	Competitive Programming	0.5
IT 2400	Intro to Networking	3
IT 3100	Systems Design and Administration I	3
IT 3110	System Automation	3
IT 3150	Windows Servers	3
IT 4200	DevOps Lifecycle Management	3
IT 4500	Information Security	3
MATH 1220	Calculus II (MA)	4
MATH 2210	Multivariable Calculus (MA)	4
MATH 2270	Linear Algebra	3
MATH 2280	Ordinary Differential Equations	3
MATH 3400	Probability & Statistics	3
WEB 3400	Web Design II: Essentials	3

¹ If not used to fulfill a core requirement.

NOTE: A course may only be used to fulfill one program requirement. Dual-listed courses may only be used once to fill requirements. Consult course descriptions in the current catalog to verify dual-listed courses.

Graduation Requirements

1. Complete a minimum of 120 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits (3000 and above).
3. Complete at least 30 upper-division credits at DSU for institutional residency.
4. Cumulative GPA 2.0 or higher.
5. Grade C- or higher in each Core Discipline and Elective Requirement course.

Graduation Plan

Course	Title	Hours
1st Year		
Fall Semester		
First Year Recommended Elective		2
CS 1400	Fundamentals of Programming	3
IT 1100	Introduction to Unix/Linux	3
ENGL 1010 or ENGL 1010D	Introduction to Writing (EN) or Introduction to Writing (EN)	3
MATH 1210	Calculus I (MA) (meets General Education (Mathematics) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext))	4

Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.

	Hours	15
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Spring Semester

CS 1410	Object Oriented Programming	3
IT 2400	Intro to Networking	3
WEB 1400	Web Design I: Fundamentals	3
ENGL 2010	Intern Writing Selected Topics: (EN)	3
General Education (Social & Behavioral Sciences) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3

Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.

	Hours	15
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2nd Year

Fall Semester

CS 2420	Introduction to Algorithms and Data Structures	3
CS 2810	Computer Organization and Architecture	3
CS 3005	Programming in C++	3
General Education (American Institutions) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Education (Fine Arts) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3

Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.

	Hours	15
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Spring Semester

CS 3010	Mobile Application Development for Android	3
CS 3410	Distributed Systems	3
CS 4307	Database Design & Management	3
General Education (Life Science) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Education (Physical Science) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Education (Lab Science) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		1

Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.

	Hours	16
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3rd Year

Fall Semester

CS 3020	Mobile Application Development: iOS	3
CS 3500	Application Development	3
CS 3520	Programming Languages	3
General Education (Literature/Humanities) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Education (Exploration) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3

Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.

	Hours	15
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Spring Semester

CS 3600	Graphics Programming	3
CS 4550	Compilers	3
Software Development Elective		3
General Elective		3
General Elective		3

Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.

	Hours	15
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4th Year

Fall Semester

CS 2450	Software Engineering	3
CS 3200	Web Application Development I	3
CS 4300	Artificial Intelligence	3
General Elective		3
General Elective		3

Milestones & Notes: Apply for graduation (SPRING DEADLINE NOV. 1, FALL DEADLINE APR. 1). Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.

	Hours	15
Spring Semester		
CS 4600	Senior Project	3
ENGL 3010	Business Communication and Ethics	3
	Software Development Elective	3
	General Elective	3
	General Elective	2
Milestones & Notes: Double check with advisor for final classes. Maintain minimum program grade requirements. Congratulations!		
	Hours	14
	Total Hours	120