

Bachelor of Science in Computer Science

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
Computer Science Core 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 3400	Operating Systems ¹	3
or CS 3410	Distributed Systems	
CS 3510	Advanced Algorithms/Data Structures	3
CS 3520	Programming Languages	3
CS 3530	Computational Theory	3
CS 3600	Graphics Programming	3
CS 4300	Artificial Intelligence	3
CS 4307	Database Design & Management	3
CS 4550	Compilers	3
CS 4600	Senior Project	3

Math & Science Core Requirements

CS 3310	Discrete Mathematics	3
MATH 1210	Calculus I (MA)	4
MATH 1220	Calculus II (MA)	4
BIOL 1610 & BIOL 1615	Principles of Biology I (LS) and Principles of Biology I Lab (LAB)	5
PHYS 2210 & PHYS 2215	Physics/Scientists Engineers I (PS) and Physics/Scientists Engineers Lab (LAB)	5

Math & Science Elective Requirements

Complete eight (8) credits from the following, one of which must have a MATH prefix:

MATH 2210	Multivariable Calculus (MA)	4
MATH 2270	Linear Algebra	3

MATH 2280	Ordinary Differential Equations	3
MATH 3400	Probability & Statistics	3
BIOL 1620 & BIOL 1625	Principles of Biology II and Principles of Biology II Lab	5
BIOL 2060 & BIOL 2065	Principles of Microbiology and Principles of Microbiology Lab	4
CHEM 1210 & CHEM 1215	Principles of Chemistry I (PS) and Principles of Chemistry I Lab (LAB)	5
CHEM 1220 & CHEM 1225	Principles of Chemistry II and Principles of Chemistry II Lab	5
PHYS 2220 & PHYS 2225	Physics/Scientists EngineersII and Physics/Scientists Engineers II Lab	5

Computer Science Elective Requirements

Complete at least nine (9) credits from the following (courses used to complete Core Discipline Requirements may not be repeated here):

CS 3010	Mobile Application Development for Android	3
CS 3020	Mobile Application Development: iOS	3
CS 3400 or CS 3410	Operating Systems ¹ Distributed Systems	3
CS 3440	Software Practices	3
CS 3500	Application Development	3
CS 4200	Web Application Development II	3
CS 4920R	Internship	1-3
CS 4990	Sem in Computer Science	3
CS 4991R	Competitive Programming	0.5
IT 3100	Systems Design and Administration I	3
IT 3110	System Automation	3
IT 4200	DevOps Lifecycle Management	3
IT 4500	Information Security	3
WEB 1400	Web Design I: Fundamentals	3
WEB 3400	Web Design II: Essentials	3

¹ If not used to fulfill 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
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
CS Elective (WEB 1400)		3

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

	Hours	15
Spring Semester		
BIOL 1610 & BIOL 1615	Principles of Biology I (LS) and Principles of Biology I Lab (LAB) (meets General Education (Life Sciences & Lab Science) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext))	5
CS 1410	Object Oriented Programming	3
MATH 1220	Calculus II (MA)	4
ENGL 2010	Intern Writing Selected Topics: (EN)	3
Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.		
	Hours	15

2nd Year**Fall Semester**

PHYS 2210 & PHYS 2215	Physics/Scientists Engineers I (PS) and Physics/Scientists Engineers Lab (LAB) (meets General Education (Physical Sciences) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext))	5
CS 3005	Programming in C++	3
CS 2420	Introduction to Algorithms and Data Structures	3
Math/Science Elective		3
General Elective		1
Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.		
	Hours	15

Spring Semester

CS 2810	Computer Organization and Architecture	3
CS 3600	Graphics Programming	3
CS 4307	Database Design & Management	3
Math/Science Elective		3
General Elective		3
Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.		
	Hours	15

3rd Year**Fall Semester**

CS 3200	Web Application Development I	3
CS 3310	Discrete Mathematics	3
CS 3530	Computational Theory	3
General Education (American Institutions) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Education (Literature/Humanities) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
Milestones & Notes: Meet with your program advisor. Maintain minimum prerequisite and program grade requirements.		
	Hours	15

Spring Semester

CS 3400 or CS 3410	Operating Systems or Distributed Systems	3
CS 3510	Advanced Algorithms/Data Structures	3
CS Elective		3
General Education (Social & Behavioral Sciences) (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

4th Year**Fall Semester**

CS 3520	Programming Languages	3
CS 4300	Artificial Intelligence	3
CS Elective		3

General Education (Exploration) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)	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 2450 Software Engineering	3
CS 4550 Compilers	3
CS 4600 Senior Project	3
General Elective	3
General Elective	3
Milestones & Notes: Double check with advisor for final classes. Maintain minimum program grade requirements. Congratulations!	
Hours	15
Total Hours	120