Bachelor of Science in Computer Science

The Bachelor of Science in Computer Science has four basic components:

1. General Education & Institutional Requirements
2. Core Discipline Requirements
3. Discipline Elective Requirements
4. Electives: college-level courses from any prefix to meet Graduation Requirements (p. 2)

Institutional Requirement in Computer Literacy

The DSU Computer Literacy requirement is fulfilled by successfully completing the Computer Science Core Requirement courses CS 1400 Fundamentals of Programming and CS 1410 Object Oriented Programming.

DSU General Education & Institutional Requirements

All DSU General Education and Institutional 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
Institutional Requirement in Computer Literacy (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		
Computer Literacy		0-6
General Education Core Requirements (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		
English		3-7
Information Literacy		0-1
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
Two (2) Global & Cultural Perspectives Courses		0-6
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	4
MATH 1220	Calculus II	4
BIOL 1610 & BIOL 1615	Principles of Biology I and Principles of Biology I Lab	5
PHYS 2210 & PHYS 2215	Physics/Scientists Engineers I and Physics/Scientists Engineers 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	4
MATH 2270	Linear Algebra	3
MATH 2280	Ordinary Differential Equation	3
MATH 3400	Probability & Statistics	3
BIOL 1620 & BIOL 1625	Principles of Biology II and Principles of Biology II Lab	5
CHEM 1210 & CHEM 1215	Principles of Chemistry I and Principles of Chemistry I 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	Systems Design and Administration II	3
IT 4200	Advanced Web Delivery	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 this 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		
CIT 1001	FYE: Computer & Information Technology	1
CS 1400	Fundamentals of Programming (CS 1400 & CS 1410 meet Computer Literacy requriement (catalog.dixie.edu/ programs/generaleducation/#gerequirementstext))	3
ENGL 1010	Introduction to Writing	3
LIB 1010	Information Literacy	1
MATH 1210	Calculus I meets General Education (Mathematics) (catalog.dixie.edu/programs/generaleducation/ #gerequirementstext)	4
CS Elective (WEB 1400)		3
	Hours	15
Spring Semester		
BIOL 1610	Principles of Biology I	5
& BIOL 1615	and Principles of Biology I Lab meets General Education (Life Sciences & Lab Science) (catalog.dixie.edu/ programs/generaleducation/#gerequirementstext)	
CS 1410	Object Oriented Programming (CS 1400 & CS 1410 meet Computer Literacy (catalog.dixie.edu/programs/ generaleducation/#gerequirementstext))	3
MATH 1220	Calculus II	4
ENGL 2010	Interm Writing Selected Topics:	3
	Hours	15
2nd Year		
Fall Semester		
PHYS 2210	Physics/Scientists Engineers I	5
& PHYS 2215	and Physics/Scientists Engineers Labmeets General Education (Physical Sciences) (catalog.dixie.edu/programs/ generaleducation/#gerequirementstext)	
CS 2810	Computer Organization and Architecture	3
CS 3005	Programming in C++	3
CS 2420	Introduction to Algorithms and Data Structures	3
General Elective		2
	Hours	16
Spring Semester		
CS 2450	Software Engineering	3
CS 3600	Graphics Programming	3
Math/Science Core		5
Math/Science Elective		3
	Hours	14
3rd Year		
Fall Semester		
CS 3410	Distributed Systems	3
CS 3520	Programming Languages	3
CS 3310	Discrete Mathematics	3
General Education (American Institutions)		3
General Education (Literature/Humanities)		3
	Hours	15
Spring Semester		
CS 3510	Advanced Algorithms/Data Structures	3
CS 4550	Compilers	3
CS 3000, 4000, or 4010		3
General Education (Social & Behavioral Sciences) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Education (Fine Arts) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
	Hours	15

4th Year

Fall Semester

CS 3530	Computational Theory	3
CS 4300	Artificial Intelligence	3
CS 4307	Database Design & Management	3
General Education (Global & Cultural Perspectives) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Education (Exploration) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
	Hours	15

Spring Semester

CS 4600	Senior Project	3
CS 4550		3
CS Elective		3
General Education (Global & Cultural Perspectives) (catalog.dixie.edu/programs/generaleducation/#gerequirementstext)		3
General Elective		3
	Hours	15
	Total Hours	120