

# B.S. Computer Science

## Program Admissions Requirements

There are no program admission requirements for the B.S. in Computer Science.

## General Education

The listing below includes program requirements that also fulfill General Education requirements.

Code	Title	Credits
Objective 1		6
Objective 2		3
Objective 3 - MATH 1170		4
Objective 4		6
Objective 5 - PHYS 2211		7
Objective 6		6
<b>Students must fulfill Objective 7 or Objective 8</b>		<b>3</b>
Objective 7 - CS 1181 or INFO 1181		
Objective 8		
Objective 9		3
Total Credits		38

## Major Requirements

All required courses for the CS major must be completed with a grade of C- or higher.

Code	Title	Credits
<b>Mathematics and Science Courses:</b>		
MATH 1170	Calculus I (Satisfies General Education Objective 3)	4
MATH 1175	Calculus II	4
MATH 2240	Linear Algebra	3
CS/MATH 1187 or MATH 2287	Applied Discrete Structures Foundations of Mathematics	3
PHYS 2211	Engineering Physics I (Partially satisfies General Education Objective 5)	4
Math or Science Electives <sup>1</sup>		10
<b>Select one course in statistics from the following:</b>		
MATH 3350 or MATH 4450	Statistical Methods Mathematical Statistics I	3
<b>Technical Communication Requirements:</b>		
ENGL 3307 or ENGL 3308	Professional and Technical Writing Business Communications	3
<b>Required Computer Science and Related Courses:</b>		
CS/INFO 1181	Computer Science and Programming I (Satisfies General Education Objective 7)	3
CS 1337	Computer Organization and Architecture	3
CS 2235	Data Structures and Algorithms	3
CS 2263	Advanced Object-Oriented Programming	3
CS 3305	Introduction to Computational Theory	3

CS 3316	Social Issues and Professional Practices in Computing	3
CS 3321	Introduction to Software Engineering	3
CS 3337	Secure Systems and Networks	3
CS 4412	Advanced Algorithms	3
CS 4416	Foundations in Cybersecurity and Resilience	3
CS 4461	Secure Operating Systems	3
CS 4488	Capstone Project	3
INFO 4407	Database Design and Implementation	3
The CS Major also requires 9 additional 4000-level CS elective credits or ECE 4451 or ECE 4451L.		9
Total Credits		82

<sup>1</sup> Ten (10) additional credits are required from math, biological science, chemistry, geoscience, or physics. At least six (6) of the ten (10) credits must be at the 2000-level or higher (with the exception of MATH 2256, MATH 2257, BIOL 2213, BIOL 2214, and BIOL 2280).

## Degree Totals

Code	Title	Credits
	Program Admission Requirements	0
	General Education	39
	Major Requirements (Required General Education credits removed.)	68
	Upper Division Free Electives	3
	Free Electives	10
Total Credits		120

ISU Degree Requirements (<http://coursecat.isu.edu/undergraduate/degrequirements/>)

ISU General Education (<http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>)

Major Academic Plan (MAP)