

# COMPUTER SCIENCE BACHELOR OF SCIENCE

## Program Overview

The major in Computer Science enables a student to develop an understanding of the theory and practice of computing within the context of a liberal arts and sciences education.

In addition to computer programming, majors in computer science study computer languages, logic, data structures, and applications of computing. The art and science of problem-solving are emphasized.

Students who desire a more scientific emphasis will complete the College of Arts and Sciences requirements for a B.S. degree; the computer science requirements for the B.A. and B.S. degrees are the same.

All programs are to be planned in careful consultation with a departmental advisor and be approved by that advisor.

## B.S. Degree Requirements

The Bachelor of Science degree is intended for students who desire more of a scientific emphasis. Students who desire less of a scientific emphasis should consider the Bachelor of Arts degree. All programs are to be planned in careful consultation with a departmental advisor and be approved by that advisor.

Students must also satisfy the special requirements for a Bachelor of Science (B.S.) Degree

Code	Title	Hours
<b>Core Courses</b>		
CS 065	INTRODUCTION TO COMPUTER SCIENCE I	3
CS 066	INTRODUCTION TO COMPUTER SCIENCE II	3
CS 067	OBJECT-ORIENTED PROGRAMMING	3
CS 083	DIGITAL ETHICS	3
CS 130	COMPUTER ORGANIZATION AND ASSEMBLY	3
CS 137	ALGORITHM ANALYSIS	3
CS 188	SOFTWARE ENGINEERING	3
CS 191	COMPUTER SCIENCE CAPSTONE	3
MATH 050	CALCULUS I	3
Select one of the following:		3
MATH 054	DISCRETE MATHEMATICS	
MATH 101	MATHEMATICS REASONING	
<b>Upper Division Component</b>		
Computer Science Upper Division Component:		
Select nine hours from the following:		9
Computer Science Courses 100 or above <sup>1</sup>		
IS 145	WEB SITE TECHNOLOGY	
IS 150	NETWORK MANAGEMENT	
IS 160	DATABASE MANAGEMENT	
Additional Upper Division Component:		
Select six hours from the following:		6
Computer Science Courses 100 or above <sup>1</sup>		
IS 145	WEB SITE TECHNOLOGY	
IS 150	NETWORK MANAGEMENT	

### IS 160 DATABASE MANAGEMENT

Upper-Division Courses in Mathematics, Statistics, Actuarial Science, or Quantitative Methods <sup>2</sup>

**Total Hours**

**45**

<sup>1</sup> Other computer science courses numbered 100 or above, excluding CS 140 COOPERATIVE EDUCATION, the tutoring course, and the Capstone course

<sup>2</sup> MATH 101 MATHEMATICS REASONING and CS 114 SYMBOLIC LOGIC may not both be counted for the major.

Neither MATH 140 COOPERATIVE EDUCATION, CS 140 COOPERATIVE EDUCATION, CS 190 CASE STUDIES IN DATA ANALYTICS, the tutoring course, nor the MATH/CS Capstone courses may not be counted

In addition to programmatic requirements, students are responsible for satisfying all requirements of the Drake Curriculum (<https://catalog.drake.edu/undergraduate/academic-information/drake-curriculum/>), including Areas of Inquiry (AOI)

Student must also satisfy university graduation requirements (<https://catalog.drake.edu/undergraduate/academic-information/graduation-requirements/>) for all undergraduate students..