

University of Indianapolis – Shaheen College of Arts & Sciences
2025-2026 Curriculum Guide for Computer Science Majors (CSCI)
 Bachelor of Science in Computer Science

Required Computer Science Courses:

- **CSCI 155** Introduction to Programming (3)
- **CSCI 156** Introduction to Object-Oriented Programming (3)
- **CSCI 230** Computer Architecture & Parallel Computing (4)
- **CSCI 240** Data Structures and Algorithms (4)
- **CSCI 340** Computer Algorithms (4)
- **CSCI 310** Graphical User Interfaces & Game Programming (4)
- **SWEN 310** Operating Systems (3)
- **CSCI 350** Programming Languages (4)
- **CSCI 370** Database Systems (4)
- **CSCI 396** Software Entrepreneurship I (1)
- **CSCI 398** Software Entrepreneurship II (1)
- **CSCI 420** Computer Networks and Distributed Computing (4)
- **CSCI 421** Data Encryption & Network Security (4)
- **CSCI 496** Computer Science Capstone Lab I (1)
- **CSCI 498** Computer Science Capstone Lab II (2)

Students must complete **at least six credit hours** of **CSCI** or **SWEN** courses at the **200 level or higher** outside of the already required CSCI and SWEN courses, such as the following examples:

- **SWEN 200** Introduction to Software Engineering (3)
- **PHYS 280** Scientific Computing
- **CSCI 355** Mobile Development (4)
- **CSCI 390** Internet Programming (4)
- **CSCI 396** Software Entrepreneurship I (1)
- **CSCI 398** Software Entrepreneurship II (1)
- **CSCI 424** Big Data Mining (4)
- **CSCI 460** Artificial Intelligence (4)

Required Engineering, Mathematics, and Natural Science Courses:

- **ENGR 185** Orientation to Engineering (1)
- **ENGR 196** Introduction to Engineering (Design Lab I) (3)
- **ENGR 198** Engineering Design Lab II (1)
- **MATH 190** Calculus and Analytic Geometry I (4)
- **MATH 191** Calculus and Analytic Geometry II (4)
- **MATH 195** Discrete Mathematics (4)
- **MATH 280** Linear Algebra (4)
- **Natural Science** A minimum of 6 credits from the disciplines of Physics, Chemistry, or Biology which must include a laboratory course (6) ([list](#))

NOTE: The Computer Science major requires a total of 78 hours.

NOTE: A grade of C- (1.7 on a 4.0 scale) or higher is required in all courses applying toward the Computer Science Major. The Bachelor of Arts and Bachelor of Science degree requires a minimum of 120 hours. See the General Education Core Guide for additional course requirements.

REMEMBER: If you have any questions about the Computer Science Major and its requirements, contact a faculty advisor from the R.B.Annis School of Engineering (Ken Reid: 788-3657, Annis Hall) or your academic advisor. Courses and requirements sometimes change so keep in contact with your advisor.