

# Computer Science

## Bachelor of Science

### Description

The Bachelor of Science (BS) in Computer Science is a robust program that covers the fundamentals of computing technology, adapting to the constantly evolving tech landscape. Courses span various programming languages, platforms, and operating systems, blending hands-on and theoretical study. With a flexible curriculum and diverse electives, students can customize their education to focus on specific interests, such as Cybersecurity, Data Science, Esports, Networking, or Software Systems. Throughout the program, students develop skills to analyze complex problems, design and evaluate solutions, communicate effectively, make ethical decisions, and lead teams. This program prepares students for diverse career opportunities in high-demand, high-paying roles like programmer, systems analyst, app developer, and more.

### Admissions Requirements

- A high school diploma or GED
- GPA of 2.0 or higher
- Official transcripts from all previously attended institutions
- Completed application with Carolina University

### Graduation Requirements

- Shall have maintained a minimum cumulative GPA of 2.0;
- Shall have passed all courses in the curriculum and made a C- or better in professional core courses;
- Shall have completed at least 24 of the final 30 hours with Carolina University.

### Courses

#### General Education Core (36 Credit Hours) - must include the following:

##### [GC 205 - Calculus I](#)

3 Credit Hours

##### [GS 201 - Principles of Speech](#)

3 Credit Hours

##### [MG 210 - Introduction to Statistics](#)

3 Credit Hours

#### Professional Core (69 Credit Hours)

##### [CS 105 - Introduction to Computer Science](#)

3 Credit Hours

##### [CS 110 - Programming I](#)

3 Credit Hours

##### [CS 111 - Programming II](#)

3 Credit Hours

[CS 150 - Scripting](#)

3 Credit Hours

[CS 210 - Algorithms and Data Structures](#)

3 Credit Hours

[CS 220 - Object Oriented Programming](#)

3 Credit Hours

[CS 300 - Software Engineering](#)

3 Credit Hours

[CS 310 - Algorithms & Data Structures II](#)

3 Credit Hours

[CS 315 - Database/SQL](#)

3 Credit Hours

[CS 320 - Advanced OOP](#)

3 Credit Hours

[CS 330 - Networking](#)

3 Credit Hours

[CS 340 - Computer Architecture and Organization](#)

3 Credit Hours

[CS 410 - Operating Systems](#)

3 Credit Hours

[CS 425 - Advanced Database/SQL](#)

3 Credit Hours

[CS 430 - Computer Security Fundamentals](#)

3 Credit Hours

[CS 435 - Ethical Hacking](#)

3 Credit Hours

[CS 450 - Introduction to Unix](#)

3 Credit Hours

[CS 475 - Senior Project I](#)

3 Credit Hours

[CS 480 - Senior Project II](#)

3 Credit Hours

[CS 485 - Senior Project III](#)

3 Credit Hours

[CS 490 - Senior Project IV](#)

3 Credit Hours

[EN 215 - Technical Writing](#)

3 Credit Hours

[GC 206 - Calculus II](#)

3 Credit Hours

### **Professional Electives (18 Credit Hours)**

[CS 205 - Python Programming](#)

3 Credit Hours

[CS 222 - C# Programming](#)

3 Credit Hours

[CS 250 - Cloud Computing](#)

3 Credit Hours

[CS 305 - DevOps Engineering](#)

3 Credit Hours

[CS 325 - Introduction to Routing and Switching](#)

3 Credit Hours

[CS 335 - Network Protocols and Services](#)

3 Credit Hours

[CS 350 - User Interface Design](#)

3 Credit Hours

[CS 355 - Information Architecture](#)

3 Credit Hours

[CS 360 - Web Database Applications](#)

3 Credit Hours

[CS 365 - Information Security](#)

3 Credit Hours

[CS 375 - Java](#)

3 Credit Hours

[CS 380 - Web Design](#)

3 Credit Hours

[CS 415 - Network Security](#)

3 Credit Hours

[CS 420 - Advanced Routing and Switching](#)

3 Credit Hours

[CS 440 - Windows Client Server](#)

3 Credit Hours

[CS 445 - Advanced Defense and Countermeasure](#)

3 Credit Hours

[CS 451 - Digital Forensics](#)

3 Credit Hours

[CS 499 - Special Topics](#)

3 Credit Hours

[ES 210 - Introduction to Esports](#)

3 Credit Hours

[ES 220 - Contemporary Issues in Esports](#)

3 Credit Hours

[ES 230 - Games Design](#)

3 Credit Hours

[ES 310 - Broadcasting and Communication](#)

3 Credit Hours

[ES 320 - Coaching and Team Management](#)

3 Credit Hours

[ES 330 - Social Media Management](#)

3 Credit Hours

[ES 410 - Business Senior Capstone](#)

3 Credit Hours

[ES 420 - Regulation and Policy in Esports](#)

3 Credit Hours

[GC 112 - Mathematics II](#)

3 Credit Hours

[IS 210 - Drones](#)

3 Credit Hours

[IS 305 - Introduction to Information Systems](#)

3 Credit Hours

[IS 310 - Introduction to Network Technology](#)

3 Credit Hours

[IS 320 - Information Systems Management and Business](#)

3 Credit Hours

[IS 325 - Business Systems](#)

3 Credit Hours

[IS 330 - Introduction to Data Science](#)

3 Credit Hours

[IS 335 - Machine Learning](#)

3 Credit Hours

[IS 340 - Natural Language Processing](#)

3 Credit Hours

[IS 345 - Neural Networks](#)

3 Credit Hours

[IS 350 - Artificial Intelligence](#)

3 Credit Hours