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