Computer Engineering

Bachelor of Science

Description

The Bachelor of Science (BS) in Computer Engineering program equips students with the knowledge and skills necessary for successful careers in technology-driven fields. Students combine computer science, engineering, and mathematics to evaluate problems and design solutions for digital systems. Given the broad scope of the computer field, students gain knowledge in software, hardware, and related areas such as embedded systems, applications, electronic circuits, and microprocessors. The integrated BS/MS option allows completion of a bachelor's and master's degree in five years if continuously enrolled, placing our students at the forefront of Industry 4.0 (or 4IR) and beyond.

Admissions Requirements

- A high school diploma or GED
- Credentials earned outside of the US must be evaluated by an approved agency
- 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 (38 Credit Hours) - must include the following:

CH 110 - General Chemistry I w/Lab
4 Credit Hours
GC 205 - Calculus I
3 Credit Hours
PY 210 - General Physics I w/Lab
4 Credit Hours

Professional Core (73 Credit Hours)

CN 100 - Introduction to ComputerEngineering
1 Credit Hour
CN 490 - Senior Project I
3 Credit Hours
CN 495 - Senior Project II

3 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 205 - Python Programming
3 Credit Hours
CS 210 - Algorithms and Data Structures
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 430 - Computer Security Fundamentals
3 Credit Hours
CS 435 - Ethical Hacking
3 Credit Hours
EL 205 - Digital System Design w/Lab
4 Credit Hours
EL 210 - General Principles of Electric Circuits I w/Lab
4 Credit Hours
EL 215 - General Principles of Electric Circuits II w/Lab
4 Credit Hours
EL 335 - Semiconductor Devices w/Lab
4 Credit Hours
EL 305 - Embedded Systems
3 Credit Hours
EL 470 - Digital Signal Processing w/Lab
4 Credit Hours
EL 480 - Microprocessor and Microcontroller with Lab
4 Credit Hours
GC 206 - Calculus II
3 Credit Hours
MA 205 - Calculus III
3 Credit Hours
MA 310 - Linear Algebra
3 Credit Hours

Professional Electives [Select from any CS, EL, or IS Course] (12 Credit Hours)