BS in Software Engineering

What is Software Engineering?

The primary characteristic that differentiates engineers from scientists is that engineers design and build things, which solve societal problems. Engineers apply the principles of science and mathematics in building things. Software engineers design and build complex software-intensive systems using a range of computing and engineering technologies.

Producing large-scale, high-quality and secure software requires an approach that is rooted in the rigorous and systematic application of engineering principles and proven industry practices.

Rapid advances in search technologies, digital media, mobile computing, eCommerce, cloud computing, social networking and crowd-sourcing are fundamentally changing the way businesses compete and innovate in the era of software everywhere.

Employment:

Salaries: Mean salary: $73,764 a year

Number of jobs in 2018: Over one million

These are some professional titles that are possible with a BS in Software Engineering:

♦ Computer Programmer
♦ Software Developer
♦ Cloud Software Engineer
♦ Software Engineer
♦ Computer Systems Designer
♦ Web Designer
♦ Technical Writer
♦ Database Administrator
♦ Computer Support Specialist

Program Requirements: Software Engineering Catalog

Concentrations: Data Science and Mobile & Web Development

Credit Hours: 120 (average 15 hours per semester without summer to graduate in four years)

Internship Requirement: None, but opportunities are available (ask your faculty!)

Admissions Requirements:

- **Freshman:** For newly admitted students into ECU (i.e., freshmen), students must be eligible for MATH 1065, as determined by the ECU Department of Mathematics.
- **Change of Majors:** Internal change of majors within ECU must have a 2.5 cumulative ECU GPA minimum eligibility for MATH 2119, as determined by the ECU Department of Mathematics.
- **Transfers:** Transfer students from other institutions must have a 2.5 cumulative transfer GPA and minimum eligibility for MATH 2119, as determined by the ECU Department of Mathematics.
- **Second Degree:** Second Degree students must have a 2.5 cumulative GPA from previous institutions and minimum eligibility for MATH 2119, as determined by the ECU Department of Mathematics.
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Advising Tips

- If you are eligible for MATH 1065: Register for MATH 1065 and an additional 12-13 general education credits.

- If you are eligible for MATH 2119: Register for SENG 1000 and SENG 1010

- Register for 15-16 hours your first semester. This ensures that if you need to withdraw from a course, you are still a full-time student, which could impact financial aid, residency, your ability to remain in the residence hall, etc.

- We recommend that you take a mix of major courses and general education courses each semester to balance your schedule. This may include 2 to 3 courses with labs, along with other courses.

- This program has additional admissions requirements (see reverse side of this document)

- When registering, check the course information to be sure you have met any prerequisites.

- Software Engineering is an On-Campus, Face-to-Face program. You should not expect to take courses online.

- You may see other restrictions when registering, including:
  - Student Attribute Error/Program Restriction most likely mean that you are attempting to register for an online/Distance Education course, typically sections are in the 600’s. These are for students in our online programs only.
  - Prerequisite: You do not have the prerequisite to take this course

Software Engineering at ECU Website