

# B.S.Cp.E. in Computer Engineering

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## Description

The Bachelor of Science in Computer Engineering program prepares students to have an understanding of computer hardware, software, and electrical engineering fundamentals, thereby acquiring knowledge to develop and/or apply many kinds of computing systems, such as microprocessors, computers, smart phones, and Internet of Things (IoT) devices. Students in the program will have knowledge of computer programming languages, hardware description languages, digital logic design, computer organization, electrical and electronics circuit design, and processing of electrical signals. They will have the ability to apply mathematical and statistical methods for understanding, development, and applications of computing devices.

The graduates of the program will be able to pursue (i) employment in electronic chip design/production companies, hardware/software services companies, and all industries requiring electrical and computer engineers, such as automotive, aerospace, defense, utilities and heavy-machinery; and (ii) advanced study in computer engineering or a related field.

## Minimum Total Credit Hours: 126

### General Education Requirements

The following courses are required: Math 261-264 and Math 353; laboratory sciences to be fulfilled by Chem 105, 115 and Phys 211, 212, 221, 222; Writ 100/101 and Writ 102/Liba 102. Students must also complete at least 18 semester hours of 3 hours in humanities chosen from classics, English, history, modern languages, philosophy, religion, African American studies, gender studies, and Southern studies; 3 hours in fine arts chosen from art history, dance, music, and theatre arts (courses emphasizing the enhancement of skills and performance are not acceptable); 3 hours in social science chosen from anthropology, economics, political science, psychology, and sociology; Econ 310; 3 additional hours of humanities or fine arts; and 3 additional hours of humanities, fine arts, or general education.

### Course Requirements

#### Major Coursework Requirements:

Specific requirements for the B.S.Cp.E. program include Math 301; Csci 256, 356, 423, 433; Engr 310, 360, 361; 235, 236, 237, 331, 351, 352, 353, 367, 385, 386, 391, 425, 485, 486; Cp E 431, 461, 462.

#### Coursework for Standard Emphasis:

Specific requirements for the Standard Emphasis include EI E 100; 3 hours selected from Technical Elective I (EI E 391, EI E 431, or EI E 586); 12 hours selected from Technical Elective II (EI E 482, CpE 421, CpE 432 and no more than 3 hours of 300 level or above CSCI course); 3 hours of Technical Elective III (EI E 431, 447, 534, 535, 586, or any other course from Technical Elective I not already completed) for a total of 19 credit hours.

