It takes specialized skills to design and implement the software and hardware that power today’s global society.

**Computer Engineering Overview**

A Bachelor of Science degree in Computer Engineering provides a bridge between the disciplines of electrical engineering and computer science. This program prepares students for the ever-evolving and emerging technologies and advancing electronics in the areas of research, security, manufacturing, medical, communications, government, and consumer product markets.

Students will develop a thorough understanding of engineering, mathematics, digital and analog electronics and control, and gain proficiency in computer languages, computing theory, and computer architecture. A variety of computer-aided design (CAD) tools are utilized to facilitate learning and implementation of design and problem-solving skills, which are the heart of the discipline.

The graduate of this program will obtain the basic education in the first three years. The last year is utilized to explore specific areas of interest. These areas of interest are either software oriented (artificial intelligence, knowledge-based systems, and software design) or hardware oriented (computer or integrated circuit design, robotics, and networking).
Program of Study

The Computer Science program requires 92 semester credit hours including 37 credit hours in the program core and 55 credit hours in additional engineering courses. An additional 40 credit hours will be accumulated through general education requirements. Students are required to complete 132 credit hours to graduate with a degree in Computer Engineering.

Program Core Courses

Computer Engineering

- Chem 103 General Chemistry
- CpE Digital System Design I
- CpE 286 Microprocessor System Design
- CS 101/101a Introduction to Computing I
- EE 233/235 Electrical Engineering I w/ Lab
- Engr 111 Introduction to Engineering I
- Engr 300 Econ. And Management of Engr project
- Math 215 Calculus III
- Math 301 Differential Equations
- Math 323 Probability and Statistics
- ME 223 Materials Science for Engineers

Additional Program Requirements

- CpE 312 Computer Organization
- CpE 315 Digital Systems Design II w/ Lab
- CpE 387 Embedded System Design
- CpE 408 Operating Systems
- CpE 447/448 Logic Synthesis/VLSI Design
- CpE 449 A, B CpE Senior Design Project
- CpE 489 Software Engineering
- CS 102/102a Introduction to Computing II
- CS 227 Discrete Structures
- EE 234/236 Network Analysis II w/ Lab
- EE 348 Electronics I
- EE 360 Controls
- EE 443 Applied Digital Signal Processing
- EE 204 Technical Writing for CpE
- Math 214/314 Linear Algebra/Numerical Analysis