# B.S. in Computer Engineering

The Bachelor of Science in Computer Engineering degree gives the student the opportunity to acquire a broad background in computer design, including embedded control systems, real-time systems, telecommunication systems, and software engineering. The curriculum includes courses in general education, computer science, software engineering, and electrical engineering, and features a capstone senior design. The program's emphasis on real-time embedded control systems and hardware/software interfaces give program graduates employment opportunities beyond graduates of traditional computer engineering programs, including positions in the aerospace and defense industries.

In a few years of completing their undergraduate degree, graduates of the Bachelor of Science in Computer Engineering:

- Have established themselves in successful engineering careers in aviation, aerospace, and related fields and/or are pursuing advanced degrees.
- Are serving society and their professions as involved and responsible citizens, leaders, and role models.
- Are problem solvers, systems thinkers, and innovators.

The program curriculum is designed to facilitate accomplishment of these objectives by program graduates. The program includes significant project work designed to prepare students to work as part of a team on the development of complex systems involving both software and hardware. It allows the student opportunities to develop capabilities in teamwork, designing to requirements, and quality assurance techniques. The Computer Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

## Degree Requirements

The Bachelor of Science in Computer Engineering can be earned in eight semesters assuming appropriate background and full-time enrollment. Successful completion of a minimum of 127 credit hours is required. A minimum cumulative grade point average of 2.0 is needed for all required CEC, CS, EE, SYS and EGR courses that fulfill any degree requirement. To enter this program, students should have demonstrated competence in mathematics, physics, and computer programming in high school, and they should be prepared to enter Calculus and Analytical Geometry I and Computer Science I. If necessary, students can prepare for the program by taking MA 143 before taking MA 241. Students should check the course descriptions before registering for classes to ensure requisite sequencing.

See the Common Year One outline in the Engineering Fundamentals Program Introduction. CS 223 is a required course for this degree program.

## Combined MSECE Program Option

Exceptional students in undergraduate engineering programs, including the Bachelor of Science in Computer Engineering program, are invited to apply to the Combined Master of Science Option in Electrical and Computer Engineering. This program enables students to pursue a MSECE degree with only one additional year of studies beyond the BS degree. For additional details, see the Combined MSECE section of the catalog.