Engineering and Computer Science Majors

# Computer Engineering

## About

Computer engineers improve the underlying digital hardware, computing networks and production software systems that impact everyday life. The discipline aims to improve computer efficiency, and manage the hardware/software/energy costs of all types of computers, from portable embedded devices and miniature sensor nodes to supercomputers. The work involves mobile and embedded computing devices, sensor networks, reconfigurable logic, software engineering, and computer system design and analysis, and can be applied in a variety of sub-disciplines, including signal processing, cybersecurity, renewable power, biomedical sensing, computer architecture, microwave engineering and antenna design, and more. While computer engineers have less programming experience than computer science graduates, their understanding of hardware gives them an advantage in working with overall systems.

The electrical and computer engineering programs at UCF share a common set of core courses, such as mathematics, physics, chemistry, statistics, linear circuits, electronics. UCF also offers an accelerated BS to MS.

## Coursework Includes

- Digital Systems
- Computer Organization
- Embedded Systems
- Computer Architecture
- Computer Communication Networks
- Engineering Analysis and Computation

See program requirements in the UCF undergraduate catalog at **catalog.ucf.edu**

## Where Computer Engineering Graduates Work

Computer engineers work for computer companies such as Texas Instruments and Intel, and also in industries that build or use computer-based systems, such as telecommunications, automotive, energy and aerospace.

## Typical Starting Salary / Possible Job Titles

$61,000. Computer Hardware Engineer; Computer Software Engineer; Computer Design Engineer.

## Related Student Organizations at UCF

Institute of Electrical and Electronics Engineers
Eta Kappa Nu (ECE Honor Society)
Women in EECS
Collegiate Cyber Defense Club (Hack@UCF)

## Related Minors

Computer Science; Mathematics;
Secure Computing and Networks;
Engineering Leadership;
Cyber Operations Certificate.

## Contact

Department of Electrical and Computer Engineering
407-823-3327
**ece.ucf.edu**

## University of Central Florida

Located in Orlando, Florida, UCF is one of the nation's largest universities with more than 66,000 students from all 50 states and 152 countries. UCF's 13 colleges offer 212 degree programs. Students find community and camaraderie in more than 600 registered student organizations. To learn more, visit **www.ucf.edu/admissions**.

## College of Engineering and Computer Science

With 10,000+ students, the college is among the nation's top producers of engineers and computer scientists. Students receive rigorous instruction, enhanced with real-world hands-on experiences, to graduate with solid technical skills in 11 majors offered: aerospace engineering; civil engineering; computer engineering; computer science; construction engineering; electrical engineering; environmental engineering; industrial engineering; information technology; mechanical engineering; and optics and photonics.

During their academic career, students benefit from unique and innovative leadership and diversity-based support programs, such as the UCF Engineering Leadership & Innovation Institute (eli$^2$) (**eli2.cecs.ucf.edu**), and renowned STEM retention programs described in detail at **stem.ucf.edu/stem-programs-at-ucf**.

## UCF Rankings

- Nation's #1 workforce supplier to the aerospace and defense industry (*Aviation Week*, 2015, 2016)
- Ranks 11th among U.S. public universities for number of National Merit Scholars (289).
- *Kiplinger*, *Forbes* and The Princeton Review rank a UCF education among the nation's best values.
- Ranks #1 in nation, #13 in world among 13,000 regional teams, 2017 Association of Computing Machinery's International Collegiate Programming Competition.
- Home to three-time national champions: UCF Collegiate Cyber Defense Competition Team – 2014, 2015, 2016.
- U.S. Southeast Programming Team Champions – 2012, 2013, 2014, 2015, 2016.
- Ranks #5 out of 225 U.S. universities for number of patents granted, and #22 for success in research that leads to new technologies, products and companies (*2017 Milken Institute report*).
- Top choice of high school seniors in Florida and in the 12 states of the U.S. Southeast region (*2016 Cappex College Considerations Report*)

**UNIVERSITY OF CENTRAL FLORIDA**
*has been designated as a*
*National Center of Academic Excellence*
*in Cyber Defense Education*

**College of Engineering and Computer Science**
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