

electrical  
and  
computer  
ENGINEERING



*Florida Institute  
of Technology*



# ELECTRICAL AND COMPUTER ENGINEERING

How many times a day do you flip a switch, push a button, start up a computer application, drive a vehicle or use any number of telecommunications devices? Today, more than ever, we rely heavily on our machines, computers, gadgets and devices yet we tend to take for granted the complex technology that makes them work.

It takes the expertise of computer and electrical engineers to develop the technology, processes, interfaces and delivery systems that improve the quality of our lives in so many ways. And it takes a great education to create those engineers. At Florida Tech, we've got what it takes.

As a freshman engineering student at Florida Tech you'll hit the ground running, with hands-on activity your very first semester. Our small size and exceptional faculty make for an intensive and productive learning experience that will prepare you for success in the real world. During your senior year, you'll take courses that employ previous knowledge to develop a system approach to engineering design.

Our main campus is located in Brevard County, along the Atlantic coastline of Central Florida. Better known as the

"Space Coast," it is home to NASA, Kennedy Space Center, United Space Alliance and many other companies tied to the national space program. Florida Tech is also located in Florida's High Tech Corridor, home to more than 5,000 technology companies and the nation's fifth largest high-tech workforce.



## COMPUTER ENGINEERING MAJORS LEARN:

- > The basic building blocks of transistors and gates through the progression of embedded controllers
- > Mathematics and science fundamentals and how to apply them to computer engineering
- > Computer architectures and complex computer system applications
- > An extensive array of hardware and computer systems
- > Concurrent programming techniques
- > Interdisciplinary research focusing on the needs of government and partners

## ELECTRICAL ENGINEERING MAJORS LEARN:

- > The basic building blocks of transistors and gates through communications control, electromagnetic, computer and photonic systems
- > An extensive array of hardware systems
- > Skills in software simulation and analysis

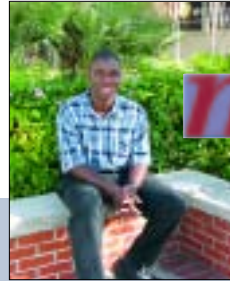
*The Electrical Engineering program offers the following areas of specialization: Electromagnetics • Physical Electronics • Systems and Information Processing • Wireless Systems and Technology*





## GET INVOLVED IN ENGINEERING CLUBS AND ORGANIZATIONS:

- IEEE** Institute of Electrical and Electronic Engineers
- SWE** Society of Women Engineers
- SHPE** Society of Hispanic Professional Engineers
- SME** Society of Manufacturing Engineers
- NSBE** National Society of Black Engineers
- TAU BETA PI** National Engineering Honor Society



### Leighton Rowe Computer Engineering

"I chose Florida Tech mainly because the campus offers good technical programs with intense hands-on experience. The campus is small and easy to move around and meet people."

"I am involved in the National Society of Black Engineers, as Vice President, the IEEE, IVCF, Caribbean Students Association, and the International Cricket Organization ... am a member of Tau Beta Pi, Eta Kappa Nu, and Phi Eta Sigma honor societies."

"Cricket and tennis are intramural sports that I enjoy and I play basketball just for fun."

"At the Academic Support Center, I tutor other students in calculus, electronics and other computer engineering related courses."

"I hope to further develop my computer engineering skills and specialize in computer networking/communications. In the long-term, I hope to continue my education, aiming for a master's degree in computer engineering."

## GET RECRUITED BY BIG NAMES:

**NASA, Kennedy Space Center, Johnson Space Center, Boeing, Lockheed Martin, Northrop Grumman, United Space Alliance, Westinghouse, Harris, Raytheon Systems, Siemens, Rockwell Collins, Ford Motor Company, and many others...**

## RESEARCH

Automated object detection and perception, segmentation, texture analysis, noise reduction, edge detection, computer imaging, modeling and other areas of image analysis;

Techniques being used include traditional and other techniques that include wavelets, fractals, higher-order statistics and morphology done on digital computers or performed by special optoelectronic devices;

Information Processing Laboratory (IPL) conducts research concerned with problems in the areas of signal processing, neural networks and biomedical engineering;

The Antenna Systems Laboratory (ASL) is currently investigating the use of devices embedded directly into the individual antenna element to provide control of the far-field phase of the antenna;

STADIUM is a design methodology and collection of computer algorithms that are intended for incorporation in a specific software program for a given application;

Photonic research performed in fiberoptic sensors and communications systems, laser radar and remote sensing, and laser scanning for robot visio;

High-performance computing applications such as optimized software-engineered computer communications between computer subsystems, and dedicated video and sound processors;

Networking for high performance computing, signal processing, computer architecture and VLSI design; and advanced computer architecture with an emphasis on designing fast and reliable systems that advance the current technology, including parallel computer systems, fault tolerance and microscopic design.



## Why in the **WORLD** would you go anywhere else?

The only independent, scientific and technological university in the southeastern United States.

Located in Florida's High Tech Corridor, home to more than 5,000 technology companies and the nation's 5th largest high-tech workforce.

Classified by the Carnegie Foundation as a Doctoral Research Intensive University, a classification separating it from institutions that only offer degrees at the bachelor's or master's level.

Listed as a Barron's Guide "Best Buy" in college education and named as one of the top 14 technical institutions for engineering in the Fiske Guide to Colleges 2002-2004.

For the 14th consecutive year, U.S. News and World Report has ranked Florida Tech among the nation's best national doctoral universities. The listing also places Florida Tech in the top 7% of America's colleges and universities.

Ranked 4th in the nation for ocean engineering and ranked 7th in the nation for marine biology by the Gourman Report.

Ranked among the top 5% of all U.S. institutions awarding B.S. degrees to women in physics.

According to the latest survey of Florida Tech graduates, 96% are working in their major or in graduate school within 6 months of graduation.



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