ABOUT
The department’s graduate students work with distinguished faculty on a variety of focus areas, from smart sensors, radar and navigation systems, and power-generating systems to systems design and networks. The department is housed in the Harris Corporation Engineering Center, a modern, 113,866 square-foot facility.

THE UCF DIFFERENCE
NATIONALLY-RANKED PROGRAMS

LEADERS IN SMART GRID ENERGY RESEARCH & EDUCATION
UCF leads a national, multi-partner consortium, known as FEEDER, funded by the U.S. Department of Energy. More than 50 partners, including 12 universities and 22 utilities and co-ops, are working together to modernize and sustain the nation’s power grid as it transitions to renewable energy sources such as wind and solar. Through industry-relevant courses and shared curriculum, FEEDER partners are educating the nation’s current and future smart grid workforce. ECE Department Chair Zhihua Qu is principal investigator. UCF’s Florida Solar Energy Center is also on the team.

GRADUATE DEGREES OFFERED
MASTER’S
Electrical Engineering
(Non-Thesis & Thesis option with tracks)
Computer Engineering
(Non-Thesis & Thesis option with tracks)

DOCTORAL
Electrical Engineering
Computer Engineering

FACULTY HONORS
Our faculty are members and fellows of professional societies, including the prestigious National Academy of Engineering (1 member); IEEE (7 fellows); AAAS (3 fellows); American Society of Engineering Education (1 fellow); ECS (1 fellow); National Academy of Inventors (1 member).

ALUMNI AND STUDENTS SAY
“The Ph.D. journey at UCF equipped me with excellent knowledge and taught me to be perseverant and tough.”
– Cong Li, Ph.D., ’14
Software Engineer, Google

“My outstanding experience at UCF made it my only choice for graduate school. The extensive availability of night and online classes allows me to work full time and study.”
– Walther Del Orbe, ’05, ’06, Master's Student and Engineer, Lockheed Martin

“UCF has a great campus, excellent professors, advanced learning methods, modern facilities and flexible programs that allow students to acquire unique skill sets. The close proximity to Central Florida Research Park allows for networking and job opportunities.”
– Assem Kaylani, Ph.D., ’01, ’08, Lead Software Engineer, GE Transportation
FUNDAMENTAL AND APPLIED RESEARCH FOCUS GROUPS

COMPUTER SYSTEMS AND VLSI:
Data-intensive High Performance Computing, Massive Storage and File System, I/O Architecture
Computer Architecture and Evolvable Hardware
Secure, Trusted, and Reliable Processor and ASIC Design; Cyber Security and Cryptography

CYBER-PHYSICAL SYSTEMS (COMMUNICATION, CONTROLS, SIGNAL PROCESSING, AND ENERGY SYSTEMS):
Network Systems, Cooperative Control, Optimization and Games
Autonomous Robotics Vehicles, Medical and Assistive Robotics
Smart Grids, Distributed Generation and Optimization, Protection and Control
Biomedical Devices and Control
Digital Signal Processing, Detection and Estimation
Communication Theory, Cognitive Radios and Networks, Wireless Communication and Sensor Networks
Machine Learning, Artificial Neural Networks, Distributed Decision

MICRO- AND NANO-SYSTEMS:
Micro- and Nano-Electronics, MEMS devices, Device Modeling, Acoustic Wave Devices
Power Electronics, Power Semiconductor Devices and ICs
Optoelectronic Materials, Thin Films, Micromachining

ELECTROMAGNETICS:
Microwave Sensors, Antennas, Phase Arrays and Integrated RF
Remote Sensing, Satellite Communications

RESEARCH LABORATORIES
ECE has 17 labs, including state-of-the-art Class 100/1000 Cleanroom microfabrication facilities, Remote Sensing, Nano/MEMS, Medical Robotics and Antenna, RF & Microwave Integrated Systems Labs, and Smart Grid Lab.

COMPETITIVELY-AWARDED RESEARCH CENTERS
Foundations for Engineering Education for Distributed Energy Resources (FEEDER), U.S. Department of Energy
Electric Vehicle Transportation Center (EVTC), U.S. Department of Transportation
Multi-functional Integrated System Technology (MIST), addressing the Internet of Things, National Science Foundation

ALUMNI STARS
GENE FRANTZ, EE, ’71
Rice University Professor in the Practice and Principal Fellow, Texas Instruments. He invented the technology inside the Texas Instruments Speak & Spell and is considered the “father” of digital signal processing.

BRIAN CRUTCHER, EE, ’95
Executive Vice President of Business Operations, Texas Instruments.

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