Leadership
Dr. Leon Tolbert, Department Head
Min H. Kao Building, Suite 401
1520 Middle Drive
Knoxville, TN 37996-2250
Phone: (865) 974-3461
www.facebook.com/EECS.UTK
www.twitter.com/EECS_UTK

Mission
We are the Department of Electrical Engineering and Computer Science at the University of Tennessee, the largest department in the College of Engineering. We have 44 faculty members, who are respected, world-class leaders in their fields and are dedicated to teaching students and aiding them in developing the technical and communication skills necessary to have successful careers. Our rigorous curriculum prepares students to be successful in their future profession and offers the flexibility for students to choose courses that match their interest areas.

Academics

Enrollment Figures
Enrollment (Full-Time)
Academic Year 2016-2017
Undergraduate 790
Graduate 284
Total 1074
Ph.D. Enrollment 202

Fall 2016 Freshman Enrollment
Computer Science 102
Computer Engineering 68
Electrical Engineering 45
Total EECS Freshmen 215

Degrees Granted
Academic Year 2015-2016
Undergraduate 137
M.S. 27
Ph.D. 34
Total 198

Faculty
Academic Year 2015-2016
Professors 23
Associate Professors 9
Assistant Professors 9
Professors of Practice 3
Total 44

Financials

EECS Research Expenditures for Fiscal Year 2016: $17,378,169
EECS Research Expenditures per T/TT Faculty for Fiscal Year 2016: $423,858

Research Centers

Center for Ultra-wide-area Resilient Electric Energy Transmission Networks (CURENT) current.utk.edu CURENT was founded by the National Science Foundation (NSF) under the prestigious Engineering Research Center (ERC) program. Base funding provided by the NSF and the US Department of Energy is at $4 million per year. CURENT is the first and only ERC at UT and works closely with its industrial partners with a focus on improving the nation’s electric power transmission system and accommodating a high level of renewable energy penetration.

Innovative Computing Laboratory (ICL) icl.utk.edu The Innovative Computing Laboratory (ICL) is a large computer science research and development group specializing in advanced scientific and high performance computing. ICL’s founder, Dr. Jack Dongarra, established the lab in 1989. Dr. Dongarra is the creator of the LINPACK Benchmarks, linear algebra tests that measure the mathematical capabilities of computers. The latest version of these benchmarks is used to build the TOP500 list, ranking the world’s most powerful supercomputers.

Initiative Point of Need/Point of Care Nanobiosensing (PCN) nanobio.eecs.utk.edu Joint with MABE, Nutrition and Public Health. This collaborative initiative aims to use nanobiosensing technology to design, test, and validate rapid tests at point of need (PON) and/or point of care (POC) to facilitate clinical disease diagnosis and monitoring of environmental, food or water safety.

Institute for Biomedical Engineering (iBME) ibme.utk.edu The iBME seeks to develop and implement revolutionary, life-enhancing biomedical engineering solutions, which will be accomplished by uniting and leveraging the resources of diverse disciplines throughout the UT system.

Debrees, Minors & Certificates Offered

Degrees
Bachelor of Science
Electrical Engineering
Computer Engineering

Master of Science
Electrical Engineering
Computer Engineering

Doctor of Science
Electrical Engineering
Computer Engineering

Minors & Certificates
- Computer Science Minor
- Cybersecurity Minor
- Datacenter Technology and Management Minor
- Power and Energy Systems Graduate Certificate
- Fire Protection Engineering Graduate Certificate
- Reliability and Maintainability Engineering Graduate Certificate – Electrical Engineering and Computer Engineering Concentration

Faculty Awards

National Academy of Engineering (NAE) Members: 3
NSF Career Award Winners: 10
IEEE Fellows: 9
Faculty Members with an ORNL Appointment: 20

Oak Ridge National Laboratory is the largest US Department of Energy science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy and security. ORNL’s diverse capabilities span a broad range of scientific and engineering disciplines, enabling the Laboratory to explore fundamental science challenges and to carry out the research needed to accelerate the delivery of solutions to the marketplace. ORNL is located near the University of Tennessee in the town of Oak Ridge, and several EECS Faculty members have joint ORNL appointments there and even more have joint collaborations.

22nd nationally among public EECS programs in research expenditures per tenure-line faculty member.
12th nationally among public EECS programs in Ph.D. enrollment per tenure-line faculty member.

ASEE Survey Data
**Research Areas**

- **Power Systems, Power Electronics and Renewable Energy**
- **Microelectronics, Microwaves and MEMS**
  - Analog and Mixed-Signal Circuits
  - Antennas and Microwaves
  - Bio-Electronics and Sensors
  - Integrated Circuits

- **Biological Applications**
  - Bioelectronics
  - Bioinformatics
  - Bio-Medical Devices
  - Biotechnology and Bio-Sensor Design
  - Computational and Systems Biology

- **Networked and Embedded Systems**
  - Cybersecurity
  - Mobile Cloud Computing
  - Network Privacy and Security
  - Power Control in Wireless Networks
  - Real-Time Embedded Systems
  - Sensor Networks

- **Signal Processing, Communications and Controls**
  - Automatic Control
  - Communications
  - Information Theory
  - Statistical Signal Processing

- **Visual Computing and Image Processing**
  - 3D Rendering
  - Biomedical and Scientific Data Visualization
  - Computational Imaging
  - Computer Vision
  - Graphical Programming Environments
  - Pattern Recognition

- **Intelligent Systems, Data Mining, and Machine Learning**
  - Artificial and Distributed Intelligence
  - Data Analytics
  - Deep Machine Learning
  - Emerging Computation
  - Robotics
  - Neuromorphic Computing

- **High Performance and Scientific Computing**
  - Data Storage
  - Distributed Computing
  - Mathematical Software
  - Parallel Processing

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**Five-Year BS/MS Program**

The Five-Year BS/MS Program allows qualifying undergraduate students to take up to 6 hours of approved graduate courses for their senior electives and have them count toward both their BS and MS degrees at the University of Tennessee thereby reducing the amount of time it takes to earn the latter.

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**Scholarships & Fellowships**

**Scholarships**
- Carol and Malcolm Bayless
- Dr. M.E. and Mrs. J.N. Casey
- Grace O. Davis
- Department of Electrical Engineering & Computer Science
- Christopher J. and Michelle R. Gentry
- S.T. Harris
- Urban and Susan Hilger
- Beta-Phi Chapter, Eta Kappa Nu
- Dr. E. Johnson and Mrs. L.H. Kennedy
- Alliene Lay
- W.O. Leffell
- Edgar Wyman McCall
- Harlan D. and Luella C. Mills
- Billy J. and Sylvia F. Moore
- L.B. Murray, Jr.
- Leonard B. Murray, Sr.
- Erby Roy and Jean Bush Nankivell
- David O. and Joan G. Patterson
- Leonard and Betty Shealy
- Charles and Martha Sprankle
- David W. Straight
- Fred Smith Vreeland
- Charles Weaver Memorial
- Arthur F. Woods
- Min H. Kao Scholars

**Fellowships**
- Bodenheimer Fellowships
- Robert Vaughn Blalock Graduate Memorial Award
- Chancellor’s Honors Awards
- Min. H. Kao Fellowships
- Pierce Graduate Award
- Ron Nut Fellowships
- Department Excellence Awards

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**Student Organizations**

**ACM**

The student chapter of the Association for Computing Machinery at the University of Tennessee is dedicated to serving its members by providing information about job opportunities, the computer science fields, and a location for our local members to share their knowledge and experience in the world.

**Eta Kappa Nu**

Eta Kappa Nu is the International Electrical Engineering Honor Society, with more than 100,000 members and 194 chapters in the United States, Canada and Europe. To be eligible for induction, a student’s scholastic standing must be in the upper quarter of the junior class or the upper third of the senior class in electrical or computer engineering.

**HackUTK**

The mission of HackUTK is to promote student interest in the fields of computer and network security through participation in and sponsorship of Capture the Flag competitions and related activities that inspire, develop, and empower the future generation of computer scientists.

**IEEE**

The Student Chapter of the Institute for Electrical and Electronics Engineers (IEEE, “eye-triple-E”) is a professional society seeking to involve students enrolled in the study of electrical and computer engineering at the University of Tennessee, Knoxville.

**Systers**

The mission of Systers: Women in EECS @ UTK is to recruit, mentor, and retain women in Electrical Engineering and Computer Science at the University of Tennessee. Systers is proud of their accomplishments so far: mentoring young women entering EECS, reaching out to girls in the community to tell them about opportunities in our field, and helping ensure that talented students have access to our department’s resources and our community’s industry opportunities, regardless of gender.

**Tau Beta Pi**

Tau Beta Pi’s collegiate chapters elect members who have distinguished themselves with outstanding scholarship and character. Founded in 1885 to mark in a fitting manner those who have conferred honor upon their alma mater by distinguished scholarship and exemplary character as undergraduates in engineering, or by their attainments as alumni in the field of engineering, and to foster a spirit of liberal culture in engineering colleges. The Tennessee Alpha Chapter at the University of Tennessee, Knoxville was founded in 1929.

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Systers: Women in EECS @ UTK