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 42 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**

<table>
<thead>
<tr>
<th>Enrollment (Full-Time)</th>
<th>Academic Year 2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>810</td>
</tr>
<tr>
<td>MS Enrollment</td>
<td>74</td>
</tr>
<tr>
<td>Ph.D. Enrollment</td>
<td>211</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1095</strong></td>
</tr>
</tbody>
</table>

**Fall 2017 Freshman Enrollment**

<table>
<thead>
<tr>
<th>Department</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science</td>
<td>122</td>
</tr>
<tr>
<td>Computer Engineering</td>
<td>55</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total EECS Freshmen</strong></td>
<td><strong>222</strong></td>
</tr>
</tbody>
</table>

**Degrees Granted 2016-2017**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>149</td>
</tr>
<tr>
<td>M.S.</td>
<td>38</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>216</strong></td>
</tr>
</tbody>
</table>

**Faculty 2017-2018**

<table>
<thead>
<tr>
<th>Faculty Level</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td>23</td>
</tr>
<tr>
<td>Associate Professors</td>
<td>10</td>
</tr>
<tr>
<td>Assistant Professors</td>
<td>6</td>
</tr>
<tr>
<td>Professors of Practice</td>
<td>3</td>
</tr>
<tr>
<td>Adjunct</td>
<td>16</td>
</tr>
<tr>
<td>Joint Faculty from ORNL</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>88</strong></td>
</tr>
</tbody>
</table>

**Research Centers**

Center for Ultra-wide-area Resilient Electric Energy Transmission Networks (CURENT)  
curent.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 for Point of Need/Point of Care Nanobiosensing (IPN)  
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.

**Degrees, Minors & Certificates Offered**

**Degrees**

Bachelor of Science  
Electrical Engineering  
Computer Engineering  
Computer Science  

(M.B.S. degrees ABET accredited)

**Master of Science**

Electrical Engineering  
Computer Engineering  
Computer Science  

**Doctor of Science**

Electrical Engineering  
Computer Engineering  
Computer Science  

**Minors & Certificates**

- Computer Science Minor  
- Cybersecurity Minor  
- Datacenter Technology and Management Minor  
- Power and Energy Systems Graduate Certificate  
- Fire Protection Engineering Graduate Certificate  
- Wide Bandgap Power Electronics Certificate  

**Financials**

**EECS Research Expenditures**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Expenditures ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY'11</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>FY'12</td>
<td>$12,000,000</td>
</tr>
<tr>
<td>FY'13</td>
<td>$14,000,000</td>
</tr>
<tr>
<td>FY'14</td>
<td>$16,000,000</td>
</tr>
<tr>
<td>FY'15</td>
<td>$18,000,000</td>
</tr>
<tr>
<td>FY'16</td>
<td>$20,000,000</td>
</tr>
<tr>
<td>FY'17</td>
<td>$22,000,000</td>
</tr>
</tbody>
</table>

EECS Research Expenditures for Fiscal Year 2017: $21,744,838  
EECS Research Expenditures per T/TT Faculty for Fiscal Year 2017: $529,716  

**Oak Ridge National Laboratory**

Oak Ridge National Laboratory (ORNL) 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.
Research Areas

Power Systems, Power Electronics and Renewable Energy
- Electric Vehicles (EVs)
- Power Electronics for Renewable Energy
- Power System Monitoring and Control
- Power Grid Modeling and Economics
- Wide Bandgap Power Electronics

Microelectronics, Microwaves and MEMS
- Analog and Mixed-Signal Circuits
- Antennas and Microwaves
- Bio-Electronics and Sensors
- Bio-Medical Devices
- Biotechnology and Bio-Sensor Design
- Integrated Circuits

Signal and Image Processing, Communications and Controls
- Automatic Control
- Communications
- Computational Imaging
- Computer Vision
- Graphical Programming Environments
- Information Theory
- Pattern Recognition
- Statistical Signal Processing

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

Intelligent Systems, Data Analytics, and Machine Learning
- Artificial and Distributed Intelligence
- Bioinformatics
- Computational and Systems Biology
- Data Analytics
- Deep Machine Learning
- Emergent Computation
- Graph-Theoretical Algorithms
- Neuromorphic Computing
- Robotics

Software and Systems and High-Performance Computing
- Biomedical and Scientific Data Visualization
- Data Storage
- Distributed Computing
- Mathematical Software
- Parallel Processing
- Scalable Big Data Computation
- 3D Rendering

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.

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.J. and Mrs. L.H. Kennedy
- Aliene 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
- Richard and Mary Ann Peugeot
- Leonard and Betty Shealy
- Charles and Martha Sprinkle
- David W. Straight
- Fred Smith Vreeland
- Charles Weaver Memorial
- Arthur F. Woods
- Min H. Kao Scholars

Fellowships
- Bodenheimer Fellowships
- T. Vaughn Blalock Memorial Graduate Award
- Chancellor’s Honors Awards
- Min. H. Kao Fellowships
- Pierce Graduate Award
- Ron Nutt Fellowships
- Department Excellence Awards

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.

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.

Systs
The mission of Systs: Women in EECS @ UTK is to recruit, mentor, and retain women in Electrical Engineering and Computer Science at the University of Tennessee.

Systs 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 1889 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 was founded in 1929.

utKML
Machine Learning Student Organization (UTKML)--With a focus on interdisciplinary collaboration, the organization brings together students from many backgrounds and levels of expertise to work on problems where data is readily available.