Electrical Engineering and Computer Science

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Degrees in EECS

• B.S. in Computer Science
• B.S. in Computer Engineering
• B.S. in Electrical Engineering

• Several students change majors during their study as they find what they like / dislike

• Most classes include hands-on experience in design/testing of electrical and/or magnetic systems
• We emphasize system-level thinking in both research and teaching – a real edge in the marketplace
Computer Engineering at UT

- Multiple large **robotics and visualization** research groups that study and design state-of-the-art artificial intelligence systems
- Variety of **communication networks** research activities
  - High-performance Internet switches and routers
  - Wireless sensor networks
  - Real-time ubiquitous computing
  - Digital communications
- **Reconfigurable computing and neuromorphic computing**
  - design of chips that can be reconfigured to perform diverse tasks in real-time

Computer Science at UT

- Multiple research laboratories including
  - **Center for Intelligent Systems and Machine Learning**: multidisciplinary study of machine learning
  - **Distributed Intelligence Laboratory**: cooperative robotics and AI
  - **Seelab**: visualization and graphics with applications in medical and scientific fields
- **Data analytics** and clustering, classification, and retrieval
- Computational science, distributed computing, and parallel processing
- **Bioinformatics**, genetic algorithms, neural networks
- Cybersecurity (minor offered to engineering majors)
Electrical Engineering at UT

- Analog mixed-signal circuit design for chips on future MARS rover and other NASA missions
- Electronics and MEMs for biosensors and microfluidics
- Robotics designs for military and civilian uses
- Image processing and multisensor fusion techniques.
- Electromagnetics and antenna design for microwave frequency
- Power electronics for electric vehicles and interface with PV, wind, energy storage
- Power system analysis and smart grid applications

EECS Undergraduate Enrollment

- Fall 2015 Freshman Enrollment
  - Computer Science: 72
  - Computer Engineering: 54
  - Electrical Engineering: 42
  - Total EECS Freshman: 166
Advising

• Associate Head for Academic Affairs – Dr. Kamrul Islam
• Computer Science Advising Coordinator – Dr. Mike Berry
• Computer Engineering Advising Coordinator – Dr. Hairong Qi
• Electrical Engineering Advising Coordinator – Dr. Ben Blalock

• UG Advising Assistant – Ms. Julia Elkins – Min Kao, Rm 401
• EECS IT Help – Min Kao, Rms 423 - 427

EECS Student Groups

• IEEE (Institute of Electrical and Electronics Engineers)
  – Dr. Mongi Abidi

• ACM (Association of Computing Machinery)
  – Dr. Jim Plank

• Eta Kappa Nu (EE and CpE Honor Society for juniors and seniors)
  – Dr. Jeremy Holleman

• Systers (Recruit, Mentor, Retain women students in EECS)
  – Dr. Lynne Parker
Undergraduate Research and Graduate School

- 5-year B.S. / M.S.
  - Count 2 courses toward BOTH B.S. and M.S. degree
  - Students with GPA >3.4 are eligible
- Research Experiences for Undergraduates (REU)
  - Summer REU program sponsored by CURENT
  - CURENT faculty (power systems, power electronics, communications, cyber security) during the academic year
  - In general, approach faculty who teach a subject that you have interest in.

Final Words

- Welcome to The University of Tennessee, Knoxville, and the Department of Electrical Engineering and Computer Science
- Our department has lots of exciting, fun things going on.
- If you need assistance, please ask.
- Be sure to work hard (attendance, homework, study)
- Payoff is a rewarding career that pays well.