DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Phone: 703-993-1569
Email: ece@gmu.edu
Website: ece.gmu.edu

Undergraduate Programs

The undergraduate education mission of the Department of Electrical and Computer Engineering (ECE) is to provide a quality education for electrical engineering and computer engineering students to support the needs of Virginia and the nation.

Program Educational Objectives for the BS ELEN and BS CPE

Graduates of the Electrical Engineering and the Computer Engineering programs are expected within three to five years of graduation to have:

- Demonstrated critical thinking, to have applied engineering design principles to produce solutions that satisfy specifications, and to have established themselves as successful and productive engineering professionals or to have engaged in advanced study such as a graduate degree program.
- Worked collaboratively and effectively in team environments, and to have worked effectively in multi-disciplinary environments.
- Fulfilled their professional responsibilities in the areas of ethics, to have continued their professional development, and to have demonstrated effective oral and written communications.

Graduate Programs

Graduate programs leading to MS and PhD degrees prepare students for careers in industry, government, and academia. Graduate certificate programs provide well-defined targets for students who want to advance or update their knowledge in selected areas. The ECE department offers the PhD in Electrical and Computer Engineering (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/electrical-computer-engineering-phd/) and master's degrees in computer engineering (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/computer-engineering-ms/), electrical engineering (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/electrical-engineering-ms/), telecommunications (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/telecommunications-ms/), and digital forensics (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/digital-forensics-ms/), and certificates in machine learning for embedded systems (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/machine-learning-embedded-systems-graduate-certificate/), smart grid technology (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/smart-grid-technology-graduate-certificate/), systems engineering (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/systems-engineering-graduate-certificate/), small satellite engineering (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/small-satellite-engineering-graduate-certificate/), and advanced networking protocols (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/advanced-networking-protocols-telecommunications-graduate-certificate/).

The ECE department is committed to high standards of teaching and research excellence in communications, computer networks, bioengineering, digital systems design, microprocessor and embedded systems, distributed computing, high performance computing, signal and image processing, control systems, robotics, intelligent systems, systems integration, space-based systems, nanoelectronics, and power and energy systems. Graduate students are offered a progressive environment with ample opportunities for the type of advanced research needed to confront the complex realities of the 21st century.

Faculty

Department Faculty

Professors

Cummings, Gaj (Associate Chair for Graduate Studies), Hayes, Ioannou, Jabbari, Kurtay (Senior Associate Chair), Mark (Interim Chair), Mulpuri, Osgood, Tian, Wage, Zeng

Associate Professors

Ahn, Berry, Huang, Jones, Kaps, Lorie, Nelson, Nowzari, Pachowicz, Paris, Peixoto, Soyata

Assistant Professors

Jiang, Khasawneh, Parsa, Pudukotai D., Veiga, Wang, Yao

Research Professors

Elder, Katona

Adjunct Professors

Adamiak, Abgariah, Boci, Chou, Cotanis, Diehl, Douglas, Eppley, Gomez, Greenhill, Harun, Hassan, Horton, Hrnjez, Hyde, Irvine, Katti, Kaur, Kettell, Khan A., Khan T., Larkin, Long, Loveall, Maiden, McFadden, Neshatpour, Opacki, Robinson, Rothwell, Sabzevari, Saylor, Schaefer, Shenkar, Sheppard, Sigel, Steele, Tahsin, Tran, Vargas, Williams, Wu, Yun, Zhou

Emeritus Faculty

Allnutt, Baraniecki, Beale, Black, Ceperley, Chang, Cook, Ephraim, Griffiths (Dean Emeritus), Hintz, Levis, Li, Manitius, Schaefer, Sutton, Tabak

Programs

- Advanced Networking Protocols for Telecommunications Graduate Certificate
- Computer Engineering, BS
- Computer Engineering, MS
- Digital Forensics, MS
- Electrical Engineering, BS
- Electrical Engineering, MS
- Electrical and Computer Engineering Minor
- Electrical and Computer Engineering, PhD
- Machine Learning for Embedded Systems Graduate Certificate

- Small Satellite Engineering Graduate Certificate
- Smart Grid Technology Graduate Certificate
- Systems Engineering Graduate Certificate (ECE)
- Telecommunications, MS