

# DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

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## Undergraduate Programs

The undergraduate education mission of the ECE Department 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:

- Established themselves as successful and productive engineering professionals or engaged in advanced study such as a graduate degree program.
- Worked effectively in team environments and individually.
- Fulfilled their responsibilities in the areas of ethics, continuing professional development, and effective 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 and master's degrees in computer engineering, electrical engineering, telecommunications, and digital forensics and cyber analysis, and certificates in communications, forensics, networking, and signal processing.

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, and nanoelectronics. 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.

Courses in the department's graduate programs are offered during the evening or late afternoon hours to accommodate students who are employed full time. For those who enter a program on a full-time basis, some financial aid may be available in various forms, such as teaching assistantships or research assistantships.

## Faculty

### Faculty Professors

Ephraim, Gaj, Hayes (Chair), Ioannou, Jabbari, Levis, Li, Manitius, Mark, Mulpuri, Tian

### Associate professors

Berry, Homayoun, Huang, Jones, Kaps, Kurtay (Associate Chair), Lorie, Nelson, Osgood, Pachowicz, Paris, Peixoto, Sasan, Wage, Zeng

### Assistant professors

Chen, Lofaro, Nowzari, Pandula, Zhang

### Research professors

Elder, Katona

### Adjunct professors

Abgariah, Allen, Beatty, Bisson, Boci, Cohen, Cotae, Deavers, Douglas, Emdadi, Fowler, Gibson, Greenhill, Hassan, Hosford, Hrnjez, Hyde, Irvine, Kaur, Khan, Larkin, Lin, Maiden, Mangra, McFadden, Mehrotra, Narenji, Rothwell, Sabzevari, Sachdev, Schaefer, Sheppard, Steele, Shyy, Talman, Tran, Williams, Wu, Yun

### Emeritus faculty

Allnutt, Baraniecki, Beale, Black, Ceperley, Chang, Cook, Gertler, Griffiths (Dean Emeritus), Schaefer, Sutton, Tabak, Van Trees

## Programs

- Advanced Networking Protocols for Telecommunications Graduate Certificate
- Computer Engineering, BS
- Computer Engineering, MS
- Digital Forensics and Cyber Analysis, MS (title pending SCHEV approval)
- Electrical Engineering, BS
- Electrical Engineering, MS
- Electrical and Computer Engineering, PhD
- Signal Processing Graduate Certificate
- Small Satellite Engineering Graduate Certificate
- Systems Engineering Graduate Certificate (ECE)
- Telecommunications Forensics and Security Graduate Certificate
- Telecommunications, MS
- Wireless Communications Graduate Certificate