Why ECE?

Friendly learning environment
We offer the advantages of a large engineering program in a small community atmosphere.

Project-based curriculum
Most of the required and elective courses culminates with a final project, which emphasizes hands-on experience and teamwork.

Research opportunities
About 40% of our students engage in various research programs and present their results at conferences and in published journal papers.

Broad-based curriculum
We offer diversified education experiences using a rotating list of electives in numerous fields.

Practical experience
We provide a good balance of engineering skills and knowledge that are applicable to many fields and industries.

Choosing ECE does NOT dictate your service assignment; rather, it will help in getting where you want to go.

Internship opportunities
- Energy systems (NSWC)
- Power devices (NPS/PSU)
- Motor drives (Lockheed Martin)
- Magnetism (NRL)
- Joint IED Defeat Org. (JIEDDO)
- Tactical assault light operator suit (USSOCOM)
- Digital forensics (SECRET)

usna.edu/ECE
facebook.com/usnaECE

The Cryptologic Warfare community loves ECE graduates because they have the technical depth we’re looking for.

CDR Jennie Wood
USNA ’01
Former CW Officer, now PMP

The hard path always reaps the most benefits

Mr. Ari Polivy
USNA ’12
USMC Pilot
2-time Shark Tank finalist and Program Manager at Bose
Electrical and Computer Engineering

Electrical and Computer Engineers are involved in designing, implementing, and testing every device connected to the Internet of Things (IoT).

We equip technologies with:
- Continual power
- Smart materials and sensors
- Ultrafast communication
- Reliable networks

Opportunities abound in these areas:
- 5G communications
- Smart grids and energy solutions
- Artificial intelligence
- Cyber security
- Biomedical applications

Electrical Engineering

Electrical engineering majors are required to take courses in four main areas of electrical engineering fundamentals:
- Electronics and materials
- Power and energy
- Communications
- Signals processing

Electives are offered in a variety of topics:
- Semiconductor physics
- Electrical machines and drives
- Wireless and cellular communications
- Networks
- Digital signal processing
- Biometric signal processing
- Brain machine interfaces
- Lasers and fiber optics
- RADAR and electronic warfare

Computer Engineering

Computer engineering majors are required to take courses in four main areas of computer engineering fundamentals:
- Digital Logic Design
- Computer Architecture
- Computer Network and Security
- Embedded Systems

Electives are offered in a variety of topics:
- Operating systems
- Wireless networks
- Computer architecture
- Microcomputer interfacing
- Compilers

We are moving to Hopper!