VIRTUAL CANDIDATES' EVENT
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
DR. BIJAN MOBASSERI, CHAIR
Curriculum: Freshman Year

Fall Semester
• General Chemistry I
• General Chemistry Lab
• Calculus I
• Augustine Culture – Ancients
• Theology (Faith, Reason & Culture)
• Eng. Interdisciplinary Projects
• Career Compass (A)

Spring Semester
• ECE Freshman Projects
• Engineering Programming and Applications
• Career Compass (B)
• Calculus II
• Augustine Culture – Moderns
• Physics I (Mechanics)
EGR 1200: Interdisciplinary Projects

Goals of EGR 1200:
• Intro to design thinking
• Basic engineering tools
• Teamwork
• Excite & engage with hands-on projects

Projects have included:
• Biomimcry
• Biomedical Signal Analysis
• Sustainable Systems Design
• DIY Biosensor
• Water Energy Nexus
ECE 1205: Building A CubeSat
Electrical Engineering Curriculum: Beyond Freshman Year

Core Competencies
- Analog and digital electronics
- Communication systems
- Control systems
- DC and AC circuits
- Electric energy systems
- Electromagnetics
- Electronic materials and devices
- Signal processing

Areas of Specialization
- Biomedical engineering
- Electric energy systems
- Electronics
- Embedded systems
- High frequency systems
- Signal processing
Computer Engineering Curriculum: Beyond Freshman Year

Core Competencies
- C and C++ programming languages
- Efficient computer algorithms
- Computer hardware and architectures
- Computer networks
- Computer interfacing
- Digital system design
- Microprocessor systems

Areas of Specialization
- Cybersecurity
- Microcontrollers
- Multimedia
- Real-time digital signal processing
- Software engineering
Minors Available to ECE Students

- Electrical Engineering
- Computer Engineering
- Cybersecurity
- Mechatronics
- Biomedical Engineering
- Engineering Entrepreneurship
- Dozens more across the University!
Research Opportunities
-Senior Design Projects
-Research with Faculty
-Independent Study

Recent Undergraduate Projects:
- Mario Kart system to measure focus and attention levels in players with ADHD
- Measurements of multicore micro-structured optical fibers heated up to 100 C
- Intranet system to connect schools on an island in the Galapagos
- Applying game theory to drone search strategies
- Facial recognition of Philadelphia Zoo animals
- Virtual reality mind control
- Two-factor fingerprinting device
Opportunities

- Summer Internships
- Study Abroad
- Student Clubs and Professional Societies
- Service Learning Experiences
- Combined BS/MS Program
Study Abroad in Australia

Service Learning in Ecuador

CubeSAT Club

Formula SAE: NovaRacing Team

INNOVATE: L3Harris Summer Program

Arduino Hackathon
After Graduation, What?

**Computer Engineering**
- Successful Placement Rate: 100%
- Employed: 96.6%
- Continuing Ed: 3.4%
- Average Starting Salary: $80,241

**Electrical Engineering**
- Successful Placement Rate: 100%
- Employed: 63.2%
- Continuing Ed: 26.3%
- Other Endeavors: 10.5%
- Average Starting Salary: $73,454
2019 Sample Employers

- Accenture
- Deloitte
- Everis USA
- L3Harris Technologies
- JP Morgan Chase
- Microsoft
- Parsons Corp.
- Planisware
- U.S. Navy
- Walt Disney Studios
Where Are They Now?

Gibel Sowe ’19 EE, Business & Technology Delivery Analyst, Accenture Federal Services

Peter Paralikas ’18 CpE, Systems Engineer, L3Harris Technologies
Have Questions Later?

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