ELECTRICAL ENGINEERING

HIGH POINT UNIVERSITY
Premier Life Skills University™
WEBB SCHOOL OF ENGINEERING

Degree **offered**

B.S. Electrical Engineering

What can I do with **this major?**

Electrical engineers design and build the critical components of various communications systems and infrastructure, including computing devices such as laptops and smartphones.

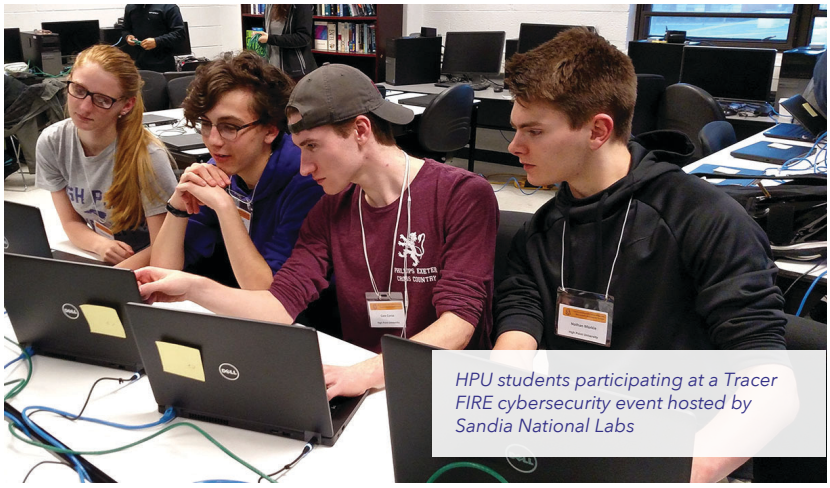
Mid-Career median pay for electrical engineering majors: **$95,230**

Apple Computer co-founder and HPU Innovator in Residence, Steve Wozniak, works with students on a new class project

Student **outcomes**

Skills students will possess at the time of graduation include:

1. An ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data and use engineering judgment to draw conclusions.



HPU students participating at a Tracer FIRE cybersecurity event hosted by Sandia National Labs

Relevant **curriculum**

A Bachelor of Science in Electrical Engineering is a professional degree program that prepares students for careers in electrical engineering. The degree provides students with the necessary technical and managerial skills to enter the workforce in the design application, installation, manufacturing, operation and maintenance of electrical systems. Students gain hands-on experience throughout the program and learn the foundational electronics, mathematics, physics, chemistry, control systems and computing necessary to solve real-world problems in an ethical and socially-responsible manner. Students will learn the skills necessary to build, manufacture, operate, maintain and improve complex electrical systems. Graduates will have strong communication skills and are capable of communicating with a range of audiences, as well the ability to work as a productive member of an interdisciplinary team.

Program **objectives**

Prepare graduates for a career as a professional electrical engineer. Graduates will be able to:

1. Successfully practice electrical engineering to serve state and regional industries, government agencies or national and international industries.
2. Provide solutions to challenging problems in their profession by applying electrical engineering theory and principles.
3. Communicate effectively, work collaboratively and exhibit high levels of professionalism and ethical responsibility.
4. Achieve personal and professional success with awareness and commitment to their ethical and social responsibilities, both as individuals and in team environments.

For more information about the Webb School of Engineering, contact:

Dr. Michael Oudshoorn | 336.841.9633 | moudshoo@highpoint.edu

Meet **Hallie**

Hometown: Dennis, Massachusetts

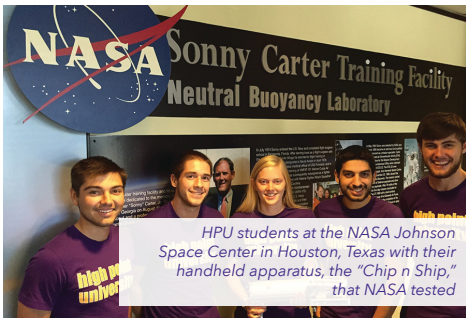
Major: B.S. in Physics and B.S. in Mathematics

Minor: Computer Science

Career: Currently, Hallie is the Innovation, Digitalization and University Collaborations Project Steering Analyst at BMW Manufacturing Co., LLC, in Clemson, S.C. As a BMW Augmented Associate, she conducts research on the use of a wireless EEG to study the cognitive load of associates during assembly tasks. She received her M.S. in Mechanical Engineering at Clemson University in 2018.

At HPU, Hallie led a five-person team that designed a tool for astronauts that caught the attention of NASA. They built a pneumatic-powered device, 18 inches long, a little bigger than a shoebox. It weighed no more than 15 pounds and looked like a space-age gun from a sci-fi movie. Stidham and her team called it the Chip 'n Ship. They took their device to Houston's Johnson Space Center. NASA officials described the Chip 'n Ship as "cleverly designed." More importantly, it worked.

"We showed everyone that High Point can compete and build our own," she says. "We did it, and we did it really well."



HPU students at the NASA Johnson Space Center in Houston, Texas with their handheld apparatus, the "Chip n Ship," that NASA tested

Unique course offerings

- Advanced Control Systems
- CAD/CAM Fundamentals
- Circuits
- Communications Systems
- Digital Logic and Computer Systems
- Discrete Structures
- Economics for Engineers
- Instrumentation and Control Systems
- Mathematical Methods for Engineering and Physics
- Operating Systems
- Power Systems
- Programming in MATLAB
- Signals and Systems
- Solid State Devices

DISCOVER WHY STUDENTS & FAMILIES LOVE HPU'S DISTINCTIVE LEARNING MODEL

Google

Tyler Yusko

National Account Strategist, Google 2013 B.S. Business Administration and 2014 M.A. Strategic Communication

LIFE SKILLS

"As a freshman, the President's Seminar on Life Skills was a game changer for me. I've put those lessons into practice daily. At HPU and Google – where I work today – the sky is the limit for those who work hard."

Alan Vasquez Soto

2018, B.S. Physics and B.A. Computer Science, current Ph.D. candidate at the University of North Carolina at Chapel Hill

MENTORSHIP

"Dr. Brad Barlow got me interested in the field of astrophysics. He helped me gain real-world experiences, which influenced my career choices and helped me get accepted at my first choice graduate program."

NBA

Mikaela Campbell

2018, B.A. Sport Management, NBA Associate Program

EXPERIENTIAL LEARNING

"When I interned with organizations like USA Track and Field, Under Armour and IMG College, I was up against a field of qualified candidates from large universities. What set me apart was the real-world experience I received at HPU and the belief they instilled within me to never be afraid of a challenge."

Chloe Tyler

2018, B.A. in Special Education, elementary school teacher in Winston-Salem, North Carolina

VALUES & CHARACTER DEVELOPMENT

"Everyone at HPU shaped me into the conscientious, hardworking and prideful person I am. I was taught to be appreciative by the Hospitality Team, prompt by Campus Enhancement, compassionate by the Office of Student Life, courteous by my roommates, meticulous by my professors, creative by my choir director, spiritual by the Chapel and Religious Life team, loyal by my fellow alumni, extraordinary by HPU President Nido Qubein and proud by the campus I grew up on."

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