

ELECTRICAL ENGINEER

AVERAGE SALARY:

\$84,460

EDUCATIONAL REQUIREMENTS:

Bachelor of Science (BS) or Bachelors of Engineering (BEng) in Electrical or Electronics Engineering
Advanced Education: Master's Degree or a PhD in Electrical Engineering



RELATED HIGH SCHOOL CLUBS:

Robotics, Coding, Engineering



RELATED HIGH SCHOOL CLASSES:

Chemistry, Physics, Computer Science, Algebra II, Precalculus, Trigonometry, Calculus

- 1) Modify hardware and software designs
- 2) Source, assemble, and test product prototypes
- 3) Test and validate to ensure electric system designs actually work the way they are designed to
- 4) Design electrical circuits, board layouts and systems for various power-related products
- 5) Solve problems in factories to make sure the electronics in different pieces of equipment work together properly

ON THE JOB



RELATED CAREERS:



Aerospace Engineer, Systems Engineer, Software Engineer

- 1) The Boeing Company
- 2) Lockheed Martin Corporation
- 3) International Business Machines Corporation (IBM)
- 4) Google
- 5) Apple
- 6) General Electric (GE)

EXAMPLES OF EMPLOYERS



FUN FACTS:

- Nikola Tesla, a famous engineer, invented the tesla coil. You may have seen a giant tesla coil used to create artificial lighting.
- Big Brutus is the world's largest electric shovel. It was built in 1962 for over 6 million dollars to dig coal out of the ground. It weighs 5,500 tons and is as tall as a 16 story building. It took almost 7,000 volts of electricity to start Big Brutus! As a reference, it takes 12 volts to get a car started.
- Electrical Engineering Researchers are working to create a mini lab on a microchip to diagnose diseases. The tiny chip carries all the electrical circuits that make up the computers and sensors in a hospital lab but is designed to fit in a pill. When you are sick in the future you might be able to swallow a pill and use an app on your smartphone to send the information so your doctor can diagnose your illness.