What can I do with a major in... Electrical engineering

ACTIVITIES ELECTRICAL ENGINEERING MAJORS DO:
From geographical information systems that can continuously provide the location of a vehicle to giant electric power generators, electrical and electronics engineers are responsible for a wide range of technologies. Electrical engineers design, develop, document, and test electrical and electronic equipment and systems. This includes utility systems, electric motors, and machinery as well as wiring in buildings, automobiles, and airplanes. Electronic equipment includes radar, computers, communication equipment, and home entertainment. Electrical engineers apply the concepts and knowledge of science to help solve problems. They generally specialize in a major field such as power distribution, integrated circuits, computers, manufacturing or communications. There is a growing need for electrical engineers specializing in industrial robot and automation systems as well as laser and electro-optics.

INDUSTRIES ELECTRICAL ENGINEERING MAJORS WORK IN (SAMPLE LISTING):
- Acoustics
- Antennas and propagation
- Broadcasting
- Supercomputing
- Electrical insulation
- Geoscience
- Circuits and systems
- Healthcare
- Magnetics
- Power electronics
- Robotics
- Medical technologies
- Consulting
- Ultrasonics
- Oceanic engineering
- HVAC systems
- Automotive
- Nuclear and plasma sciences
- Industrial/food products
- Genetics
- Lasers and electro-optics
- Supercomputing
- Telecommunications
- Automation

EMPLOYERS WHO HIRE ELECTRICAL ENGINEERING MAJORS (SAMPLE LISTING):
- Caterpillar
- Cargill
- Cummins
- Seagate Technology
- Tata Consultancy Services
- Avery Dennison
- LasX
- Schlumberger
- Beckman Coulter
- Alliant Techsystems
- Boston Scientific
- Polaris Industries
- 3M
- The Boeing Co.
- Cummins Inc.
- National Instruments
- Dow Chemical Co.
- Eaton Corp.
- Flint Hills Resources
- Medtronic
- Garmin International
- Dell
- General Mills Inc.
- Lockheed Martin
- Mayo Clinic
- IBM
- Ingersoll Rand
- Logic PD
- ExxonMobil
- Siemans
- Dupont
- Accenture
- Microsoft Co.

TYPES OF POSITIONS FOR ELECTRICAL ENGINEERING MAJORS (SAMPLE LISTING):
- **Computer hardware engineer:** Designs and develops computer hardware, such as computer chips, circuit boards, modems, and printers. Computer hardware engineers also test hardware and supervise its installation.
- **Power engineer:** Deals with the generation, transmission, and distribution of electricity as well as the design of a range of related devices. These devices include transformers, electric generators, electric motors, high voltage engineering, and power electronics.
- **Control engineer:** Focuses on the modeling of a diverse range of dynamic systems and the design of controllers that will cause these systems to behave in the desired manner.
- **Electronic engineer:** Employs knowledge of electronic theories and material properties to research, design, develop, and test electronic components and systems that are used in industrial, military, scientific, or commercial uses.
- **Telecommunication engineer:** Focuses on the transmission of information across a channel such as a coax cable, optical fiber, or free space.

**Some of these positions may require an advanced degree.**
USEFUL WEBSITES FOR ELECTRICAL ENGINEERING MAJORS:

Department of Electrical and Computer Engineering  ece.umn.edu
Computer Work  computerwork.com
OdinJobs  odinjobs.com
Computing Careers  acm.org
Dice  dice.com

USEFUL WEBSITES FOR ENGINEERING MAJORS:

Engineer.net  engineer.net
Engineer Jobs  engineerjobs.com
Engineering Central  engcen.com
Graduating Engineer  graduatingengineer.com
ThinkJobs.com  thinkjobs.com
Engineering.com  engineering.com
Engineer Info  engineer.info

PROFESSIONAL ORGANIZATIONS:

American Association of Artificial Intelligence  aaai.org
Association for Computing Machinery  acm.org
NSSN: A National Resource for Global Standards  nssn.org
Institute of Electrical and Electronics Engineers (IEEE)  ieee.org
IEEE – Computer Society  computer.org
International Society for Optical Engineering  spie.org
American Council of Engineering Companies  acec.org
American Council of Engineering Companies-MN chapter  acecmn.org
National Society of Professional Engineers  nspe.org
Minnesota Society of Professional Engineers  mnspe.org
Society of Women Engineers  swe.org

*Additional job/internship search websites and resources can be found at cse.umn.edu/career.

Information on this page was compiled from the Occupational Outlook Handbook, the Encyclopedia of Careers and Vocational Guidance, University of Minnesota departmental websites, and student-reported data.