



# WHAT TO DO WITH A MAJOR IN...

## ELECTRICAL ENGINEERING

### Description of Major

Electrical engineering concerns itself with the science and engineering techniques dealing with electrons and other charged particles, with their behavior and effects, and especially with the control of them. Only in the last seventy-five years have people learned to use electricity to provide power, heat, light, and communication to ease their burdens. In recent times have come the developments of radar, television, automatic control systems, high-speed computers, transistors, and the whole family of solid state devices. The challenge of the future is limitless. Students completing the baccalaureate degree in Electrical Engineering will:

- Obtain a strong foundation in fundamentals including competence in mathematics, science, computing, and engineering.
- Demonstrate the ability to address unstructured problems specific to technical specialties in Electrical or Computer Engineering by identifying and implementing solutions using the proper tools, practical approaches, and flexible thinking.
- Interact with others, both individually and within multidisciplinary teams, using effective oral and written communication skills and possessing the ability to deal with both technical and non-technical subjects when working with peers, supervisors, and the public.
- Develop an appreciation for the ethical duties incumbent on an Electrical or Computer Engineering professional including a commitment to lifelong learning and a concern for society and the environment.

### Possible Job Titles

Note: This list is not comprehensive, and some positions may require further education or training.

Application Engineer  
Business Analyst  
Chemical Process Engineer  
Communication Engineer  
Construction Engineer  
Controls Project Engineer  
Design Engineer  
Electrical Engineer  
Energy Engineer  
Field Engineer  
Hardware Verification Engineer

Patent Examiner  
Power Distribution Engineer  
Production Engineer  
Professor  
Project Engineer  
Research Engineer  
Rotational Engineer  
System Engineer  
Systems Analyst  
Technical Sales Representative  
Test Engineer

The following links are excellent resources on specific careers such as those listed above:

- **O-net:** <http://online.onetcenter.org/>
- **Occupational Outlook Handbook:** <https://www.bls.gov/ooh/>
- **Federal Occupations by College Major:** <https://tinyurl.com/y9sx5fr3>

### **Possible Employment Settings/Fields**

Automotive Industry  
Colleges and Universities  
Computer Companies  
Construction Sites  
Consulting Field  
Dell  
Designing Industry  
General Electric  
Hospitals  
IBM  
Labs  
Manufacturing Firms

Medical Equipment Support Companies  
Microsoft  
Planning Field  
Research Field  
Sales Industry  
Teaching Field  
Telecommunications Companies  
Texas Instruments  
U.S. Government  
U.S. Military  
U.S. Patent and Trademark Office  
Writing Industry

### **Strategies for Success**

- Prepare for graduate school if a pre-professional or advanced position is desired.
- Consider a part-time job in a hospital, computer company, or other relevant site.
- Develop leadership skills by joining community or campus organizations.
- Ask to job shadow or interview a professional.
- Volunteer to gain relevant experience.
- Talk to faculty, recent graduates, and current students in the field.
- Develop excellent math, science, and computer skills.
- Brush up on oral and written communication skills.
- Consider involvement in a relevant organization (e.g., Upsilon Pi Epsilon).
- Purchase a personal computer.

### **Departmental Information for Electrical Engineering**

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