



# ***Electrical Engineering***

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**Automatic controls**

**Bioelectronics**

**Digital systems**

**Electromagnetics**

**Analog electronics**

**Power and energy systems**

**Communications and signal  
processing**

# Electrical Engineering Employers

Aerospace

Automotive

Computer and electronics manufacturers

Transportation

Telecommunications, guidance and control systems

Defense

Electric power and energy/Semiconductor

Technical service companies

Electronics

Environmental

Medical equipment

Chemical

Pharmaceutical

Computer

Pulp and paper

Textile and metal

National Aeronautics and Space Administration

Federal government

Scientific service companies

# Electrical Engineering Strategies

Broad discipline applies engineering principles to the design and production of electronic systems and electrical devices.

Prepare for a course load including engineering fundamentals, math, science and electrical engineering.

Pursue design projects and laboratory experience throughout college career.

Seek related experience through research, internships, co-ops or part-time employment.

Join student chapters of industry organizations such as Institute for Electrical and Electronics Engineers (IEEE) to develop communication and leadership skills, to participate in competitions and to take advantage of professional networking opportunities.

# General Engineering Information

A bachelor's degree provides a wide range of career opportunities in industry, business and government.

A bachelor's degree is good background for pursuing technical graduate degrees as well as professional degrees in Engineering, Business Administration, Medicine or Law.

Graduate degrees offer more opportunities for career advancement, college or university teaching positions.

Related work experience obtained through co-op, internships, part-time or summer jobs is extremely beneficial.

Develop excellent verbal and written communications skills including presentation and technical report writing. Learn to work well on a team to maximize collaborations with other engineers and those outside of the profession.

Develop computer expertise within field.

Engineers need to think in scientific and mathematical terms and exhibit the abilities to study data, sort out important facts, solve problems and think logically.

Other helpful traits include intellectual curiosity, creativity, technical aptitude, perseverance and a basic understanding of the economic and environmental context in which engineering is practiced.

Because of rapid changes in most engineering fields, both continued education and keeping abreast of new developments are very important.

Join relevant professional associations, attend meetings, participate in design competitions and stay up-to-date on research/publications.

All states and the District of Columbia require registration of engineers whose work may affect the life, health or safety of the public.

Professional or technical societies confer certification in some areas.

Research Fundamentals of Engineering (FE) exam requirements, as this exam is typically the first step in becoming a Professional Engineer (PE).

Professional Engineer (PE) licensing guidelines vary by state. Check with the National Council of Examiners for Engineering and Surveying (NCEES) for links to state boards.