



Computer Engineering

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Information protection

Communications and wireless networks

Computational science

Operating systems

Computer networks

Computer systems

Embedded systems

Computer vision and robotics

Circuit design

Signal, image, and speech processing

VLSI

Bioinformatics

Computer Engineering Employers

Aerospace

Automotive

Computer and electronics manufacturers

Transportation

Telecommunications

Guidance and control systems

Defense

Electric power and energy/Semiconductor

Scientific service companies

Electronics

Environmental

Medical equipment

Chemical

Pharmaceutical

Computer

Pulp and paper

Textile and metal

Financial and business service companies

National Aeronautics and Space Administration

Federal government

Technical service companies

Computer Engineering Strategies

Discipline involves the design and development of computer hardware and software and hardware-software integration.

Expect to take classes in engineering fundamentals, math, science and computer science.

Develop strong attention to detail, analytical skills and the ability to persevere through lengthy projects.

Seek ways to enhance interpersonal, communication and teamwork skills for work with people of differing backgrounds.

Join student chapters of organizations such as Institute for Electrical and Electronics Engineers (IEEE) and Association for Computing Machinery (ACM) to build contacts with peers and mentors, participate in student competitions and develop job leads.

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.