

The image features a central blue oval containing the text "Mechanical Engineering" in white. The oval is set against a background of several concentric, overlapping circles, some solid and some dashed, in light gray. A thick black curved shape is positioned behind the bottom-left portion of the blue oval.

Mechanical Engineering

Mechanical Engineering

Machine design

System design

Manufacturing and production

Energy conversion

Energy resources

Transportation and environmental impact

Materials and structures

Mechanical Engineering Employers

Automotive

Aerospace

Electronics

Chemical products

Petroleum

Textiles

Industrial equipment

Heating and air conditioning systems

National Aeronautics and Space Administration

Utility companies

National laboratories

Federal government

Department of Energy

Department of Defense

Federal Aviation Administration

Mechanical Engineering Strategies

Learn computer-aided design (CAD) and computer-aided manufacturing (CAM).

Obtain related experience through engineering internships, co-ops, or part-time jobs.

Develop strong interpersonal and communication skills; consider a class in public speaking to enhance presentation skills. Plan to collaborate with other types of engineers and with those in industry.

- Join student chapter of American Society of Mechanical Engineers to take advantage of mentorship programs, learn more about specialties in the field, and participate in design competitions.

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.