



Mechanical engineering combines engineering, physics and mathematics principles with materials science. Mechanical engineers are responsible for the design, analytics, manufacture and maintenance of mechanical systems. Mechanical engineers have a detailed understanding of the following areas: mechanics, dynamics, thermodynamics, materials science, structural analysis, and electricity. Mechanical engineers are involved in the design, production and operation of machinery in the fields of heating and cooling systems, transport systems, aircraft, watercraft, robotics, medical devices, weapons and many others.



Possible Career Options

- Aerospace Engineer
- Automotive Engineer
- CAD Technician
- Contracting Civil Engineer
- Control and Instrumentation Engineer
- Maintenance Engineer
- Mechanical Engineer
- Nuclear Engineer



Possible Employers

- Engineering Firms
- Non-Profit Organizations
- Governmental Organizations
- Colleges/Universities
- Research Firms
- Consulting Firms
- Aerospace Firms
- Automotive Firms
- Construction Firms
- Railway Firms
- Energy Firms
- Mining Firms



Skills Required

- Proficiency in oral and written communications
- Detail-oriented
- Ability to organize, analyze and interpret numerical data
- Creative approach to problem solving
- Critical thinking skills
- Ability to interpret data
- Ability to work independently or as part of a team
- Ability to concentrate for long periods of time



Personal Attributes

- Achievement-oriented
- Capacity for detail and order
- Capacity for analytical and logical thinking
- Patient
- Capacity for precision
- Thorough
- Skills with numbers
- Resourceful
- Have integrity



Ways to Get Experience

- Doing an internship
- Working part-time or volunteering in an engineering firm
- Volunteering as a research assistant in a university's mechanical engineering department
- Join a professional organization or related student club