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
- Creative approach to problem solving
- Ability to work independently or as part of a team
- Detail-oriented
- Critical thinking skills
- Ability to concentrate for long periods of time
- Ability to organize, analyze and interpret numerical data
- Ability to interpret data
- Patient
- Skills with numbers
- Resourceful
- Capacity for detail and order
- Capacity for precision
- Have integrity
- Capacity for analytical and logical thinking
- Thorough
- Join a professional organization or related student club

Personal Attributes

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

Ways to Get Experience

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