What can I do with a major in...

Mechanical engineering

ACTIVITIES MECHANICAL ENGINEERING MAJORS DO:
Mechanical engineers design and develop power-producing machines, such as internal combustion engines, steam and gas turbines, and jet and rocket engines. They use computers not only to form preliminary designs for systems or devices, but also to perform calculations that will predict the behavior of the design and to collect and analyze performance data. Mechanical engineers also design and develop power-using machines, such as refrigeration and air-conditioning equipment, robots, machine tools, material handling systems, and industrial production equipment. Mechanical engineers design tools needed by other engineers to do their work. They combine practical and technical skills with analytical and intellectual pursuits, while valuing work that requires research and a high level of creativity. In addition, mechanical engineers may work in production operations in manufacturing or agriculture, maintenance, or technical sales. Many mechanical engineers are administrators or managers. Mechanical engineering is one of the broadest engineering disciplines. Mechanics, energy and heat, mathematics, engineering sciences, design, and manufacturing form the foundation of mechanical engineering.

Mechanical engineers can specialize in applied mechanics, design engineering, heat transfer, power plant engineering, nanofabrication, pressure vessels and piping, plant maintenance, biomedical engineering, construction, and underwater technology.

INDUSTRIES MECHANICAL ENGINEERING MAJORS WORK IN (SAMPLE LISTING):
Manufacturing
Petroleum
Packaging
Pumps and fluid systems
Measurement systems
Heating and cooling
Government agencies
Telecommunications
Automotive
Research and development
Alternative energy
Technical sales
Biomedical
Consulting
Environmental
Computer technologies

EMPLOYERS WHO HIRE MECHANICAL ENGINEERING MAJORS (SAMPLE LISTING):
3M
Medtronic
Cargill
Ford Motor Company
Graco Inc.
Land O’Lakes
Honeywell
PERBIX
Boston Scientific
Emerson Process MGMT
Donaldson Company
Rockwell Automation
Cummins
Ingersoll Rand
Eaton Corporation
RFA Engineering
Datacard Group
Ecolab
Boston Scientific
ExxonMobil
Target Corporation
Polar Semiconductor Inc.
General Motors
General Electric
Polaris
Flint Hills Resources
St. Jude Medical
Andersen Corporation

TYPES OF POSITIONS FOR MECHANICAL ENGINEERING MAJORS (SAMPLE LISTING):
• Design engineer: Develops mechanical automation designs from customer specifications, conducts design reviews with customers, uses analytical tools to assist in the design process, and interfaces with suppliers.
• Energy engineer: Works with architects, engineers, contractors, and stakeholders to provide energy efficiency and sustainable design services to the commercial building sector by identifying opportunities for energy savings and reduction.
• Drilling engineer: Plans and designs oil and gas wells worldwide drilling with an emphasis on safety, cost, and efficiency improvement.
• Quality engineer: Supports development and ensures compliance with the company’s quality management system (QMS) in accordance with industry standards and provides technical support to product engineering, marketing, manufacturing, etc.

**Some of these positions may require an advanced degree.**
USEFUL WEBSITES FOR MECHANICAL ENGINEERING MAJORS:
Department of Mechanical Engineering  me.umn.edu
Mechanical Engineering Magazine  memagazine.org
Mechanical Engineering Career Toolkit  careertoolkits.com/mechanical-engineering
MechanicalEngineering.com  mechanicalengineer.com

USEFUL WEBSITES FOR ENGINEERING MAJORS:
Engineer.net  engineer.net
Engineer Jobs  engineerjobs.com
Engineering Central  engcen.com
Graduating Engineer  graduatingengineer.com
ThinkJobs.com  thinkjobs.com
Engineering.com  engineering.com
Engineer Info  engineer.info

PROFESSIONAL ORGANIZATIONS:
American Society of Mechanical Engineers  asme.org
National Association of Power Engineers  powerengineers.com
Society of Automotive Engineers  sae.org
Society of Manufacturing Engineers  sme.org
International Association of Engineers Society of Mechanical Engineers  iaseng.org
Institute of Transportation Engineers  ite.org
American Council of Engineering Companies-MN chapter  acecmn.org
National Society of Professional Engineers  nspe.org
Minnesota Society of Professional Engineers  mnspe.org
Society of Women Engineers  swe.org

*Additional job/internship search websites and resources can be found at cse.umn.edu/career.

Information on this page was compiled from the Occupational Outlook Handbook, the Encyclopedia of Careers and Vocational Guidance, University of Minnesota departmental websites, and student-reported data.