



What can I do with a major in

MECHANICAL ENGINEERING

from Valparaiso University?

Description of major:

Mechanical Engineering is the art of applying fundamental engineering and science in the design and development of technology that serves society's needs. Design involves working in multidisciplinary teams that balance social, economic and environmental goals. Some visible results of mechanical engineering include automobiles, aircraft, medical equipment, power plants, appliances and virtually every product you can imagine.

Relevant skills for a MECHANICAL ENGINEERING major:

- ◆ Analyze problems
- ◆ Analyze technical information
- ◆ Aptitude for accuracy & detail, spatial perception, & abstract reasoning
- ◆ Calculate
- ◆ Communicate, both verbally & in writing
- ◆ Conduct & clearly communicate scientific research
- ◆ Define/clarify problems
- ◆ Diagnose
- ◆ Draft/draw/computer-aided design
- ◆ Make keen observations and sound judgments
- ◆ Manual dexterity
- ◆ Meet deadlines
- ◆ Operate & use computers
- ◆ Organize
- ◆ Proficient in mathematics & science
- ◆ Read, interpret, and follow directions, schematic drawings, diagrams, & blueprints
- ◆ Solve problems & make appropriate decisions
- ◆ Supervise
- ◆ Synthesize & integrate various factors of production
- ◆ Test equipment
- ◆ Troubleshoot
- ◆ Use instruments and engineering tools
- ◆ Work well with others
- ◆ and others!

Sample work activities for Graduates in MECHANICAL ENGINEERING (some may require an advanced degree)

- Account Executive
- Aeronautical Engineer
- Aerospace Engineer
- Applications Engineer
- Astronaut
- Automotive Engineer
- Biomedical Engineer
- Body Systems Engineer
- Computer Science Engineer
- Consulting Engineer
- Design Engineer
- Energy Exploration
- Engineering Instructor/Professor
- Environment Quality Control
- Facilities Engineer
- Field Service Engineer
- Foundry Engineer
- HVAC Engineer
- Industrial Engineer
- Machine and Product Design
- Maintenance Engineer
- Manufacturing Engineer
- Manufacturing Systems
- Marine Engineer
- Market Support Engineer
- Materials Engineer
- Mechanical Engineer
- Mining Engineer
- Nuclear Engineer
- Occupational Safety Professional
- Packaging Engineer
- Intellectual Property/Patent Lawyer
- Plant Operations/ Management
- Plastics Engineer
- Power Train Systems Engineer
- Process Safety Engineer
- Product and Systems Evaluation
- Product Engineer
- Production Supervisor
- Project Engineer
- Quality Assurance
- Research Engineer
- Safety Engineer
- Service Engineer
- Specification Writer
- Superintendent, Measurement
- Supervision

Sample work activities for Graduates in MECHANICAL ENGINEERING cont. (some may require an advanced degree)

- Systems Engineer
- Technical Sales Engineer
- Test Engineer
- Vehicle Engineer
- and others!

Potential hiring institutions for MECHANICAL ENGINEERING majors:

- ◆ Aviation & Aerospace
- ◆ Automotive industry
- ◆ Biotechnology Laboratories
- ◆ Chemical plants & refineries
- ◆ Communication Firms
- ◆ Computer corporations
- ◆ Consulting Firms
- ◆ Data Processing Services
- ◆ Electrical equipment companies
- ◆ Engineering consulting firms
- ◆ Fabricated metals
- ◆ Government Agencies, Federal & State
- ◆ Healthcare Industry
- ◆ Industrial Firms
- ◆ Machinery manufacturers
- ◆ Manufacturing Firms
- ◆ Media
- ◆ Mining industry
- ◆ Petroleum industry
- ◆ Pharmaceutical Industry
- ◆ Private laboratories
- ◆ Textile manufacturers
- ◆ Transportation equipment companies
- ◆ Utility companies & power
- ◆ and others!

Area of further education for MECHANICAL ENGINEERING majors:

- Aerospace/Aeronautical Engineering
- Applied Science & Technology
- Automotive Engineering
- Aviation
- Bioengineering
- Biomedical Engineering
- Biotechnology
- Business Administration
- Computer Engineering
- Education
- Electrical Engineering
- Engineering Design
- Engineering Management
- Engineering Physics
- Ergonomics & Human Factors
- Industrial/Management Engineering
- Law
- Manufacturing Engineering
- Mechanical Engineering
- Mechanics
- Patent Law
- Reliability Engineering
- Robotics
- Safety Engineering
- Systems Engineering
- and others!

Sources of additional information for MECHANICAL ENGINEERING majors:

- ◆ VU Department of Mechanical Engineering: <http://www.valpo.edu/engineering/mechanical/index.php>
- ◆ Occupational Outlook Handbook – Engineers & Engineering Technicians: Engineers: Mechanical Engineers: the US Bureau of Labor Statistics compiles information about various occupations, including the nature of the work, the job outlook, earnings, and other relevant information. <http://stats.bls.gov/oco/ocos033.htm>
- ◆ American Council of Engineering Companies: Has a member directory to look up potential employers. <http://www.acec.org>
- ◆ American Society of Mechanical Engineers: Publishes information about careers in mechanical engineering including an extensive section for mechanical engineering students and recent graduates. www.asme.org/
- ◆ Consulting Engineers Council of Illinois: a not-for-profit statewide association of 220 consulting engineering and land surveying firms engaged in the private practice of engineering. Member firms engage in the disciplines of civil, electrical, geotechnical, mechanical, structural, architectural and acoustical engineering, as well as surveying. Information about member firms is all available online. <http://www.cec-il.org>

- ◆ Discover Engineering Online: Promotes the engineering profession as a career choice among young people and to recognize the accomplishments of the world's engineers. <http://www.discoverengineering.org>
- ◆ Engineering Central: engineering job openings - including hard-to-find entry-level engineering job openings. <http://www.engcen.com>
- ◆ Engineering News-Record The Construction Weekly, posting the jobs online and allowing access to terrific information. Search jobs by job title, keyword, location, or view the ads from specific issues of ENR. Jobs out for bid are also listed at this site. <http://www.enr.com/>
- ◆ EngineerJobs.Com: job listings for engineers and technical professionals. <http://www.engineerjobs.com/>
- ◆ Mechanical Engineer.com: Professional job opportunities for mechanical engineers. <http://www.mechanicalengineer.com/>
- ◆ National Society for Professional Engineers: the only engineering society that represents individual engineering professionals and licensed professional engineers (PEs) across all disciplines. Site includes a Student section. <http://www.nspe.org/>
- ◆ National Society of Black Engineers: a student-managed organization with more than 250 chapters on college campuses and 50 alumni chapters nationwide. Includes Jobs. <http://www.nsbe.org/>
- ◆ Professional & Technical Consultants Association: a professional association of independent consultants and principals who work in small consulting firms in a variety of technical and non-technical fields. Site includes a Directory of Consultants. <http://www.patca.org/>
- ◆ Society of Hispanic Professional Engineers: social-technical organization whose primary function is to enhance and achieve the potential of Hispanics in engineering, math, and science. <http://www.shpe.org/>
- ◆ Society of Manufacturing Engineers: professional society supporting lifelong manufacturing education. <http://www.sme.org>
- ◆ Society of Women Engineers: promotes the advancement of women as engineering professionals. Includes Career Guidance and a Jobs section. <http://www.swe.org/>

VU Career Center Resource Library Materials:

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| ◆ <i>Book of U.S. Government Jobs: Where They Are, What's Available, and How to Get One</i> | ◆ <i>Opportunities in Technical Sales Careers</i> |
| ◆ <i>Career Opportunities in Computers and Cyberspace</i> | ◆ <i>Peterson's Game Plan for Getting into Business School</i> |
| ◆ <i>Essays that Worked for Law Schools</i> | ◆ <i>Peterson's Game Plan for Getting into Graduate School</i> |
| ◆ <i>GMAT 2003</i> | ◆ <i>Peterson's Game Plan for Getting into Law School</i> |
| ◆ <i>Graduate Admissions Essays: Write Your Way into the Graduate School of Your Choice</i> | ◆ <i>Peterson's Graduate & Professional Programs in Business, Education, Health, Information Studies, Law & Social Work</i> |
| ◆ <i>Graduate Programs in Engineering and Computer Science</i> | ◆ <i>Peterson's Graduate & Professional Programs in Engineering & Applied Sciences</i> |
| ◆ <i>Graduate Programs in Physical Sciences</i> | ◆ <i>Peterson's Graduate & Professional Programs, An Overview</i> |
| ◆ <i>Graduate Schools in the U.S.</i> | ◆ <i>PhD Factory: Training and Employment of Science and Engineering Doctorates in the United States</i> |
| ◆ <i>Great Jobs for Engineering Majors</i> | ◆ <i>Resumes for Engineering Careers</i> |
| ◆ <i>Guide to America's Federal Jobs</i> | ◆ <i>Resumes for High-Tech Careers</i> |
| ◆ <i>Is there An Engineer Inside You?</i> | ◆ <i>Resumes for Scientific and Technical Careers and others!</i> |
| ◆ <i>Job Surfing: The Sciences – Research & Medicine</i> | |
| ◆ <i>LSAT 2006</i> | |
| ◆ <i>Opportunities in Aerospace Careers</i> | |
| ◆ <i>Opportunities in Engineering Careers</i> | |
| ◆ <i>Opportunities in Government Careers</i> | |
| ◆ <i>Opportunities in Law Careers</i> | |

For more information about majoring in MECHANICAL ENGINEERING, contact:

Robert Palumbo, PHD
Mechanical Engineering Department
Gellersen 151C
464-5107
Robert.Palumbo@valpo.edu

For information about Cooperative Education or Internships in the Department of Mechanical Engineering, contact the Department Chair.

For more questions about your career decisions, please make an appointment with a VU Career Counselor by calling 464-5005, stopping by the Career Center in Alumni Hall or e-mailing us at Career.Center@valpo.edu
