IMPROVING OUR WORLD

You may not know it, but mechanical engineering is already an important part of your life. That’s because mechanical engineers transform materials into products you use every day. They create machines that enhance our standard of living. They harness energy to produce the power, light, and transportation on which we rely. Every day, mechanical engineers are working to make the world a better place!

NO LIMIT TO YOUR AMBITIONS

- Design next generation spacecraft, airplanes, automobiles, and bicycles
- Develop alternative energy systems
- Build “nano” machines with biomedical applications
- Create environmentally friendly “green” buildings
- Generate devices to assist those with physical disabilities
- Learn how nature solves problems and use that to inspire new engineering designs

TURN IDEAS INTO REALITY

Imagine that you are leading a team of engineers to redesign a jet engine. You must generate ideas to make the engine function efficiently at high temperatures. You decide to replace the engine’s metal casings with casings of lightweight composite materials. Your new engine design is successful; it uses less fuel and has greater thrust, working more efficiently and saving money. Turning ideas into reality: that will be your challenge as a mechanical engineer.

MECHANICAL ENGINEERS DO IT ALL

Mechanical engineers collaborate with engineers from all other disciplines. You may work with electrical engineers on a new generation of computers, civil engineers to create earthquake-resistant buildings, or chemical engineers to advance environmental clean-up. Your skills will be some of the broadest and most adaptable in the engineering profession.

MECHANICAL ENGINEERING AT MSU

When you graduate in Mechanical Engineering from MSU, you will be well-versed in the fundamentals AND you will be on top of the latest innovations. You’ll also have plenty of hands-on experience. For instance, your capstone senior design projects will require you to work in teams (just like on the job) to help companies solve real-world problems. Your degree will be accredited by the Engineering Accreditation Commission of ABET, www.abet.org. ABET accreditation is an important seal of approval for many employers. MSU in Bozeman offers the only accredited Mechanical Engineering degree in the State of Montana.

For additional information, contact:
Mechanical & Industrial Engineering
Montana State University
P.O. Box 173800
Bozeman, MT 59717-3800
Tel: 406-994-2203
Fax: 406-994-6292
www.coe.montana.edu/mie
**PREPARING FOR THE CHALLENGE**

Successful mechanical engineers creatively solve problems, work well in teams, and communicate their ideas to others. High school students can get started by preparing themselves with a solid background in math, physics, chemistry, and English. A typical ME student has the following traits:

- Is curious about the way things work
- Is skilled in math and the physical sciences
- Can communicate verbally and in writing
- Can work in a team environment
- Can think and solve problems creatively
- Likes to tinker with machines
- Has a strong work ethic
- Is result-driven
- Is of high moral character

**SPECIALTY AREAS**

Mechanical engineering is very broad, and MEs are employed in most areas of technology. Following are a few examples:

- aerospace industries including commercial and defense aircraft and satellites
- manufacturing industries including cars and trucks, recreational and sporting equipment, and robotics
- conventional and alternative energy industries including solar and wind energy, heating/ventilating/air-conditioning systems, and fuel cells
- laboratories performing a wide variety of research and development
- consulting work, including product development and forensic engineering.

**SCHOLARSHIPS**

MSU’s Office of Financial Aid coordinates a wide variety of scholarship opportunities. Many scholarships for freshmen (both resident and non-resident) are awarded automatically, without a separate application form, based on the ACT or SAT scores you submit with your application for admission. [http://www.montana.edu/wwwfa/scholarships.html](http://www.montana.edu/wwwfa/scholarships.html)

The College of Engineering and the M&IE Department also offer scholarships to qualified applicants on a competitive basis. ME scholarships range from $250 to more than $2,000 per academic year. Students who want to be considered for these scholarships must submit a COE scholarship application prior to the early February deadline for the following academic year. [www.coe.montana.edu/scholarships.asp](http://www.coe.montana.edu/scholarships.asp)

**ADMISSIONS**

Applications are accepted from in-state, out-of-state, and international students. Eligible undergraduates may attend full- or part-time. Applications are processed by Admissions, Montana State University, P.O. Box 172180, Bozeman, MT 59717-2180 (1-888-MSU-CATS or 406-994-6617). [www.montana.edu/admissions](http://www.montana.edu/admissions)

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**EXCELLENT SALARIES**

Mechanical Engineering graduates ranked in the top 10 in terms of starting salaries. The national average starting salary for ME graduates was approximately $62,900 in 2012.

*Source: National Association of Colleges & Employers (NACE)*

**Who hires MSU ME graduates?**

- Advanced Composites – UT
- Alliant Techsystems – MT
- Anvil Corporation – WA
- Baker Hughes – WY
- Bechtel Bettis – ID
- Boeing – WA
- British Petroleum – AK
- Cargill – KS
- Control Engineers – ID
- CTA Architects Engineers – MT
- Exotic Metals Forming Company – WA
- Exxon Mobil – MT
- GE Aviation Systems – OH
- GT Solar – MT
- Halliburton – CA, CO, ND, WY
- HDR, Inc – MT
- Honeybee Robotics – CA
- IM Flash – UT
- Lockheed Martin – WA
- Los Alamos National Lab – NM
- Montana-Dakota Utilities – ND
- NAVSEA – WA
- Plastic Design & Mfg. – MT
- Puget Sound Naval Shipyard – WA
- Sanjel – ND
- Schlumberger – TX
- Stryker Medical – MI
- TIMCO Aerosystems – WA
- Trotter Morton – AB
- US Air Force
- Vermeer Manufacturing – IA
- Waterman Industries – CA
- Wood’s Powr-Grip – MT

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5 MSU students won 1st place in ASHRAE’s Integrated Sustainable Building Design competition. The site is below the Queensboro Bridge in New York City. The team will accept the prize, including $2,000, at the 2015 ASHRAE Winter Meeting in Chicago.