

ABOUT THE MAJOR

If you want to solve problems by designing, building, or creating something new, Mechanical Engineering is the major for you. Mechanical Engineers look at the products, systems, and materials existing in the world and devise ways to make them more efficient, more user-friendly, stronger, faster, and more sustainable! As an ME you would play a significant role in the design and manufacturing of all of the products and systems essential to everyday modern life: things like appliances, electronics, electric power generation, recreational equipment, automobiles, satellites, wheelchairs, airplanes, medical devices, robots, industrial equipment, environmental control systems, and much more. You will invent new products and machines that will surely improve everyone's lives.

To do all that, Mechanical Engineers learn about controlling the movement of matter and energy. At the core of our curriculum are the engineering science classes where you learn to predict how energy, forces, fluids and materials will interact in almost any application or natural environment. A Mechanical Engineering degree from the University of Utah provides you with skills you need to be an effective problem solver in the modern world.




LEARNING OUTCOMES

- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- Identify, formulate, and solve complex problems by applying principles of engineering, science, and mathematics; to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- Communicate effectively with a range of audiences; to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- Acquire and apply new knowledge as needed, using appropriate learning strategies.

PLAN & PREPARE

At the U, we plan for our students to have an Exceptional Educational Experience identified by four broad categories we call the Learning Framework: Community, Knowledge & Skills, Transformation, and Impact. This major map will help you envision, explore, design, and plan your personalized Exceptional Educational Experience with the Learning Framework at the core. In addition to assisting you in planning your coursework and navigating the requirements of your major, this map will help you incorporate other kinds of experiences to expand your knowledge, support your development, and prepare you for the future you want.

GET STARTED TODAY

-  Schedule an appointment with an advisor advising.utah.edu
-  Visit ugs.utah.edu
-  Learn more about the Learning Framework ugs.utah.edu/learning-framework



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MEEN

MECHANICAL ENGINEERING

COLLEGE OF ENGINEERING



Community



Knowledge & Skills



Transformation



Impact

"I help large industrial companies reduce their energy use. I regularly utilize skills I learned in the program in my work. I chose to study engineering because I was interested in real life applications of math and science. I specifically majored in mechanical engineering because there is a wide variety of careers and topics of study."

*>> Moriah Henning
Energy Efficiency Engineer, Turning Point Co*

MECHANICAL ENGINEERING

Use this map to explore, envision, design, and plan your Exceptional Educational Experience.

GETTING STARTED

MAKING PROGRESS

FINISHING UP

WHERE CAN I GO AFTER GRADUATION?

COURSES

- Meet with your ME EN advisor
- Enroll in the first appropriate math course
- Enroll in Calculus I (Math 1210 or 1310) and ME EN 1000 Intro to Mechanical Design for Engineering Systems, when ready
- Take ME EN 1800 - Success in Mechanical Engineering

- Meet with your advisor often to discuss your progress, options for summer course work, and the graduation path that will work best for you
- Keep track of prerequisites, required courses, and your own progress by using the Degree Plan Flowcharts. Your advisor can make a personalized one for you

- Each semester complete mostly major coursework with one general education requirement
- Your 3rd year is an excellent time to choose an emphasis and explore what technical electives you may want to take.

- Enroll in the two-semester sequence for Senior Design (ME EN 4000 and 4010)
- Finish your technical electives and any remaining general education requirements
- Check your Degree Audit and meet with your academic advisor

- Pursue a Masters or PhD
- Aerospace Engineer
- Manufacturing engineer of outdoor gear products
- Sustainable or renewable energy Engineer

COMMUNITY

- Consider enrolling in the Mechanical Engineering Learning Community
- Enroll in ME EN 1800 Success in Mechanical Engineering
- Attend both the Get Involved Fair and Engineering Club Rush (info fairs for student organizations on campus).

- Build strong study groups with your peers
- Join an engineering student organization
- Attend the Welcome Event for the ME department each Fall and Spring

- Attend research symposiums and other Undergraduate Student Advisory Committee events
- Check the ME Canvas Calendar for these events and more!

- Consider running for a leadership position in an engineering-related club
- Apply to be a Mechanical Engineering Tutor or Peer Mentor
- Network with your fellow classmates

- Manufacturing engineer in any field or industry
- Medical device development
- Industrial or Systems Engineer

KNOWLEDGE AND SKILLS

- Download software, especially SOLIDWORKS and MATLAB
- Enroll in ME EN 2800 to develop strong time management and study skills
- Explore skills required for the future career you would like

- Meet with the Career and Professional Development Center to prepare for an internship, job, or research position search
- Explore adding any related emphases, minors, and certificates with your advisor.

- If you're planning on entering the workforce after graduation, complete an internship.
- If you're pursuing an honors degree, considering graduate school, or want to get some additional experience, consider applying for an undergraduate research position and/or a UROP Grant.

- Complete technical electives that will prepare you for your desired career. Consult with your advisor and faculty to explore all options.
- Complete your senior design project.
- If you're interested in becoming a professional engineer, take the FE exam.

- Automation
- Robotics
- Product research and development
- Micro/nanoscale engineer

TRANSFORMATION

- Meet with your advisor to discuss goal-setting for your time in college
- Evaluate your course load and work load, and create a graduation plan that works for you
- Read the Engineering Grand Challenges. Which challenge do you want to address as an engineer?

- Do a mock internship search or job search. Reflect on what career you might pursue and what skills you will want to develop in college to get you there.
- Reflect on your study skills. What are you doing well to prepare? What could you do differently?

- Complete a job shadowing experience of a graduated alumni
- Review the Research Areas websites and explore what area of Mechanical Engineering interests you the most.

- Complete your Senior Design project and share this experience at Design Day
- Wrap up an internship or co-op experience. What did you learn during your time with that company?

IMPACT

- Consider getting involved in the Grand Challenge Scholars Program
- Consider completing a Learning Abroad experience. Attend a Learning Abroad 101 Information Session.

- Grow your teamwork and communication skills while working in small groups with other classmates

- Volunteer for leadership roles on your lab projects
- Lead study groups for yourself and your peers

- Lead an engineering student group in a national competition
- Present research at a conference or UROP¹ symposium

CAREER

- Explore the Career & Professional Development Center's website for resources and interest assessments
- Draft a resume and track all your experience and skills acquisition

- Update your resume and draft a cover letter
- Track all the experiences and skills you are gaining throughout your classes, labs, and co-curricular activities in a master resume

- Complete a mock interview with a Career Coach or an alumni
- Attend the the STEM Career Fair to explore internship and career opportunities
- Complete an internship or undergraduate research experience

- Identify what career and job opportunities will be the best fit for you and your experiences
- Meet with your Career Coach to create a comprehensive job search plan
- Apply for jobs and/or graduate programs

¹Undergraduate Research Opportunities Program