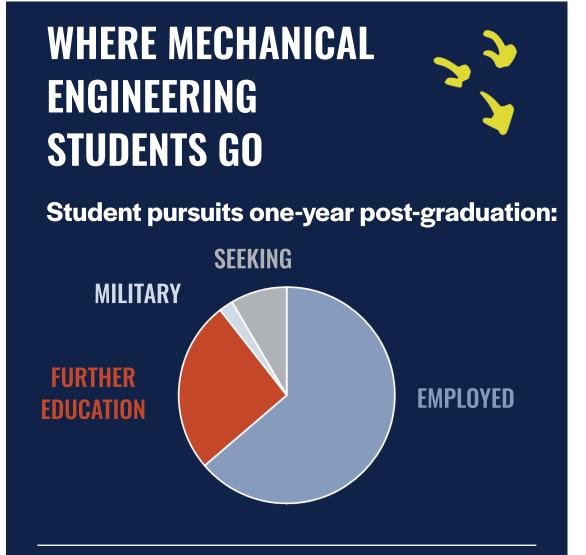
## **BS, Mechanical Engineering**

#### Experiential Major Menu





# Industries of employment for students one year out:

- Aerospace/Defense/Aviation
- Energy- Oil & Gas
- Energy Alternative/Renewable
- Manufacturing
- Transportation & Logistics
- Government/Public Sector
- Automotive
- Consulting
- High Tech/Information Technology

#### **Job titles of our graduates one-year out:**

- Mechanical Engineer
- Aerospace Engineer
- Systems Engineer
- Sales Engineer
- Product Strategy Analyst
- Corrosion Engineer
- Nuclear Power Engineer
- Design Engineer
- Engineering Consultant
- Structural Engineer

This menu is a tool for you to use to explore opportunities at Mines outside of the classroom. These are not requirements, but rather recommendations to help you leverage what Mines has to offer. Just like at a restaurant, choose what looks best to you and start from there! This menu can help you create your own pathway and customize your experience during your time at Mines.

The activities are placed in specific years based off staff and faculty recommendations, but you can participate in most of them at any time. There is never a wrong time to get involved if you're looking, and no pressure to do any of these things!

#### **Get to know Mechanical Engineering**

Mechanical Engineering is considered the most versatile Engineering degree. Any industry that employs engineers in meaningful numbers will employ Mechanical Engineers. Opportunities are as wide ranging as control systems for aircraft, to design of power conversion machines, to robotics for manufacturing automation, and much more.

Our department prides itself in providing a challenging yet rewarding experience for undergraduate students to develop as engineers, scholars and citizens. Our curriculum is the only one that includes all the fundamental engineering courses giving students grounding principles that you can build upon in upper-division electives.

Our students engage in our project-based courses to build design and problem-solving skill sets valued by industry and to prepare for the senior year Capstone Design experience. Students are also encouraged to get involved in research with our faculty. These research areas include: biomechanics, solid mechanics and materials, thermal-fluid systems, and robotics.



"Mines offers students the opportunity to engage with their course material through relevant and actionable projects."

ANNA CHRISTIANSEN

### **Academic options in Mechanical Engineering**

Students have the opportunity to build depth within the degree by taking one of our 8 <u>Tracks</u>; these don't require any additional coursework, but rather organize your electives in one focus are of ME such as Biomechanics, Automotive, Aerospace, etc.

- Frequently Pursued Minors
  - Robotics and Intelligent Systems
  - Electrical Engineering
  - Computer Science
  - McBride Honors Program
  - Teaching
- Common 4+1 Programs
  - Mechanical Engineering or any other discipline
- Academic Catalog

#### **Get Involved**

Attend Celebration of Mines in August to get to know campus organizations and academic departments, sample food, and play games. Below are some departments that offer many great opportunities to enhance your experience here at Mines.

- Student Activities, Involvement & Leadership
- University Honors and Scholars Program
- Every Oredigger

#### Experiential Major Menu B.S., Mechanical Engineering

Browse the opportunities within each year and themed Ore Cart to find ways to get involved. All activities in bold are departmental specific. whereas others are open to the general campus.



	1 <sup>st</sup> year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> or final year
Leadership & Innovation	<ul> <li>Look into joining a ME specific student organization</li> <li>Explore opportunities to get involved with the <u>Undergraduate Student Government</u></li> <li>Explore options to get involved with <u>CLSA</u> and Community Councils</li> <li>Apply for the Environmental Leadership Lab trip and Scholars Program. Check the Daily Blast for more information in April.</li> </ul>	<ul> <li>Attend the <u>Leadership Summit</u> and develop your leadership skills right on campus</li> <li>Participate in the <u>Leadership Workshop Series</u></li> <li>Attend the <u>Hennebach Program</u> lectures</li> <li>Sign up to engage in innovative thinking and real-world problem solving with <u>Innov8x Challenge</u></li> </ul>	<ul> <li>Become an officer in your society</li> <li>Apply to be an Undergraduate Writing Fellow, a peer tutor in the Writing Center. Check the Daily Blast for information in early October.</li> </ul>	<ul> <li>Expand your leadership in your society or organization</li> <li>Take <u>CSM 350:</u> Special Studies in Leadership &amp; Small Group Dynamics</li> </ul>
Professional Development	<ul> <li>Attend Mechanical Mondays to broaden your perspective of different careers and pathways</li> <li>Attend Career Day for summer internship positions</li> <li>Update or create a college resume and get it reviewed with feedback</li> <li>Attend Career Day</li> <li>Use DiggerNet and Workday for employment opportunities</li> </ul>	<ul> <li>Check out some professional organizations to join</li> <li>Create a LinkedIn profile and join the ME community on LinkedIn</li> <li>Participate in Career Day to network</li> <li>Enroll in CSM 250 to plan your career path</li> <li>Explore ethics opportunities across campus</li> <li>Attend VIP events each semester</li> <li>Attend the Chevron Lecture Series luncheon</li> </ul>	<ul> <li>Attend Career Day for summer internship positions</li> <li>Consider opportunities for graduate schools</li> <li>Take Introduction to Research Ethics (SYGN 502) or Professional Oral Communication (LICM 501), both are graduate classes but accessible to Undergraduates.</li> <li>Write an article for SWE's annual newsletter</li> <li>Be a tutor or lead core review with CASA</li> </ul>	<ul> <li>Look for full time employment at Career Day and on <u>DiggerNet.</u></li> <li>Take advantage of the Career Center's <u>Offer Letter Review</u></li> </ul>
Research, Creative & Scholarly Achievement	<ul> <li>Explore the option of a summer with <u>SURF</u></li> <li>Pick up copies of <u>The Oredigger</u> to see what is going on at Mines and maybe contribute a written piece.</li> <li>Explore how to get involved with research through <u>different opportunities</u> on campus</li> </ul>	<ul> <li>Attend the Emerging Scholars Seminar Series to learn about various research topics</li> <li>Find a faculty member you are interested in working with and apply for MURF</li> <li>Explore classes offered through HASS</li> </ul>	<ul> <li>Explore ME research areas and connect with a faculty if you want to get involved</li> <li>Show your research outcomes in Reuleaux</li> <li>Explore options to join a musical group on campus or Mines Little Theater</li> <li>Take Research, Values, and Communication (HASS 360)</li> <li>Co-author a paper with a fellow student or faculty member</li> <li>Manage departmental or student organization's web and/or social media presence</li> </ul>	<ul> <li>Submit a piece of visual art, fiction, poetry or music to the High Grade</li> <li>Present at a conference</li> <li>Present at Mines Undergraduate Research Symposium</li> </ul>
Inclusive & Impactful Civic Engagement	<ul> <li>Apply to work at College View Middle School in Denver as a tutor</li> <li>Join Society of Women Engineers as a mentee</li> <li>Attend the Study Abroad Fair this Fall to start exploring your options. If you want a ME specific program apply to study with a cohort in Cyprus next Spring</li> <li>Attend the annual Celebration of DI&amp;A at Mines</li> </ul>	<ul> <li>Participate in outreach at local elementary schools</li> <li>Participate in <u>Girls Lead The Way</u></li> <li>Examine different viewpoints with the <u>movie and book recommendations</u> from MEP</li> <li>See how you can contribute to <u>Mines Without Borders projects</u></li> <li>Join the Mines DI&amp;A <u>general council meetings</u> or a <u>learning community</u></li> </ul>	<ul> <li>Assist with Trick-or-Treat so Golden Can Eat, more information in Daily Blast</li> <li>Tutoring at local high schools</li> <li>Explore DI&amp;A workshops along with trainings from SHAPE</li> <li>Join the departmental DI&amp;A Council</li> <li>Serve as a panelist at Making The Connection or other recruitment events</li> <li>Coordinate an S2S community service event</li> </ul>	<ul> <li>Tutor at a local high school</li> <li>Volunteer as a mentor for K-14 student with Rocky Mountain MESA</li> <li>Take Art &amp; Environmentalism in Italy</li> <li>Apply for a Mines DI&amp;A community grant to help promote an inclusive campus</li> <li>Facilitate a workshop at Celebration of DI&amp;A at Mines. Keep an eye on the Daily Blast for calls for proposals.</li> </ul>
Health & Wellbeing	<ul> <li>Participate in <u>Oredigger Camp</u> to build your Mines community</li> <li>Balance studying for finals with daily wellness activities during <u>Stress Less Week</u></li> <li>Become familiar with the Counseling Center's <u>services</u></li> <li>Attend a QPR suicide prevention <u>training</u></li> <li>Attend a Bystander Intervention <u>workshop</u></li> <li>Attend <u>Fresh Check Day</u></li> <li>Take a group fitness class</li> </ul>	<ul> <li>Sign up to be a part of intramural sports</li> <li>Get financially savvy with Money Matters</li> <li>Participate in a Peer Educator led workshop</li> <li>Utilize YOU@Mines to find personalized wellness resources to succeed, thrive &amp; matter at Mines</li> <li>Apply to be a Betsy's Friends Peer Educator</li> <li>Check on your own health at the Sexual and Reproductive Wellness Fair</li> </ul>	<ul> <li>Adventure with the <u>Outdoor Recreation Center</u> through an organized trip (domestic or international!) or rent gear to have one of your own</li> <li>Get <u>CPR/First Aid</u> certified</li> <li>Prioritize your sleep by grabbing a Bedside Box</li> <li>Organize a <u>suicide prevention training</u> or a <u>Peer Education workshop</u> for your student organization</li> <li>Destress with some therapy dogs at <u>Pause for Paws</u></li> <li>Do a <u>personal training</u> session with Rec Sports</li> </ul>	<ul> <li>Show your loved ones everything you love about Mines at Family &amp; Friends weekend</li> <li>Participate in the Imposter Syndrome Peer Education workshop before heading out into the workforce or graduate school</li> <li>Help manage your stress with Stress Less Box</li> <li>Take a Self-Check at YOU@Mines</li> <li>Do a QPR refresh</li> </ul>
Academic Success	<ul> <li>Sign your family up for the <u>CASA First-Year Family Newsletter</u> so they can support your academic success</li> <li>Attend the <u>Major Fair</u> and <u>declare</u> a major in late April at Declaration Day with CASA. Keep an eye out for an announcement in the Daily Blast.</li> </ul>	<ul> <li>Explore different <u>Tracks</u> and decide if you want to focus in a sub-discipline of ME</li> <li>Mandatory <u>Advising</u></li> <li>Explore <u>Bounce Back</u> if you are needing to retake a course, on academic probation or returning from academic suspension.</li> </ul>	<ul> <li>Mandatory <u>Advising</u></li> <li>Start to request letters of recommendation</li> </ul>	<ul> <li>Choose a project In Senior Design that aligns with the skills sets developed In your ME track</li> <li>Apply to graduate school and/or jobs</li> </ul>