**ABOUT THE** MAJOR

Mining provides the raw materials and energy resources needed to sustain modern civilization. It is a field where the work is always challenging and requires creativity. Mining engineers are uniquely prepared to discover, evaluate, and develop mineral deposits. Our mining engineering program provides you with a strong background in mathematics, computer applications, economics, communication skills, and the physical sciences (particularly geology, physics, and chemistry). You will benefit from small classes with faculty who are interested in your success and you will gain handson experience with field trips to mine sites in your freshman year as well as summer internship opportunities. With a Mining Engineering degree from the U, you will be prepared to enter this competitive industry as an innovative, well-trained engineer capable of meeting the ever-increasing demand for energy and mineral resources.

### LEARNING **OUTCOMES**

- Acquire the ability to design and apply engineering processes and innovative technologies to recover the mineral resources needed for sustaining modern life.
- Learn to develop and communicate solutions for public health and safety as well as the global, cultural, social, environmental, and economic aspects of mining.
- Become an ethically and globally aware citizen capable of making positive changes in our world.
- Gain skills to develop the safest, most effective, and sustainable methods of recovering the earth's mineral resources.
- Effectively function as a member or leader of a team that creates a collaborative and inclusive environment to establish and accomplish goals.

#### 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
- $\otimes$ Learn more about the Learning Framework: ugs.utah.edu/learning-framework





115 S 1460 E, Room 205 Salt Lake City, Utah 84112 cmes.utah.edu



\* Community

# MINING ENGINEERING

"I enjoyed my time as a student in the Mining Engineering Department because the classes are small and each faculty member is genuinely interested in the success of every student. The mining engineering field is very close knit and my former classmates are now colleagues."



# COLLEGE OF MINES AND EARTH SCIENCES



>> Krystal Walker, Mining Engineer

# MINING ENGINEERING

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

	GETTING STARTED	MAKING PROGRESS		FINISHI
COURSES	<ul> <li>Take MGEN 4990 - Mining Engineer Seminar to explore what a mining engineer does</li> <li>Meet with your advisor to discuss your program of study</li> </ul>	<ul> <li>Take MGEN 3015 - Mine Visits Class and MGEN 3010 - Intro to Mining in the Fall</li> <li>Take MGEN 5150 - Mechanics of Materials in the Spring and choose technical elective courses that are 5000+ level</li> </ul>	<ul> <li>Make sure transfer credits appear in your degree audit</li> <li>Review your degree audit to make sure you are on track to graduate next year</li> </ul>	<ul> <li>Meet with review yo</li> <li>Apply for</li> <li>Complete Interview</li> </ul>
COMMUNITY	<ul> <li>Attend the Mining Engineering Welcome Back BBQ</li> <li>Stop by 313 WBB and get a department sticker</li> <li>Make sure you're on the department email list</li> <li>Attend the department's Awards Banquet in the Spring</li> <li>Follow @uofucmes on Instagram</li> </ul>	<ul> <li>Become a Utah Mining Association Mining Student Ambassador</li> <li>Join the student chapters of SME<sup>1</sup>, WIM<sup>2</sup>, or MRT<sup>3</sup></li> <li>Help with the Utah Food Bank Fund Drive in November</li> </ul>	<ul> <li>Participate in a study group</li> <li>Sign up for the Fall field trips to mine sites</li> <li>Apply to be a CMES<sup>4</sup> ambassador</li> <li>Participate in College and Department events</li> </ul>	<ul> <li>Take on a organizat</li> <li>Help mer Mining E</li> <li>Participa</li> </ul>
KNOWLEDGE AND SKILLS	<ul> <li>Download free student software at software.utah.edu</li> <li>Meet with your advisor every semester</li> <li>Attend office hours for your faculty and/or teaching assistants</li> <li>Download the SafeUT App</li> </ul>	<ul> <li>Check in with your advisor</li> <li>Apply for department, college, and external scholarships</li> <li>Check department emails for company information sessions and internship opportunities</li> </ul>	<ul> <li>Participate in undergraduate research through UROP<sup>5</sup></li> <li>Finalize your graduation plan with your advisor</li> <li>Present on your internship experience in MGEN 4990 - Mining Engineering Seminar</li> </ul>	<ul> <li>Meet wit review yo</li> <li>If you're becomin engineer</li> </ul>
TRANSFORMATION	<ul> <li>Find a mentor by connecting with faculty and student leaders</li> <li>Participate in tours hosted by the student chapters of SME and WIM</li> <li>Take a workshop through the Learning Center</li> </ul>	<ul> <li>Focus on your health and try a new sport by joining an intramural team or taking an ESSF<sup>7</sup> class</li> <li>Use your Arts Pass to attend campus events</li> </ul>	<ul> <li>Visit the Natural History Museum of Utah and the Utah Museum of Fine Arts</li> <li>Create a budget with a certified financial counselor at the Financial Wellness Center</li> </ul>	- Take an a - Attend th - Meet wit discuss f
IMPACT	<ul> <li>Meet with a Student Success Advocate and brainstorm a list of topics you care about and would like to get involved in</li> <li>Take assessments through the CPDC<sup>8</sup> to help you identify your strengths, interests, personality, and values</li> </ul>	<ul> <li>Apply for mining industry internships</li> <li>Go on a Career Trek with the CPDC</li> <li>Participate in an Alternative Fall or Spring Break trips through the Bennion Center</li> </ul>	<ul> <li>Become a UMA<sup>9</sup> Mining Student Ambassador and present to 4th grade classes</li> <li>Judge a local school's science fair</li> </ul>	- Attend a of Scienc - Participa Competi
CAREER	<ul> <li>Activate and customize your Handshake account</li> <li>Network with mining engineering seminar speakers to find internships</li> <li>Attend the the STEM Career Fair to learn about careers in mining</li> </ul>	<ul> <li>Expand your network with LinkedIn, Alumni Fire, and informational interviews</li> <li>Attend the STEM Career Fair for internship opportunities</li> </ul>	<ul> <li>Attend the SME conference to network with industry professionals</li> <li>Meet with a Career Coach to discuss your career goals and create a plan for after graduation</li> <li>Attend a CMES Speed Networking event</li> </ul>	<ul> <li>Attend th time emp</li> <li>Attend th with indu</li> <li>Apply for</li> </ul>

<sup>1</sup>Society for Mining, Metallurgy, & Exploration <sup>2</sup>Women in Mining <sup>3</sup>Mine Rescue Team <sup>4</sup>College of Mines & Earth Sciences <sup>5</sup>Undergraduate Research Opportunities Program <sup>6</sup>Fundamentals of Engineering <sup>7</sup>Exercise Sports Science Fitness <sup>8</sup>Career and Professional Development Center <sup>9</sup>Utah Mining Association

## NG UP

- h the department chair to our degree audit
- graduation
- e the department's Exit

n your advisor to our degree audit g a professional , take the FE<sup>6</sup> exam

rt class for non-majors e SME Conference uture plans

Hinckley Forum or Frontiers e event offered on campus te in the Move Mining tion at the SME Conference

ne STEM Career Fair for fullployment opportunities ne SME conference to network ustry professionals jobs or graduate school

### WHERE CAN I GO **AFTER GRADUATION?**

- Construction Coordinator
- Construction Engineer
- Consultant
- Data Analyst
- Electrical Distribution Systems Engineer
- Environmental Consultant
- Explosives and Blasting Specialist
- Geotechnical Engineer
- Instructor/Professor
- Long-Range Mine Planner
- Manager of Mine **Technical Services**
- Manager of Operations
- Mine Planner and Designer
- Mine Supervisor
- Mineral Scheduler
- Mining Engineer
- Mining Marketing Representative
- Mining Technical Service Engineer
- Operations Engineer
- Planning Engineer
- Principal Engineer
- Project Engineer
- Reclamation Specialist
- Safety Engineer
- Senior Engineer Technician
- Senior Mining Technician
- Senior Mining Engineer
- Senior Surveyor
- Short-Range Mine Planner
- Superintendent of Mine Planning