

## ABOUT THE MAJOR

As a student in the Geoscience program at the U, you will focus on the composition, structure, and history of the Earth and the processes that govern them. You will learn to apply the principles of chemistry, physics, mathematics, and biology and gain a fundamental understanding of how the Earth works and has evolved through time. The geoscience coursework includes theoretical, fieldwork, and laboratory components that will prepare you to address societal needs and problems such as locating and characterizing mineral, energy, and groundwater resources, assessing seismic and other geologic hazards, and evaluating and remediating environmental contamination. You can tailor your major to suit your interests, passions, and future goals by selecting from three emphasis areas: Geology, Geophysics, or Environmental Geosciences. The Geology emphasis uses Utah's unique structures to focus on geologic materials, Earth systems, and fossils. The Geophysics emphasis focuses on using physical methods to image and understand the Earth. The Environmental Geoscience emphasis focuses on layers of the atmosphere and their interactions. Regardless of emphasis area, the Geoscience major at the U provides both pre-professional training for future scientists and prepares you to make informed choices about pressing societal issues.

## LEARNING OUTCOMES

- Understand the nature and origin of the materials that make up the Earth
- Understand the dynamic processes that operate within the Earth from its deep interior to the surface
- Apply basic principles of math, chemistry, biology and physics to geologic issues
- Recognize the professional and ethical responsibilities expected of scientists
- Demonstrate skills in reading comprehension of scientific literature, and in oral and written communication of scientific results
- Demonstrate proficiency in geologic field skills and in solving integrative, field-based problems in Earth science

## 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](https://advising.utah.edu)
-  Visit [ugs.utah.edu](https://ugs.utah.edu)
-  Learn more about the Learning Framework [ugs.utah.edu/learning-framework](https://ugs.utah.edu/learning-framework)



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# GEO

**GEOSCIENCE**  
geology emphasis

COLLEGE OF MINES & EARTH SCIENCES



*"Studying geology at the University of Utah has granted me the sheer joy of learning to listen to the universe, tell its most intimate stories and deepest secrets, amidst the very landscapes that preserve them."*

*>> Savannah Carpenter  
Undergraduate Student Researcher*

*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 academic advisor to create a first year course plan
- Take GEO 1100 and GEO 2500 in the fall
- Ask your advisor about taking an appropriate math course
- Look for a minor

- Take GEO 3100 – Dynamic Earth
- Ask your advisor about your allied science sequence
- Study in the Student Epicenter (FASB 104)

- Find professors on earth.utah.edu and set up an appointment to talk about research
- Take a general education class that feels interesting (GEO 3030 is a great IR class!)
- Begin taking upper division electives to explore the earth sciences

- Meet with your academic advisor to review your degree audit
- Prepare to take Field Methods and Field Geology as your capstone experience
- Apply for graduation during your final fall semester

- Geologist
- Economic Geologist
- Geochemist
- Paleontologist
- Oceanographer
- Secondary Earth Science Teacher
- University Professor or Researcher
- Stratigrapher
- Hydrologist
- Petroleum Geologist
- Science Journalist
- Science Journalist
- Hydrogeologist
- Mineralogist
- Sedimentary Petrologist
- Soil Scientist

### COMMUNITY

- Visit student involvement tables in the fall (find more information in the Student Epicenter - FASB 104)
- Keep up with social media and the calendar of events

- Ask your advisor about becoming a student ambassador
- Volunteer at the Student Epicenter to help with outreach workshops and building tours

- Find a student club or organization at [getinvolved.utah.edu](http://getinvolved.utah.edu)
- Experience an alternative fall or spring break through the Bennion Center

- Join GeoClub and get involved with the annual Open House, the weekly Distinguished Lectures Series, or sit on the department outreach committee

### KNOWLEDGE AND SKILLS

- Meet with a Career Coach at [careers.utah.edu](http://careers.utah.edu)
- Connect with a Geology professor to find opportunities to Interview or job shadow with someone in your field of interest

- Attend the STEM Job Fair in the fall to find internships, see CPDC<sup>1</sup> calendar
- Research professional licensure requirements for geological

- Consider taking GEOG 3100 Intro to GIS<sup>2</sup> & Cartography
- Join a research team. Connect with your current professors or find research interests
- Find a learning abroad experience [learningabroad.utah.edu](http://learningabroad.utah.edu)

- Share your research with the Office of Undergraduate Research
- Present your research at the annual department Open House

### TRANSFORMATION

- Use the Catalog to explore a minor or certificate
- Visit with a Student Success Advocate
- Explore the Natural History Museum of Utah

- Begin research for a senior thesis and work with a geology professor
- Volunteer at the Natural History Museum of Utah

- Explore the geology of Utah by visiting Utah Geological Survey
- Visit one of Utah's national parks
- Dig for trilobites at [u-digfossils.com](http://u-digfossils.com)

- Participate in graduation events across campus
- Interview a Distinguished Lecture Series presenter

### IMPACT

- Join Inclusive Earth Club
- Attend a MUSE<sup>3</sup> Casual Friday

- Participate in or create your own community service project at the Bennion Center
- Volunteer at the Gardens on campus

- Find volunteer opportunities at
- Attend the annual Gem, Mineral and Fossil show from the Wasatch Gem Society

- Teach community members about your interests at the annual Open House
- Email your advisor to share your research in the department newsletter

### CAREER

- Start building your resume with your career coach at the CPDC
- Activate and customize your Handshake account to find jobs, internships, and career events

- Create a LinkedIn Account
- Research internships through the Hinckley Institute
- Start research with a faculty member

- Apply for research funding through UROP<sup>4</sup>
- Ask your advisor or professors about Learning Abroad experiences for earth scientists
- Attend Career Expos in fall and spring semesters

- Apply for jobs or graduate schools at least 6 months before graduation
- Meet with a Career Coach to practice interview conversations