Welcome to the

Geology Major

in the College of Computational, Mathematical, and Physical Sciences

College Advisement Center
- Website: https://science.byu.edu/advisement
- Email: cmsadvising@byu.edu
- Phone: 801-422-2674
- Office: N-181 ESC

Geological Sciences Department
- Website: www.geology.byu.edu
- Email: geology@byu.edu
- Phone: 801-422-3918
- Office: S-389 ESC

Faculty Advisor – Jani Radebaugh*
- Email: janirad@byu.edu
- Phone: 801-422-9127
- Office: S-383 ESC

Internship Coordinator – Keryn Ross
- Email: volcano@gmail.com

University Career Services – Anna Kennington
- Website: careers.byu.edu (See Handshake flyer in packet)
- Email: anna.kennington@byu.edu
- Phone: 801-422-3000 to schedule an appointment
- Office: C106 BNSN

Club – Geology Club
- Advisor: Ron Harris (ESC S-317)
- Email: rharris@byu.edu
- Phone: 801-422-9264

AAPG Chapter
- Advisor: Sam Hudson (ESC S-337)
- Email: sam.hudson@byu.edu
- Phone: 801-422-4657

*Please meet with Dr. Jani Radebaugh soon after entering the major for important information about the course sequencing.

Things to Know

Resources for Graduation Planning

- Flow Charts and Major Academic Plans (MAPs) can be found here: https://science.byu.edu/advisement/explore-majors-and-minors.
- Academic advisors in N-181 ESC will help you understand course sequencing and help you plan classes to efficiently fill requirements. They can also help you with study skills and initial career exploration as well as connecting you with correct resources.
- Plan and register from your plan on MyMAP. Your academic advisor can help you understand how to best utilize this resource.
- Evaluate your current program. Periodically major programs are updated. An academic advisor would be happy to review the differences between the programs with you to help you determine what would be best for you.
- Consider meeting with a faculty advisor in your department. Contact info is found on the first page of this packet.

Tutoring Resources and Research

- Volunteer peer tutors are available through Y Serve if you need help with a class. Also, if you excel in a subject, consider serving your fellow students by becoming a tutor. Find out more here: https://tutoring.byu.edu/.
- Many departments provide TA Tutorial Labs and research opportunities. Check your department for details:
  - Chemistry and Biochemistry: C-104 BNSN, 801-422-6261, https://chem.byu.edu/department/faculty/
  - Computer Science: 3361 TMCB, 801-422-3027, cs-office@byu.edu
  - Geological Sciences: S-389 ESC, 801-422-3918, geology@byu.edu
  - Mathematics: 275 TMCB, 801-422-2061, office@mathematics.byu.edu
  - Mathematics Education: A180 ESC, 801-422-1735, office@mathed.byu.edu
  - Physics and Astronomy: N-283 ESC, 801-422-4361, physics_office@byu.edu
  - Statistics: 2152 WVB, 801-422-4505, statsec@stat.byu.edu

Prepare Early for a Career

- Check out Careers & Experiential Learning in 1134 WSC and at careers.byu.edu.
- Consider doing an internship.
  - Attend the STEM and Career Fairs held in fall and winter semesters.
  - Talk to your department about internship opportunities.
  - Use LinkedIn and Handshake (see flyer in this packet) to connect with alumni and apply for jobs/internships. BYU Connect is another great resource for networking (connect.byu.edu).
  - Talk with the college Career Director who can help you search for internships as well as assist you with many other career related strategies (see first page of this packet).
- Consider taking StDev 317 (Career Strategies) your junior year.
- Consider taking either Chem 502, CS 502, Geol 502, Math 502, PHSCS 502, or STAT 502 (1-credit Networking Class). Class is held for 1 hour each week.

BYU
Geology BS

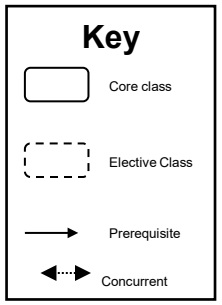
Requirements / Prerequisites
2025-2026
Academic Year

Major (74-75 hours)

1. No D credit is allowed in major courses.
2. Complete the following: Geol 111, Geol 112, Geol 210, Geol 230, Geol 351, Geol 352, Geol 370, Geol 375, Geol 405, Geol 420, and Geol 421
3. Complete the following (2 credit hours): Geol 491R
4. Complete 3 courses from the following: Geol 411, Geol 435, Geol 440, Geol 445, Geol, 452, Geol 460, Geol 476, Geol 480.
5. Complete either Chem 105, Chem 106, and Chem 107, or Chem 111 and 112.
6. Complete either Stat 121 or Stat 201.
7. Complete the following: WRTG 316, Math 112, Math 113, Phscs 105, Phscs 106.

Minor (17-18 hours)

1. No D credit is allowed in minor courses.
2. Complete Geol 111, Geol 112,
3. Complete 3 courses from the following: Geol 100, Geol 109, Geol 210, Geol 351, Geol 352, Geol 370, Geol 375, Geol 405, Geol 411, Geol 435, Geol 440, Geol 445, Geol 452, Geol 460, Geol 480, Geol 546



CORE

Freshman

Geol 111 F
Geol 112 W
Chem 105 (FWSS) or Chem 111 (F)
Chem 106 (FWSu) & 107 (FWSS) Or Chem 112 (W)
Math 112 FWSS, S-S

Sophomore

Geol 210 F
Geol 351 F
Math 113 FWSS, S-S
Phscs 105 FWSp
Geol 230 W
Geol 352 Pre-Req: Chem 105 or 111 & Geol 210 W

Junior

Phscs 106 FWSu
Geol 491R FW
Geol 375 Additional Pre-Req: Math 112, Geol 351 & PHSCS 105 or concurrent F
WRTG 316 Pre-Req: Junior Status FWSS
Stat 121 (FWSp, S-S) Or Stat 201 (FWSp) Pre-req for 201: Math 112
Geol 405 Pre-Req: Math 113 & Geol 111 W
Geol 491R FW
Geol 370 Pre-Req Geol 230, Geol 210 and Geol 112 W
Geol 420 Pre-Reqs: Geol 352, Geol 370, Geol 375 Sp
Geol 421 Pre-Reqs: Geol 352, Geol 370, Geol 375 Sp

Senior

Geol 491R FW
Geol 491R FW
Take one course From Requirement 3 (List below)
Take one course From Requirement 3 (List below)
Take one course From Requirement 3 (List below)

Requirement 3
Complete Three Courses

- Geol 411 Pre-Req: Geol 111 or Geol 330 F
- Geol 435 Pre-Req: Geol 111 or Geol 330, & Math 110 W
- Geol 440 Pre-Req: Phscs 106, Math 112, & Geol 111 W
- Geol 445 Pre-Req: Chem106 & 107 or Chem 112 Geol 352 W
- Geol 452 Pre-Req: Geol 351 & 352 W Even Years
- Geol 460 Pre-Req: Geol 352 F
- Geol 476 Pre-Req: Geol 370 & 375 F
- Geol 480 Pre-Req: Geol 112 Contact Department

F=Fall, W=Winter, Sp=Spring, Su=Summer, S-S=Spring-Summer, SS=Spring & Summer.

Please Note: When Taught is subject to change. Guide only—please consult MyMAP for full requirements.

Updated 6/24/2025

Handshake: BYU's Online Job Board

handshake

BYU's own job board. Employers who want to hire BYU graduates or offer internships to current students post job openings to this website and students apply. Just like LinkedIn, employers can view student profiles and students can network as they apply for jobs and internships

Login to handshake.byu.edu >>> BYU Net ID

*you do not need to create an account, just sign in with your BYU information

HOW TO MAKE THE MOST OUT OF HANDSHAKE:

1. COMPLETE YOUR PROFILE

- Upload your resume and it will auto-fill in your profile
- Completed profiles tailor your Handshake experience
- Information from your transcript is already uploaded
- Fill in the Summary/Bio section
- Fill in yor past jobs and experiences, including all the bullet points you use on your resume
- Add a professional headshot and background photo

Remember: every word in your profile will be searchable by students and employers

employers are

5X MORE LIKELY

to view a profile that has at least one job/skill/organization

2. APPLY FOR JOBS

- Search for job titles, employers, or skills
- Apply for interesting jobs that meet your skill set

3. RESEARCH COMPANIES

- Under the "Jobs" Tab there is an "Employers" Tab
- Search for keywords or locations to find companies that are the right fit for you
- Plan to attend their info sessions on BYU Campus, connect with them at Career Fairs, or set up informational interviews to learn more

Remember: when looking at companies or jobs, Handshake will tell you what other BYU students have worked there. Use this resource to network and discover more information!

4. EXPLORE FELLOW STUDENTS

- "Students" tab
- Search for fellow BYU students to view their profiles and job positions.

5. ATTEND EVENTS

- The "Events" tab will be your key to attending info sessions, interviews, and Career Fairs
- The "Calendar" tab under "Events" will show you what events are coming soon
- Make sure to save events you are interested in or RSVP so you do not forget to attend
- Spread the word to your friends on social media

6. DOWNLOAD HANDSHAKE APP

- Search: "Handshake" not "Handshake Career Services"
- Input your BYU e-mail address: netID@byu.edu (it will forward emails to the e-mail you have on file with BYU)
- Handshake will send you a link via e-mail to enable your account in the app
- Navigate the app to perform all the functions of the website that have been previously mentioned

7. VISIT THE CAREER STUDIO

- Freshen up your resume, cover letter, or LinkedIn
- Receive networking help
- Practice interviewing with a mock interview
- Meet with a full-time Career Director in your field

8. GET A JOB, RING THE BELL

- Once you're hired, stop by the Career Studio to ring our Victory Bell and get a picture for the Victory Board

Geology Careers

There are many career opportunities for you in the geological sciences! While many of these jobs allow you to be outside and exploring the Earth, there are also careers that allow you to work in a lab, in an office, on a computer, even in your home. Many of these jobs require a graduate degree, but not all – many of our undergraduates have moved immediately into good jobs. Below are some ideas listed alphabetically; we can help you sort these by location, theme, potential pay, etc. as you move through the major.

Economic geologist: explore and recover metallic and nonmetallic deposits
Engineering geologist: geological data applied to structures, ground water, etc.
Environmental Consultant: assess and manage environmental risks for government, industry, or communities, often involving site assessments and remediation.
Environmental geologist: solve pollution, waste, urban, and hazards problems
Geochemist: nature and distribution of elements in ground water and earth materials
Geochronologist: determine ages and sequences of events in Earth's history
Geologist: materials, processes, products, and history of Earth
Geomorphologist: landforms as related to geologic and climactic processes
Geophysicist: using physics to study Earth's interior and its magnetic, electric, & gravity fields
Glacial geologist: properties and movement of glacier plus records of past climates
GIS Analyst: use geographic information systems to analyze and visualize spatial data for geologic, environmental, or urban planning purposes.
Hydrogeologist: study the distribution, movement, and quality of groundwater in soil and rock, often for water supply, contamination cleanup, or environmental impact assessment.
Hydrologist: Earth's water, from precipitation to surficial movement to groundwater.
Informal Educator: teach Earth and space science topics in museums, planetariums, national parks, or science centers through exhibits and programs.
Marine geologist: Ocean floor, ocean basins, and coastal environments
Mineralogist: mineral formation, composition, and properties
Oceanographer: physical, chemical, biological, and dynamics of oceans
Paleoecologist: distribution of ancient organisms and ancient environments
Paleontologist: study ancient life, its evolution and impacts on Earth
Petroleum geologist: exploration and production of hydrocarbons
Petrologist: origin and history of rocks
Planetarium or Museum Educator: develop and deliver public education programs focused on astronomy, geology, and Earth science in informal learning settings.
Planetary geologist: study of planets and moons and development of solar systems
Professor: teaching and research at the university level
Science Curriculum Developer: design and write educational materials and standards-aligned content for K–12 or college Earth and space science instruction.
Sedimentologist: origin, distribution of sediments, usually in relation to oil, gas, and coal
Seismologist: earthquakes, behavior and interpretation of earth's structure
Soil scientist: soils, their properties and distribution related to agriculture
Stratigrapher: time and space relations of rocks on large scales
Structural geologist: deformation, fracturing, and folding of Earth's crust
STEM Outreach Coordinator: manage and promote science outreach initiatives, often through universities, nonprofits, or government agencies.
Earth Science Teacher: secondary and junior colleges
Volcanologist: volcanoes and their phenomena to predict natural hazards and nature of Earth

Modified from the American Geological Institute Careers in Geosciences:
https://profession.americangeosciences.org/working