

# MAP THE FUTURE GEOLOGY

A Guide For  
Optimizing Your Degree



This career map provides a general blueprint of how to navigate your under-graduate program. The map highlights quality experiences to supplement your coursework and identify academic milestones for years one through four.

Take advantage of the rich resources the university and Chattanooga community have to offer as you prepare for post-college years. During your time here, forge connections, participate in organizations and utilize exploratory learning options to gain real-world experiences outside of the classroom.

## **ABOUT THE COLLEGE OF ARTS AND SCIENCES**

Our mission is to provide an environment for intellectual curiosity and a foundation for life-long learning, thinking, reflection and growth. We do this by: equipping students with transferable skills, encouraging cultural and intellectual diversity and advancing knowledge through research and creative activities.

Small classes, careful advising and personal attention make our commitment work for students majoring in the fine arts, the humanities, the sciences and behavioral sciences, and for students preparing for professional study through a liberal education.

## **YOUR GEOLOGY DEGREE**

The Department of Biology, Geology and Environmental Science (BGE) consists of one integrated department with three divisions representing the degree programs: Division of Biology, Division of Geology, and Division of Environmental Science.

In addition to teaching, our faculty are engaged in research activities and geology majors are encouraged to participate. Each spring the department offers a ten-day field experience to examine either the geology of the Southwest USA or international locations including Costa Rica, Spain and Scotland, alternating each year.

## **Geology**

UTC's campus is a prime location, a geological playground with easy access to a diverse makeup of rocks and exposures of folds and faults with the valley, ridge, nearby Cumberland Plateau and Blue Ridge Mountains.

Students pursuing a B.S. in Geology choose a concentration from these options:

### **Geology**

### **Environmental Geology**

**STEM Education Geology: Students earn a degree in geology and certification to teach high school or middle school science.**

**[utc.edu/geology](http://utc.edu/geology)**

## **SCHOLARSHIP OPPORTUNITIES**

Specific to Geology majors:

### **Hoover-Nofsinger Award**

Based on successful academic performance and/or financial need. Awarded to a rising junior.

### **Lebron B. Carver Field Scholarship**

A maximum amount of \$1000 is awarded to offset the expense of field camp or research activities.

### **Lebron B. Carver Scholarship**

Awarded to deserving students selected by the geology faculty.

### **Geology Award**

Awarded to an outstanding senior selected by the geology faculty.

## INTERNSHIP OPPORTUNITIES

UTC emphasizes opportunities for meaningful learning experiences, inside and outside of the classroom. From conducting original research to exciting internships and community outreach initiatives, Geology students take advantage of resources on campus and in Chattanooga.

## RESEARCH

The department offers research opportunities in the following areas. Visit our website to learn more about specific research opportunities.

Conservation and Restoration  
Ecology, Evolution and Behavior  
Environmental and Human Health  
Geology  
Geospatial Sciences  
Microbiology  
Molecular Biology, Cell and Physiology  
Systematics and Biodiversity

## INTERSHIPS

In recent years, our department has placed students in internships with a variety of locations and opportunities, including:

Erlanger Health System  
Crabtree Farms  
Chattanooga Zoo  
Tennessee Valley Authority  
Reflection Riding Arboretum and Nature Center  
City of Chattanooga  
Tennessee Aquarium  
Tennessee Department of Environment and Conservation  
Tennessee State Parks

## CAREER POSSIBILITIES

Are you starting college with a specific career in mind? Geology graduates excel in these fields and more.

Visit University Career Services at [utc.edu/career-student-employment](http://utc.edu/career-student-employment) for a detailed list of career possibilities.

### Industry/Business

Engineering Geologist  
Hydrogeologist  
Mudlogger  
Wellsite Geologist  
Economic Geologist  
Petroleum Geologist  
Project Geologist  
Exploration Geologist  
Environmental Consultant  
Project Manager  
Environmental Planner  
Field/Lab Technician  
Map Specialist  
Staff Geologist  
Soil Scientist  
Park Ranger  
Forest Ranger  
Materials Analyst  
Urban/Regional Planner

### Education

Secondary Science Teacher  
Community College (with MS)  
4-year University (with PhD)

### Technical Writing and Editing

Illustrator  
Science/Technical Writing

Sample **Advanced Study Options** specialists with graduate or professional degree

Environmental Law  
Paleoclimatologist  
Oceanographer  
Glacial Geologist  
Planetary Geologist  
Geophysicist/Field seismologist  
Volcanologist  
Geochemist  
Paleontologist

These options do not represent all of the occupations you might consider. Some of the options listed above might require additional training.

**SUCCESS TRACK: GEOLOGY  
DEGREE: BS IN GEOLOGY: GEOLOGY AND  
GEOLOGY: ENVIROMENTAL GEOLOGY**

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	PROF. DEVELOP.
EXPLORATION	Meet with geology advisor to discuss career path and determine best approach to major concentration. Read about geoscience jobs and skills required at U.S. Bureau of Labor and Statistics and AGI.	List career options and determine if graduate level education is required. Meet with faculty to discuss experience and skills required. Match your course plan to future goals.	Seek internships. Begin contacting graduate schools and employers relevant to your career path. Build relationships with faculty who will provide reference letters.	Visit prospective employers and graduate schools. Work with University Career Services and Geology advisor to finalize professional and/or future academic plans.	Geological Society of America
ACADEMIC MILESTONES	Complete GEOL 1110(L) Physical Geology, 1120(L) Historical, CHEM 1110(L) and 1120(L), General Chemistry I & II. Begin Math requirements.	Complete GEOL 3410 Mineralogy, 3420 Petrology, and additional required science sequence courses. Continue working on General Education and geology requirements.	Meet with faculty to discuss capstone research possibilities. Continue General Education and geology requirements.	Complete all General Education and geology requirements per program plan created with your advisor. Apply for graduation and complete Senior Exit Exam.	American Institute of Professional Geologists
CONNECTIONS	Join UTC Geology Club and the American Institute Student Chapter. Introduce yourself to geology faculty, discuss professional plans and ask for advice.	Deepen involvement in student clubs and consider running for an officer position. Attend a TN AIPG meeting.	Attend a meeting with Geological Society of America (GSA). Attend service projects with UTC Geology Club. Contact faculty and grad students to choose grad programs.	Apply for student membership in GSA or AGU. Present research at GSA meetings, UTC Research Dialogues, and/or Tennessee Academy of Science.	American Geophysical Union
READINESS	Meet with University Career Services to identify four skills employers want and begin cultivating them. Attend a part-time job fair in fall or spring. Prepare draft of curriculum vitae with your faculty advisor.	Apply for scholarships. Research skills required for future careers. Consider undergraduate research—apply year three. Explore graduate and professional opportunities beyond Chattanooga.	Refine CV. Apply for department scholarships; and for field camp if considering graduate school. Finalize graduation application packet.	Finalize CV for prospective employers and graduate school applications. Prepare to take GRE if attending graduate school and ASBOG for professional path. Prepare a professional LinkedIn profile.	American Geosciences Institute
ACHIEVEMENT	Complete 30 credit hours. Meet with your geology advisor twice. Have your second year mapped out and a general plan for years three and four.	Complete 60 credit hours. Meet with your geology advisor at least three times. Have your third year mapped out and a general plan for year four.	Complete 90 credit hours. Meet advisor twice and check on graduation goals. Prepare employment and graduate program admissions packets. Complete admission exams.	Complete 120 credit hours (39 hours at the 3000-4000 level), capstone research project and other graduation requirements. Attend commencement and prepare to join the Alumni Association.	

## **GEOLOGY STEM EDUCATION** **[utc.edu/stem-education/](http://utc.edu/stem-education/)**

Participation in the STEM Education program, gives students valuable hands-on teaching experience, a four-year degree in their respective field and completion of requirements necessary to earn a teaching license. Geology majors who choose the STEM Education concentration should successfully meet these milestones as they navigate the geology curriculum.

### **FIRST YEAR**

STEM 1030 and STEM Checkpoint 1.

Meet with STEM advisor in addition to meeting with your academic advisor.

### **SECOND YEAR**

STEM 2010, 2020 and STEM Checkpoint 2.

Meet with STEM advisor in addition to meeting with your academic advisor.

### **THIRD YEAR**

STEM 3010, 3020 and STEM Checkpoint 3.

Apply for Apprentice Teaching.

Prepare to take the Praxis.

Meet with STEM advisor in addition to meeting with your academic advisor.

### **FOURTH YEAR**

STEM 4010, 4020 (Apprentice Teaching) and STEM Checkpoint 4.

Meet with STEM advisor in addition to meeting with your academic advisor.