

The University of Tennessee at Martin

Bachelor of Science (with a major in Geoscience)

Geology Concentration (program 1162)

Overview

Scientist. Explorer. Time-Traveler. All of these terms describe a geologist.

As a *scientist*, you will hypothesize and analyze complex geological processes. You'll study phenomena such as volcanoes, earthquakes, floods, and glaciers to see how they have given shape to the earth's great mountains and fertile prairies. Rocks and fossils will give you clues to the locations of natural resources and to the ways in which geoscientists can help society cope with natural disasters.

As an *explorer*, you participate in field expeditions throughout Tennessee and other regions of North America, plus have the opportunity to travel abroad to experience geologic processes firsthand and where they occur. Field trips to caves, mines, mountains, the coast, and other places will expose you to a world that you have often seen, but may have never truly known.

Through these and other experiences, you will ultimately become a *time-traveler* and thus see the earth's grand evolution – past, present, and future.

The Geoscience-Geology degree program is designed to introduce students to the many realms of this essential and dynamic scientific discipline. Whether it be through an introductory course on the geologic history of the earth or a degree-oriented curriculum, undergraduates have the opportunity to learn about concepts, processes, and analytical techniques that have real-world relevance and professional applications.

Career Opportunities

There are many subfields such as oil and gas exploration, environmental geology, paleontology, hydrogeology, geochemistry and geophysics. Geology assumes an increasingly important role in our quest for energy and mineral resources and in our growing concern for the environment. Geologists are typically employed by: private industry such as energy, mining and construction companies; federal government in such agencies as the U.S. Geological Survey, Bureau of Land Management, Bureau of Mines, NASA and the Environmental Protection Agency; state and local governments in state geological surveys, regulatory bodies and regional planning commissions; private consulting firms; academia.

Forbes Magazine ranks geology as the 7th most valuable college major in 2012 out of 120 college majors. Employment growth projections through 2020 from the U.S. Bureau of Labor Statistics placed geology within the 15 most valuable majors in the current marketplace.

Facilities

UT Martin has one of the most beautiful campuses in the state. It is comprised of 900 acres of land and instruction is not limited to the campus. Numerous field trips are made to visit the wealth of natural resources in the region. Modern classrooms and laboratories and numerous computer facilities are also available for student use.

Dr. Wes Totten, Chair
Department of Agriculture, Geosciences, and Natural Resources
257 Brehm Hall
Martin, TN 38238
Phone: 731-881-7262
Email: wtotten@utm.edu

B.S. (with a major in Geoscience) - Geology Concentration, minor optional (1162)

Course Requirements for 2018-19 catalog

Fine Arts (3 hours) *Select One*

ART 110	Understanding Visual Arts	___/3
ARTH 210	The History of Art	___/3
ARTH 211	The History of Art	___/3
DANC 110	Understanding Dance	___/3
MUS 111	Masterpieces of Music	___/3
MUS 112	Music in Our Time	___/3
MUS 114	Historical Survey of Jazz	___/3
MUS 115	Music for the Masses	___/3
THEA 110	Understanding Theatre	___/3
THEA 111	Understanding Theatre	___/3

Biological & Physical Systems (24 hours)

GEOL 110	Introduction to Physical Geology	___/4
GEOL 120	Environmental Geology	___/4
<i>*Complete two sequences outside of the major</i>		
ASTR 201	Astronomy	___/4
& 202	Astronomy	___/4
BIOL 110	Introductory Cell Biology & Genetics	___/4
& 120	Introductory Plant & Animal Biology	___/4
BIOL 130	Foundations of Biology: Ecology & Diversity	___/4
& 140	Foundations of Biology: Cell & Molecular	___/4
CHEM 121	General Chemistry	___/4
& 122	General Chemistry	___/4
PHYS 211	College Physics w/lab	___/4
& 212	College Physics w/lab	___/4
PHYS 220	University Physics	___/4
& 221	University Physics	___/4

Communications (9 hours)

**Students who place in ENGL 100, will use ENGL 110 instead of ENGL 111 in the ENGL sequence.*

ENGL 111	English Composition (Must earn a C or better)	___/3
ENGL 112	English Composition (Must earn a C or better)	___/3
COMM 230	Public Speaking	___/3

General Humanities Part A (9 hours)

**Complete a sequence and a course from a different discipline. If 3 courses are taken in 3 different areas, this area could show incorrectly. Please check carefully!*

ENGL 250	British Literature	___/3
& 251	British Literature	___/3
ENGL 260	American Literature	___/3
& 261	American Literature	___/3
ENGL 270	World Literature	___/3
& 271	World Literature	___/3
HIST 121	World Civilization I	___/3
& 122	World Civilization II	___/3
HIST 201	History of the U.S. I	___/3
& 202	History of the U.S. II	___/3
PHIL 110	Adventure of Ideas: Historical	___/3
& 120	Adventure of Ideas: Contemporary	___/3
HONR 111		___/

General Foreign Language (4 hours)

**Complete a foreign language at 122 level or above. Students who must fulfill a high school deficiency must continue with 222*

___/	___/
___/	___/

Social & Behavioral Sciences (6 hours)

**Choose two courses from discipline outside of major*

ECON 201	Principles of Macroeconomics	___/3
ECON 202	Principles of Microeconomics	___/3
GEOG 151	Intro to Regional Geography:NA, Europe, Russia	___/3
GEOG 152	Intro to Regional Geography:Asia, Africa, LA	___/3
GEOG 202	Intro to Cultural Geography	___/3
HONR 112		
POSC 210	American Government & Politics	___/3
POSC 220	American Political Institutions & Policy	___/3
POSC 230	Introduction to World Politics	___/3
PSYC 101	Introduction to Psychology	___/3
SOC 201	General Sociology	___/3

Mathematics (6 hours)

**If both courses taken are MATH 170 or MATH 252, then choose an additional course to satisfy UW GenEd*

MATH 185	Precalculus	___/5
<i>Or Select Two:</i>		
MATH 110	Essentials of Algebra	___/4
or 140	College Algebra & Elementary Functions	___/3
MATH 160	Calculus for Business & Life Sciences	___/3
MATH 170	Trigonometry	___/3
MATH 210	Elementary Statistics & Probability	___/3
MATH 251	Calculus I	___/3
MATH 252	Calculus II	___/3

Geoscience- Geology (37 hours)

**No more than 9 upper-division transfer hours may be used toward a UT Martin degree!*

GEOL 210	Methods in Geoscience (Min C grade)	___/2
GEOL 320	Mineralogy (Min C grade)	___/4
GEOL 330	Igneous & Metamorphic Petrology (Min C)	___/4
GEOL 340	History of the Earth (Min C grade)	___/4
GEOL 350	Principles of Paleontology (Min C grade)	___/4
GEOL 360	Sedimentology (Min C grade)	___/3
GEOL 370	Principles of Stratigraphy (Min C grade)	___/2
GEOL 400	Structural Geology (Min C grade)	___/4
GEOL 450	Methods in Field Geology (Min C grade)	___/3

Upper-Division Electives (7 hours in GEOL discipline)

___/	___/
___/	___/
___/	___/

Additional Required Hours (12 hours)

**If student is completing a minor, this area will be replaced once the minor is specified*

___/	___/
___/	___/
___/	___/

Geology Major Electives (10 hours)

**Choose enough electives to total 120 degree hours & 42 UD hours*

___/	___/
___/	___/
___/	___/
___/	___/

B.S. (with a major in Geoscience)
Geoscience – Geology
2018-2019

Freshman Fall			Freshman Spring	
General Studies 101	2		Math 210	3
English 111	3		Biology 140	4
Math 140	3		English 112	3
Biology 130	4		Geology 120	4
GEOL 110	4		Social Science Gen Ed 1	3
Semester Total	16		Semester Total	17

Sophomore Fall			Sophomore Spring	
General Elective	3		CHEM 122	4
GEOL 210	2		Humanities Gen Ed 2	3
CHEM 121	4		COMM 230	3
Humanities Gen Ed 1	3		Geology 350	4
Geology UD elective	3		Geology UD elective	1
Semester Total	15		Semester Total	15

Junior Fall			Junior Spring	
GEOL 320	4		General Elective UD	3
Humanities Gen Ed 3	3		Geology 330	4
Geology UD elective	3		Fine Arts Gen Ed	3
General elective	3		Foreign Language Gen Ed	4
Semester Total	13		Semester Total	14

Senior Fall			Senior Spring	
Social Science Gen Ed 2	3		General Elective	3
Geology 400	4		General Elective	3
GEOL 360	3		GEOL 340	4
Geology 450	3		GEOL 370	2
General Elective UD	3		General Elective UD	2
Semester Total	16		Semester Total	14