Bachelor of Arts in Geology (Engineering)

About This Program

Bachelor of Science in Geology Engineering Geology Option is for students who are interested in combining Geology with Civil Engineering coursework to work with engineering firms on construction and environmental problems.

Competencies

1. Upon graduation, students will demonstrate expertise in the use of methods found within the core disciplines of geology including mineralogy, petrology, sedimentology and stratigraphy, paleontology, and structural geology. In particular, students will be able to evaluate and design in engineering geoscience monitoring and/or models.
2. Upon graduation, students will be able to interpret geological maps and describe three-dimensional structures of rocks in the earth's crust.
3. Upon graduation, students will be able to analyze scientific data in geoscience.
4. Upon graduation, students will be able to communicate complex information using written reports and oral presentation to both specialists and non-specialists.

Curriculum

Foundations		
General Core Requirements (https://catalog.uta.edu/academicregulations/degreerequirements/generalcorerequirements/)		42
Students must select specific courses in certain core areas.		
For Communication select:		
ENGL 1301/1302	RHETORIC AND COMPOSITION I	
For Life & Physical Sciences select:		
PHYS 1443	GENERAL TECHNICAL PHYSICS I	
PHYS 1444	GENERAL TECHNICAL PHYSICS II	
For Mathematics select:		
MATH 1426	CALCULUS I	
MATH 2425	CALCULUS II	
For US History select:		
HIST 1301	HISTORY OF THE UNITED STATES TO 1865	
HIST 1302	HISTORY OF THE UNITED STATES, 1865 TO PRESENT	
Geology Engineering Foundations		
Additional hours required in core.		4
UNIV 1131	STUDENT SUCCESS	1
Communication Competence - pass oral presentation requirement in GEOL 3443, or complete COMS 1301, COMS 2302, or other equivalent course		
Computer Competence - pass Computer Skills Placement test or any computer-related course such as:		
GEOL 4330	UNDERSTANDING GEOGRAPHIC INFORMATION SYSTEMS	
CHEM 1441	GENERAL CHEMISTRY I	4
CHEM 1442	GENERAL CHEMISTRY II	4
CE 2221	DYNAMICS	2
CE 2311	STATICS	3
CE 2313	MECHANICS OF MATERIALS I	3
12 hours of 3000/4000-level advisor-approved Civil Engineering courses plus prerequisites.		12
Geology Engineering Specialization		
GEOL 1301	EARTH SYSTEMS	3
GEOL 1302	EARTH HISTORY	3
GEOL 2445	MINERALOGY	4
GEOL 3387	FIELD GEOLOGY I	3
GEOL 3388	FIELD GEOLOGY II	3
GEOL 3442	SEDIMENTOLOGY AND STRATIGRAPHY	4
GEOL 3443	STRUCTURAL GEOLOGY	4
GEOL 4330	UNDERSTANDING GEOGRAPHIC INFORMATION SYSTEMS	3

GEOL 4352	ANALYTICAL METHODS IN GEOCHEMISTRY	3
GEOL 4420	HYDROGEOLOGY	4
Select GEOL, ENVR, DATA, CE, or ENGR courses sufficient to bring total hours to 120 with at least 36 hours at the 3000/4000 level.		11
Total Hours		**120**

SUGGESTED COURSE SEQUENCE

Details of a personal course sequence should be made with the guidance of the Earth and Environmental Sciences undergraduate advisor, particularly since many GEOL courses are not offered every semester. Students should also consult with the appropriate department for minor requirements.

First Year

	First Semester	Hours	Second Semester	Hours
	CHEM 1441	4	ENGL 1302	3
	ENGL 1301	3	GEOL 1302	3
	GEOL 1301	3	MATH 2425	4
	MATH 1426	4	PHYS 1443	4
	UNIV 1131	1		
	15		**14**	

Second Year

	First Semester	Hours	Second Semester	Hours
	CE 2311	3	CHEM 1442	4
	HIST 1301	3	CE 2313	3
	MATH 2326	3	CE 2221	2
	PHYS 1444	4	HIST 1302	3
			Social/Behavioral Science*	3
	13		**15**	

Third Year

Summer Session	Hours	First Semester	Hours	Second Semester	Hours
GEOL 3387	3	GEOL 2445	4	GEOL 3442	4
GEOL 3388	3	GEOL 3443	4	POLS 2312	3
		POLS 2311	3	Advisor Approved CE, DATA, or MATH Electives	8
		Advisor Approved CE, DATA, or MATH Elective	3		
	6		**14**		**15**

Fourth Year

	First Semester	Hours	Second Semester	Hours
	GEOL 4330	3	Foundational Component Area*	3
	GEOL 4352	3	General Elective	1
	GEOL 4420	4	Advisor Approved GEOL, ENVR, CE, or MATH Electives	10
	Advisor Approved DATA, ENVR, GEOL, CE Electives	4		
	14		**14**	

Total Hours: 120

* See General Core Requirements (https://catalog.uta.edu/academicregulations/degreerequirements/generalcorerequirements/) for approved courses.

** Actual number of courses/hours and course sequence determined by appropriate department.

Advising Resources

First time in college students should plan to speak to a program advisor when starting their second year. or have an academic advising hold. Transfer students should contact program advising when enrolled or have an academic advising hold.

Location:

SH 328C

Email:

kaycee.nikses@uta.edu

Phone:

817-272-9686

Web:

Schedule an appointment (https://outlook.office365.com/book/PHYSGEOLEESADVISING@mavs.uta.edu/)