# **Bachelor of Arts in Geology (GIS)**

## **About This Program**

The Bachelor of Arts in Geology Geographic Information Systems option is for students who want to combine Geology with computer technology to store and analyze spatial data using GIS software.

# 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.
- 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 nonspecialists.
- 5. Upon graduation, students will demonstrate expertise in geographical information systems (GIS) and attain a CIS certificate.

## Curriculum

#### Foundations

Students must complete specific courses in certain core areas.    For Communication select:    ENGL 1301  RHETORIC AND COMPOSITION I    & ENGL 1302  and RHETORIC AND COMPOSITION II    & ENGL 1301  RHETORIC AND COMPOSITION II    For Life & Physical Sciences select:  PHYS 1441    GENERAL COLLEGE PHYSICS I  PHYS 1442    For Mahematics select:  MATH 1308    MATH 1421  PREPARATION FOR CALCULUS    For U.S. History select:  HIST 1301    HIST 1302  HISTORY OF THE UNITED STATES TO 1865    HIST 1302  HISTORY OF THE UNITED STATES, 1866 TO PRESENT    Geology Foundations  Additional hours required in core.    UNIV 1131  STUDENT SUCCESS  1    Communication Competence - pass oral presentation requirement in GEOL 3441 or GEOL 3443, or complete COMS 1301, COMS 2302, or other equivalent course  3    GEOL 4330  UNDERSTANDING GEOGRAPHIC INFORMATION SYSTEMS  4    BIOL 1441  BIOLOGY I FOR SCIENCE MAJORS: CELL AND MOLECULAR BIOLOGY  4    BIOL 1442  GENERAL CHEMISTRY II  4    Geology Specialization  3  3    GEOL 1301  EARTH SYSTEMS  3    GEOL 1302  EART			
For Communication select:  ENGL 1301  RHETORIC AND COMPOSITION I    For Life & Physical Sciences select:  PHYS 1441  GENERAL COLLEGE PHYSICS I    PHYS 1442  GENERAL COLLEGE PHYSICS II    PHYS 1443  GENERAL COLLEGE PHYSICS II    PHYS 1444  GENERAL COLLEGE PHYSICS II    PHYS 1442  GENERAL COLLEGE PHYSICS II    PHYS 1443  GENERAL COLLEGE PHYSICS II    For Mathematics select:  HIST 308    MATH 1421  PREPARATION FOR CALCULUS    For U.S. History select:  HIST 1302    HIST 1302  HISTORY OF THE UNITED STATES TO 1865    HIST 1302  HISTORY OF THE UNITED STATES, 1865 TO PRESENT    Geology Foundations  Additional hours required in core.    Additional hours required in core.  STUDENT SUCCESS    Communication Competence - pass coral presentation requirement in GEOL 3441 or GEOL 3443, or complete COMS 1301, COMS 2302, or other equivalent course  GEOL 4330    GOL 1441  BIOLOGY I FOR SCIENCE MAJORS: CELLA AND MOLECULAR BIOLOGY  4    GEOL 4330  UNDERSTANDING GEOGRAPHIC INFORMATION SYSTEMS  3    GEOL 1301  EARTH SYSTEMS  3    GEOL 1302  EARTH HISTORY  3    GEOL 1302  <	General Core Requirements (https://d	catalog.uta.edu/academicregulations/degreerequirements/generalcorerequirements/)	42
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GEOL 4330 UNDERSTANDING GEOGRAPHIC INFORMATION SYSTEMS 3	GEOL 3443	STRUCTURAL GEOLOGY	4
	GEOL 3446	PETROLOGY AND GEOCHEMISTRY	4
	GEOL 4330	UNDERSTANDING GEOGRAPHIC INFORMATION SYSTEMS	3
GEOL 4331 ANALYSIS OF SPATIAL DATA 3	GEOL 4331	ANALYSIS OF SPATIAL DATA	3

Total Hours		120
Select electives sufficeint to complete 120 hours with at least 36 at the 3000/4000-level.		2
Select a minor of at least 18 hours.		18
Minor and General Ele	ectives	
GEOL 4334	GEOGRAPHIC DATA ANALYSIS	3
GEOL 4333	REMOTE SENSING FUNDAMENTALS	3

### 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	
GEOL 1301		3 GEOL 1302		3
MATH 1324		3 MATH 1308		3
ENGL 1301		3 ENGL 1302		3
Creative Arts		3 Language, Philosophy an Culture	d	3
CHEM 1441		4 CHEM 1442		4
UNIV 1131		1		
		17		16
Second Year				
First Semester	Hours	Second Semester	Hours	
GEOL 2445		4 minor course <sup>1</sup>		3
HIST 1301		3 PHYS 1442		4
PHYS 1441		4 POLS 2311		3
BIOL 1441		4 HIST 1302		3
Social/Behavioral Science		3 BIOL 1442		4
		18		17
Third Year				
First Semester	Hours	Second Semester	Hours	
GEOL 3443		4 GEOL 3442		4
GEOL 4330		3 GEOL 4331		3
minor course <sup>1</sup>		3 minor course <sup>1</sup>		3
minor course <sup>1</sup>		3 GEOL 3446		4
		13		14
Fourth Year				
First Semester	Hours	Second Semester	Hours	
GEOL 3441		4 GEOL 4334		3
GEOL 4333		3 minor course <sup>1</sup>		3
minor course <sup>1</sup>		3 POLS 2312		3
		General Elective(s)		6
		10		15

Total Hours: 120

<sup>1</sup> 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/)