

Department of Earth Sciences

BS in Geosciences

Knowledge of Earth Sciences is essential for understanding problems of climate, weather patterns, groundwater supply, environmental hazards, geotechnical engineering, and natural resources. Earth Scientists also are involved in basic research and teaching.

The Department of Earth Sciences has well-equipped laboratories that allow students to learn the basic techniques of the Earth Sciences. The undergraduate programs prepare students to become licensed Professional Geologists in the State of Florida.

The department offers a B.S. degree in Geosciences, with a choice of tracks in either Geological or Atmospheric Sciences. In addition, the department offers a broader based interdisciplinary B.A. in Earth Sciences. Only grades of 'C' or better will be accepted for required courses in either program option. A minor in geology is also available.

Lower Division pre-requisites

GLY 1010 Introduction to Earth Sciences	3
GLY 1010L Introduction to Earth Sciences Lab	1
or	
GLY 3039 Environmental Geology	3
GLY 3039L Environmental Geology	1
CHM 1045 General Chemistry I	3
CHM1045L General Chemistry Lab II	1
CHM 1046 General Chemistry II	3
CHM 1046L General Chemistry Lab II	1
MAC 2311 Calculus 1	3
MAC 2312 Calculus 2	5
PHY 2048 Physics with Calculus I	4
PHY 2049 Physics with Calculus II	4
or	
PHY 2053 Physics without Calculus I	4
PHY 2054 Physics without Calculus II	4
PHY 2048L General Physics Lab I	1
PHY 2054L General Physics Lab II	1

Other lower division courses required for the degree

For the Geological Sciences track

BSC 1011 General Bio 2	3
BSC 1011L General Bio 2 Lab	1

For the Atmospheric Sciences track

MAC 2313 Multivariate Calculus	4
MAP 2302 Differential Equations	3

Total Lower division hrs: 34-37

Upper Division

Geosciences Essentials **17 credits**

GLY 3202 Earth Materials and Lab	3
GLY 3202 Earth Materials Lab	1
GLY 3100 Earth Through Time*	3
GLY 4822 Introduction to Hydrogeology	3
MET 3003 General Meteorology	3
OCE 3014 Oceanography	3
OCE 3014 Oceanography Lab	1

[* Students may substitute Historical Geology from another institution.]

Geological Sciences Track

This track is intended for students who wish to concentrate on the study of the solid Earth and hydrosphere. Prepares students for graduate work in geology or careers in management of resources and environment.

1. Choose three geology courses (with labs as necessary) from List 1 (**12 credits**).
2. Choose an additional 9 credits or more from either List 1 or List 2, at least three of which must be *field experience*.

Total Upper Division Hours: 38

Atmospheric Sciences Track

This track is for students who wish to concentrate on the study of the atmosphere. Prepares students for graduate work or careers in weather and climate prediction.

1. Choose four meteorology courses (with labs as necessary) from List 1 (**13 credits**)
2. Choose an additional 9 credits or more from either List 1 or List 2.

Total Upper Division Hours: 38

Lists over page [↘](#)

List 1: Track-specific Courses

GLY 4300 Petrology	3
GLY 4300L Petrology Lab	1
GLY 4511 Stratigraphy	3
GLY 4511L Stratigraphy Lab	1
GLY 4400 Structural Geology	3
GLY 4400L Structural Geology Lab	1
MET 3101 Physical Climatology 3 OR MET 4420 Physical Meteorology	3
MET 3502 Synoptic Meteorology	3
MET 3502 Synoptic Meteorology lab	1
MET 4301 Dynamic Meteorology I	3
MET 4302 Dynamic Meteorology II	3

List 2: Geo-elective courses

GEO 3167 Applications of Geographic Information Systems	3
GLY 3034 Natural Disasters	3
GLY 3157 Elements of Caribbean Geology	3
GLY 3670C Geological Map Analysis	3
GLY 3754 Remote Sensing in the Earth Sciences	3
*GLY 3782 Geology Field Excursion	3
*GLY 3881 Environmental Geology Field Methods	3
GLY 4450 Environmental and Exploration Geophysics	3
GLY 4730 Marine Geology	3
*GLY 4791 Field geology and geologic mapping	3
GLY 4812 Introduction to Ore Deposits	3
GLY 4910 Undergraduate Research in Geology	3
GLY 4970 Geology Honors Thesis	3
GLY 4989L Geology Honors Research	1-3
GLY4650 Paleobiology Lab	1
GLY4650 Paleobiology	3
MET 3300 Severe Weather	3
MET 4400 Instruments and Remote Sensing	3
MET 4xxx Hurricanes	

* Field experience courses