

**Department of Earth and Environment  
Bachelor of Science in Geosciences- *Geoinformatics Major***

**Lower Division Requirements (34 credits)**

Course	Description	Pre-requisites	Term offered	Units
ISC 1056	First Yr Sem in Earth and Env.	N/A	f,s	1

**Choose one of the following**

Course	Description	Pre-requisites	Term offered	Units
ESC 1000 & Lab	Intro to Earth Science & Lab	N/A	f, s, ss	3,1
GLY 1010 & Lab- <i>Strongly recommended</i>	Physical Geology & Lab	N/A	f, s, ss	3,1
GLY 3039 & Lab	Environmental Geology & Lab	N/A	f,s	3,1

**Complete the following courses**

Course	Description	Pre-requisites	Term offered	Units
CHM 1045 & Lab	General Chem I & Lab	MAC1105 or MAC1114 or MAC1140 or MAC1147 or CHM1025 or an appropriate Math placement	f, s, ss	3,1
CHM 1046 & Lab	General Chem II & Lab	CHM1045+L	f, s, ss	3,1
MAC 2311	Calculus I	Prerequisites: MAC1147 or MAC1140 and MAC1114 or appropriate Math placement	f, s, ss	4
MAC 2312	Calculus II	MAC2311	f, s, ss	4

**Choose one of the following**

Course	Description	Pre-requisites	Term offered	Units
PHY 2048 & PHY 2048L	Physics with Calc I & General Physics Lab I	Prerequisite or Corequisite: MAC2311	f, s, ss	4,1
PHY 2053 & PHY 2048L	Physics without Calc I & General Physics Lab I	N/A	f, s, ss	4,1

**Choose one of the following**

Course	Description	Pre-requisites	Term offered	Units
PHY 2049 & PHY 2049L	Physics with Calc II & General Physics Lab II	Prerequisites: PHY2048, Prerequisite or Corequisite: MAC2312	f, s, ss	4,1
PHY 2054 & PHY 2049L	Physics without Calc II & General Physics Lab II	Prerequisites: PHY2053 or PHY2048	f, s, ss	4,1

**Choose one of the following**

Course	Description	Pre-requisites	Term offered	Units
STA 2023	Statistical Methods	N/A	f, s, ss	3
STA 2122	Introduction to Applied Statistics	N/A	f, s, ss	3
STA 3111	Statistics I	N/A	f, s, ss	3

**Upper Division Program (38 credits)**

**Geosciences Essentials (13 credits)**

Course	Description	Pre-requisites	Term offered	Units
GLY 3112	Earth Through Time	N/A	s	3
GLY 4822	Intro to Hydrogeology	Prerequisites: (PHY2048 or PHY2053), CHM1045, MAC2311	s	3
MET 3003	General Meteorology	Prerequisites: PHY2048 or PHY2053	f	3
OCP 3002	Physical Oceanography	Prerequisites: CHM1045 and (PHY2048 or PHY2053)	f,s@ BBC	3
ISC 4935	Senior Seminar in E&E Science	Prerequisite: Must be in final year of study. Permission of the instructor required	f,s	1

## Geoinformatics Major

1. Complete all courses from List 1 (7 credits)
2. Choose 3 courses from List 2 (9 credits)
3. Choose one course from List 3 (3 credits)
4. Choose an additional 6 credits of Geo-elective courses from Lists 2-4

### List 1: Geoinformatics Fundamentals. Complete all courses (7 credits)

Course	Description	Pre-requisites	Term offered	Units
GIS 3043C	Introduction to GIS	N/A	f,s,ss	4
GLY 3754	Remote Sensing in the Earth Sciences	Prerequisites: GLY 1010 or permission of the instructor	s	3

### List 2: Major Specific Courses. Choose 3 courses (9 credits)

Course	Description	Pre-requisites	Term offered	Units
GIS 4119	Geodatabases & Geotools	Prerequisite: GIS 2040 or GIS 3043 or GIS 3048 or CGN 4321 or other introductory course in GIS	f-e	3
GIS 4390	Advanced Spatial	Prerequisites: GIS 2040 or CGN 3043 or GIS 3048 or CGN 4321 or other introductory course in GIS	f-o	3
GLY 4450	Env. and Exploration Geophysics	Prerequisites: MAC 2312; PHY 2049 or 2054; or permission of the instructor	s-o	3
MET 4750	Techniques in Earth System Modeling	Prerequisites: MET3003, MAC 2311, MAC 2312	s-e	3
MET 4410	Remote Sens in Meteorology	Prerequisites: PHY2048 and PHY2049	f-o	3

### List 3: Field Methods. Choose 1 courses (3 credits)

Course	Description	Pre-requisites	Term offered	Units
GIS 4303	Geospatial Measurement Tech	N/A	s-e	3
GLY 3782	Geology Field Excursion	Prerequisites: ESC 1000 or GLY 1010 or GLY 3039 or permission of the instructor.	s-e	3
GLY 3881	Environmental Geology Field Methods	Prerequisites: GLY 1010 or GLY 3039 or ESC 1000	s-o	3

### List 4: Additional Geo-elective Courses (Choose an additional 6 credits from lists 2-4)

Course	Description	Pre-requisites	Term offered	Units
GLY 3034	Natural Disasters	N/A	f,s	3
GLY 3759	Visualizing Our World with GIS	N/A	Currently not offered	3
GLY 4730	Marine Geology	Prerequisites: ESC 1000 or GLY 1010 or GLY 3039 or OCE 3014 or OCP 3002 or permission of the instructor.	Currently not offered	3
GLY 4734	Changing Coastlines ( <i>GL</i> )	N/A	s	3
GLY 4812	Introduction to Ore Deposits	Prerequisites: GLY 1010, GLY 1010L or GLY 3039, GLY 3039L.	Currently not offered	3
GLY 4881	Coastal Hazards ( <i>GL</i> )	N/A	f	3
ISC 4940	Undergrad Research Internship in E&E	Prerequisite: Permission of the instructor is required.	f,s,ss	1-6
GLY 4947	Internship in Geoscience	Prerequisite: Permission of Instructor.	f,s,ss	1-6
MET 4941	Internship in Meteorology	Prerequisite: Permission of Instructor.	f,s,ss	0-3
GLY 4970	Geology Honors Thesis	Prerequisite: GLY 4989L	f,s,ss	3
GLY 4989L	Geology Honors Research	Prerequisite: Admission into Geology honors major.	f,s,ss	1-3
MET 4304	Introduction to Boundary Layer Meteorology	Prerequisites: PHY 2048 and PHY 2049.	See advisor	3
MET 4352	Hurricanes	Prerequisite: Permission of the instructor is required	f	3

*Any other unused course listed in the upper division requirements of the Geological Sciences or Atmospheric Sciences majors may also be used for Geo-electives List 4. Other courses approved by the Program Director may also be used in this list.*

f: Fall term; s: Spring term; ss: Summer term; -e or -o: Taught in alternate even or odd years. **Note: scheduled semesters are subject to change.**

### Other Requirements for graduation:

- Minimum 120 credits, FIU GPA 2.0 or higher
- Maximum of 60 lower division credits may be transferred from another institution. 30 Maximum number of upper-division credits applied toward the bachelor's degree.
- UCC requirements (See PDA and Academic Advisor for more information on how to complete requirements)
- University Global Learning Requirement (2 courses. See [goglobal.fiu.edu](http://goglobal.fiu.edu) and Academic Advisor for options on how to complete this requirement)
- Civics Literacy Requirement: The Civic Literacy requirement is a statewide mandate that applies to undergraduate students initially entering a Florida State University System (SUS) and/or Florida College System (FCS) institution in the 2018-19 academic year and thereafter.
- University Foreign Language Requirement (FLENT/FLEX): State-mandated foreign language requirement
- Summer Enrollment: Students transferring to FIU with less than 60 credits are required to earn at least 9 credits during one or more summer terms at FIU or any other university in the State University System of Florida. Courses may be completed in person or online.
- College of Arts, Sciences & Education minimum 45 upper division credits requirement

**Academic Advising:** You should meet with your advisor at least once a semester. To make an appointment with your advisor, log into MyFIU and navigate to the "Academic Advising" tile, then select "Success Network."

**Success Markers:** The Earth & Environment Department has identified important courses in the major that indicate you are on track for successful degree completion. In cases where students are not making good progress, a change of major may be required.

**30 credits-**

- Complete ISC 1056 with a C or better
- Complete 1 course from this list with a C or better: MAC 1114, MAC 1140, MAC 1147, MAC 2311, MAC 2281
- Complete 2 courses from this list with a C or better: ESC 1000, ESC 1000L, GLY 1010, GLY 1010L, GLY 3039, GLY 3039L

**45 credits-**

- Complete MAC 2311 or MAC 2281 with a C or better
- Complete CHM 1045 and CHM 1045L with a C or better
- Complete 2 courses from this list with a C or better: GLY 1101, GLY 1101L, BSC 2011, BSC 2011L

**60 credits-**

- Complete MAC 2312 or MAC 2281 with a C or better by 60 credits
- Complete CHM 1046 and CHM 1046L with a C or better by 60 credits
- Complete 2 courses from this list with a C or better by 60 credits: PHY 2048, PHY 2053, PHY 2048L