



Earth Sciences 3411	Water Security for the 21 <sup>st</sup> Century	I	I	I	I	I		O-SS
Earth Sciences 2245	Introductory Data Analysis for Earth and Environmental Sciences	B-I	B-I	B-I	B-I	B-I		R-GS R-CWE R-GP
Earth Sciences 4194	Group Studies	I	I	I	I	I	I	
Earth Sciences 4194H	Honors Group Studies	I	I	I	I	I	I	
Earth Sciences 5310	Remote Sensing in the Earth Sciences	A	A	A	A		A	O-GP O-PS O-MS
Earth Sciences 4421	Earth Materials	I	I	I	I	I	I	R-GS O-CWE O-CWE O-MC
Earth Sciences 4423	Introductory Petrology	I	I	I	I	I	I	R-GS O-MC
Earth Sciences 4425	Energy Resources and Sustainability	I	I	I	I	I	I	O-SS
Earth Sciences 4450	Water, Ice, and Energy in the Earth System	I	I	I	I	I	I	R-CWE O-MS O-HG
Earth Sciences 4501	Paleontology	I	I	I	I	I	I	O-MC
Earth Sciences 4502	Stratigraphy and Sedimentation	I	I	I	I	I	I	R-GS O-CWE O-MC
Earth Sciences 4530	Structural Geology	I	I	I	I	I	I	R-GS R-GP
Earth Sciences 4560	Applied Geophysics	I	I	I	I	I	I	R-GP O-PS O-PG
Earth Sciences 4880	Seminar in Geophysics	I	I	I	I	I	I	
Earth Sciences 4998	Undergraduate Research in Earth Sciences	I - A	I - A	I - A	I - A	I - A	I - A	
Earth Sciences 4998H	Honors Undergraduate Research in Earth Sciences	A	A	A	A	A	A	
Earth Sciences 4999.01	Undergraduate Thesis in Earth Sciences	I - A	I - A	I - A	I - A	I - A	I - A	R-GS R-CWE R-GP
Earth Sciences 4999.01H	Honors Undergraduate Thesis in Earth Sciences	A	A	A	A	A	A	

Earth Sciences 5189.01	Field Geology I	I - A	I - A	I - A	I - A	I - A	I - A	R-GS R-PG O-MC
Earth Sciences 5189.02	Field Geology II	A	A	A	A	A	A	R-GS O-PG
Earth Sciences 5191	Internship in the Earth Sciences	I - A	I - A	I - A	I - A	I - A	I - A	
Earth Sciences 5191.01	Museum Internship	A	A	A	A	A	A	
Earth Sciences 5193.xx	Individual Studies	I - A	I - A	I - A	I - A	I - A	I - A	
Earth Sciences 5194	Group Studies	I - A	I - A	I - A	I - A	I - A	I - A	
Earth Sciences 5203	Geo-environment and Human Health	A	A	A	A	A	A	O-CWE O-HG
Earth Sciences 5205	Planetary Science	A	A	A	A	A	A	R-PS
Earth Sciences 5206	Advanced Oceanography	A	A	A	A	A	A	R-MS O-CWE
Earth Sciences 5242	Nat. Hist. Bahamas	I-A	I-A	I-A	I-A	I-A	I-A	O-MS O-CWE
Earth Sciences 5268	Soils and Climate Change	A	A	A	A	A	A	O-CWE O-HG
Earth Sciences 5501	Museum Databases	A	A	A	A	A	A	O-MC
Earth Sciences 5550	Geomorphology	I-A	I-A	I-A	I-A	I-A	I-A	O-PS O-HG
Earth Sciences 5600	Siliciclastic Depositional Systems	A	A	A	A	A	A	
Earth Sciences 5601.01	Sedimentary Petrology: Sandstones	A	A	A	A	A	A	
Earth Sciences 5601.02	Sedimentary Petrology: Carbonate Rocks and Shales	A	A	A	A	A	A	
Earth Sciences 5602.01	Carbonate Depositional Systems I	A	A	A	A	A	A	
Earth Sciences 5602.02	Carbonate Depositional Systems II	A	A	A	A	A	A	O-MS
Earth Sciences 5603	Stratigraphy	A	A	A	A	A	A	
Earth Sciences 5604	Sequence Stratigraphy	A	A	A	A	A	A	
Earth Sciences 5605	Paleoceanography	A	A	A	A	A	A	

Earth Sciences 5613	Micropaleontology	A	A	A	A	A	A	
Earth Sciences 5614	Paleobiology	A	A	A	A	A	A	
Earth Sciences 5615	Paleoecology	A	A	A	A	A	A	
Earth Sciences 5617	Petrology of Earth and Planets	A	A	A	A	A	A	
Earth Sciences 5618	Advanced Historical Geology	A	A	A	A	A	A	
Earth Sciences 5621	Introduction to Geochemistry	A	A	A	A	A	A	O-CWE O-HG
Earth Sciences 5622	Stable Isotope Biogeochemistry	A	A	A	A	A	A	O-MS
Earth Sciences 5625	Igneous Petrology	A	A	A	A	A	A	
Earth Sciences 5627	Global Biogeochemical Cycles	A	A	A	A	A	A	
Earth Sciences 5628	Environmental Isotope Geochemistry	A	A	A	A	A	A	
Earth Sciences 5629	Principles of Petrology	A	A	A	A	A	A	
Earth Sciences 5636	Advanced Topics in Mineralogy and Crystallography	A	A	A	A	A	A	
Earth Sciences 5641	Geostatistics	A	A	A	A	A	A	O-GP
Earth Sciences 5642	Geomathematical Analysis	A	A	A	A	A	A	
Earth Sciences 5644	Tectonic Evolution of Continents	A	A	A	A	A	A	
Earth Sciences 5645	Advanced Structural Geology	A	A	A	A	A	A	
Earth Sciences 5646	Geodynamics	A	A	A	A	A	A	O-GP O-PS
Earth Sciences 5650	Glaciology	A	A	A	A	A	A	O-CWE
Earth Sciences 5651	Hydrogeology	A	A	A	A	A	A	O-CWE O-GP R-HG
Earth Sciences 5655	Land Surface Hydrology	A	A	A	A	A	A	O-CWE O-HG
*Earth Sciences 5656 <i>pending</i>	Ecohydrology	A	A	A	A	A	A	O-CWE O-HG
Earth Sciences 5660	Geology of Metallic Deposits	A	A	A	A	A	A	



Earth Sciences 5781	Gravity Exploration	A	A	A	A	A	A	
Earth Sciences 5782	Magnetic Exploration	A	A	A	A	A	A	
Geod Sci 5781	Geodesy and Geodynamics	A	A	A	A	A	A	O-GP O-PS
Electives from other departments (Geog, AtmosSC, EEOB, ENR, Chem, Math, etc.)							I-A	

Program Learning Goals:

- A) Students critically read and evaluate Earth Science literature
- B) Students present Earth Science information in a clear and logical manner, both orally and in writing.
- C) Students apply knowledge of Earth Science data to understand the dynamic physical, chemical, and biological processes of the Earth and its history.
- D) Students apply knowledge of appropriate techniques, field methods, field mapping, and numerical methods to measure, portray, analyze, and interpret Earth Science data in specific subdisciplines.
- E) Students identify Earth Science problems and develop solutions.
- F) Students apply knowledge of modern applications from chemistry, physics, biology, mathematics, statistics, and computing to the solution of Earth Science problems.

Key: B = Beginning level; I = Intermediate level; A = Advanced level

Program Course Listing:

- R- Required
- O - one of multiple option
- prep - preparation (all BS programs)
- SS – science of sustainability (all BS programs)
- GS – Geological Sciences subprogram
- CWE- Climate Water Environment subprogram
- GP- Geophysics subprogram
- MS – Marine Science certificate
- PS- Planetary Science certificate
- HG- Hydrogeology certificate
- MC – Museum Curation certificate
- PG- Petroleum Geology certificate