

GEOLOGICAL SCIENCES

Course Search

Not all courses are offered every semester. Refer to the schedule of courses for each term's specific offerings.

[More Info](#)

Courses at the University of Florida, with the exception of specific foreign language courses and courses in the online Master of Arts in Mass Communication program, are taught in English.

Courses

- ESC 1000 Introduction to Earth Science** **3 Credits**
Integrated application of the scientific method to the earth sciences, including geologic materials, resources and processes; surface, groundwater and climate; environmental problems; and related topics. Emphasizes Florida examples. (P)
General Education - Physical Science
- ESC 3075 Deltas and Humans** **3 Credits**
Examines the historical relationship between humans and deltas, outlining possible coastal management plans in response to sea level rise.
- GEO 4281 River Forms and Processes** **3 Credits**
Examines the nature and variety of fluvial processes and the origin and modification of fluvial landforms. Includes discussion of environmental changes in rivers and human activities in drainage basins.
Prereq: GEO 2200 or GLY 2010C, or instructor permission
General Education - Physical Science
- GLY 1000 Exploring the Geological Sciences** **3 Credits**
Selected topics in the geological sciences. For those not majoring in science. (P)
General Education - Physical Science
- GLY 1102 Age of Dinosaurs** **3 Credits**
Examination of unique episodes in the physical and biological history of the earth. (B or P)
General Education - Biological Science
General Education - Physical Science
- GLY 1150L Florida Geology Laboratory** **1 Credit**
Laboratory provides a basic understanding of Florida's geology, geologic history, geologic resources and geologically related environmental problems. (P)
General Education - Physical Science
- GLY 1880 Earthquakes, Volcanoes and Other Hazards** **3 Credits**
Overview of important topics in Earth science through the examination of hazards, ranging from earthquakes and volcanoes to global warming and impacts from space. For those who are not majoring in science. (P)
General Education - Physical Science
- GLY 2010C Physical Geology** **4 Credits**
Materials, structures and surface features of the earth and processes which have produced them. Related laboratory demonstrations and experiences. (P)
General Education - Physical Science
- GLY 2030C Environmental and Engineering Geology** **3 Credits**
Hazardous geologic processes and current environmental concerns are related to the earth, the forces acting upon it and the resulting surface features and materials. Human interaction with the environment is illustrated using modern case studies. (P)
General Education - Physical Science
- GLY 2038 Sustainability and the Changing Earth** **3 Credits**
Introduces planet Earth as a dynamic and complex global system which has changed due to human interaction. Course materials demonstrate physical and chemical links between the geosphere, hydrosphere, biosphere and atmosphere that directly impact the sustainability of human lifestyles at a variety of timescales. (P)
General Education - Physical Science
- GLY 2042 Planetary Geology** **3 Credits**
Introduces recent geological exploration of recent terrestrial planets and moons, comets and asteroids, focusing on comparisons of composition and tectonics on the solid planets and moons.
- GLY 2100C Historical Geology** **4 Credits**
Evolution of the earth and its life, including the major physical events and evolutionary changes recorded in the geologic past. Related laboratory, demonstrations and exercises. (P)
Prereq: GLY 2010C or GLY 2030C, or instructor permission
General Education - Physical Science
- GLY 3074 Oceans and Global Climate Change** **3 Credits**
Examines the role the oceans play in determining climate and regulating global climate change on a range of timescales from decades to millions of years. (P)
General Education - Physical Science
- GLY 3083C Fundamentals of Marine Sciences** **3 Credits**
Introduces the basic disciplines of marine sciences, including geology, chemistry, physics, biology and conservation, with an emphasis on marine research. Includes three mandatory Saturday field trips.
Prereq: OCE 1001
General Education - Physical Science
- GLY 3105C Evolution of Earth and Life** **4 Credits**
Advanced examination of the geologic history of planet earth with an emphasis on North America. (P)
Prereq: GLY 2010C or GLY 2030C
General Education - Physical Science
- GLY 3163 Geology American National Parks** **3 Credits**
Introduces geological concepts in the context of selected US national parks. Relates geology to the cultural aspects of these parks and present-day environmental concerns. (P)
General Education - Physical Science
- GLY 3200C Principles of Mineralogy** **4 Credits**
Concepts of crystallography, crystal chemistry, physical properties of minerals, mineral genesis and systematic study of the rock-forming or otherwise important minerals including the theory and use of the petrographic microscope for study and identification of these minerals in thin section. (P)
Prereq: CHM 1030 or CHM 1025, and GLY 2010C or GLY 2030C
General Education - Physical Science
- GLY 3202C Earth Materials** **3 Credits**
Overview of the origin and occurrence of earth materials with a particular emphasis on the identification and classification of minerals and rocks. Activities involve lecture and a fully integrated laboratory component where students learn to identify and classify minerals and rocks through both macroscopic and microscopic investigation.

GLY 3603C Paleontology	4 Credits	GLY 4790 Geology Summer Field Camp	6 Credits
Investigation of the history of life on earth, including aspects of invertebrate and vertebrate paleontology, micropaleontology and paleobotany.		Summer geology field camp in northern New Mexico. Application of field procedures and techniques to the solution of geologic problems and construction of geologic maps.	
Prereq: refer to the department		Prereq: GLY 4750L and instructor permission	
GLY 3882C Hydrogeology and Human Affairs	3 Credits	GLY 4822 Groundwater Geology	3 Credits
Insight into current scientific, political, legal, social and economic aspects of hydrogeology.		Introduces the concepts of groundwater flow and its relationship to subsurface geology. Practice in applying groundwater flow concepts and problem solving.	
Prereq: junior standing		Prereq: Any GLY 2000 level course or higher and MAC 1147 or 2311	
General Education - Physical Science			
GLY 4155C Geology of Florida	3 Credits	GLY 4905 Individual Work	1-3 Credits
Principles of physical and historical geology as applied to the geology and mineral resources of Florida. (P)		For work in addition to that offered in regular courses in mineralogy, petrology, paleontology, stratigraphy, sedimentology and structural geology.	
Prereq: GLY 2010C or GLY 2030C, or instructor permission		Prereq: 15 credits of geology and instructor permission	
General Education - Physical Science			
GLY 4310C Igneous and Metamorphic Petrology	4 Credits	GLY 4911 Undergraduate Research in Geology	3 Credits
Fundamental concepts, principles and data that pertain to the genesis of igneous and metamorphic rocks. Emphasizes mineral phase relations, interpretive petrochemistry, magma genesis and tectonic relationships.		Provides firsthand, supervised research in Geology. Projects may involve inquiry, design, investigation, scholarship, discovery or application in Geology.	
Prereq: CHM 1025 and GLY 3200C			
GLY 4400C Structural Geology and Tectonics	4 Credits	GLY 4930 Special Topics in Geology	1-3 Credits
Structural features of the earth, their causes, recognition and interpretation; includes the mechanics of folding, faulting and other deformations of the earth's crust.		Lecture, conferences or laboratory sessions covering selected topics of current interest in modern geology.	
Prereq: GLY 2010C or GLY 2030C, and MAC 1147 and GLY 4552C		Prereq: three courses in geology or instructor permission	
GLY 4450 Geophysics	3 Credits	GLY 4956 Overseas Studies	1-15 Credits
Introduces the basic types of geophysical data used to characterize the subsurface. Learn about seismic refraction and reflection, gravity, magnetics, heat flow and electromagnetic methods.		Overseas Studies.	
Prereq: GLY 2010C or GLY 2030C or GLY 1000, and MAC 2311 or MAC 2233			
GLY 4552C Sedimentary Geology	4 Credits	IUF 2100 Climate Change Science and Solutions	3 Credits
Basic disciplines important in understanding the origin and classification of sedimentary rocks including sedimentary petrology, sedimentology and stratigraphy.		Uses the issue of climate change to deepen understanding of science and its role in society. Working individually and collaboratively, students integrate information and insights from a wide variety of natural sciences and engineering/design disciplines to develop holistic approaches to climate change adaptation and mitigation. (P)	
Prereq: GLY 2100C or GLY 3105C, and GLY 3200C		General Education - Physical Science	
GLY 4700 Geomorphology	3 Credits	OCE 1001 Introduction to Oceanography	3 Credits
Introduces the processes responsible for the formation and evolution of Earth surface features and landscapes. Emphasizes understanding of how first principles of physics and chemistry can be used to explain landform shaping.		Explores the geological, physical, and biological characteristics of Earth's marine realm. Includes discussion of scientific methods, the history of oceanography, and emphasizes understanding of the mutual interactions between humans and the ocean. (P)	
Prereq: GLY 2010 or GLY 2030 and an additional 3 credits of GLY		General Education - Physical Science	
GLY 4726 Geochemical Oceanography	3 Credits		
Focuses on chemical properties and processes in the oceans, exploring the links between chemistry, biology, geology, and global change within a marine context. Topics include elemental composition and speciation, biogeochemical cycles, chemical and isotopic tracers, chemistry of marine sediments, and oceanic uptake of anthropogenic carbon.			
Prereq: CHM 2045 and (OCE 1001 or GLY 2010C or GLY 2030C)			
GLY 4734 Coastal Morphology and Processes	3 Credits		
Examines the nature and variety of coastal processes, and the origin and modification of environmental changes along coasts, including human activities in the coastal zone.			
Prereq: GEO 2200 or GLY 2010C or GLY 2030C			
GLY 4750L Geological Field Methods	2 Credits		
Methods and techniques used in geological fieldwork.			
Prereq: GLY 3105C or GLY 2100C, and instructor permission			