GEOSCIENCE, CERTIFICATE

REQUIREMENTS

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The Certificate in Geoscience requires a minimum of four courses and at least 12 total credits. Students must complete a unique course to satisfy each requirement.

Code	Title	Credits
Introductory Course		
Complete one course from:		
GEOSCI 100	Introductory Geology: How the Earth Works	3
GEOSCI/ATM OCN/ ENVIR ST 102	Climate and Climate Change	3
GEOSCI/ ATM OCN 105	Survey of Oceanography	3-4
GEOSCI/ ENVIR ST 106	Environmental Geology	3
GEOSCI 109	Three billion years beneath your feet: Geology of the National Parks	3
GEOSCI 110	Evolution and Extinction	4
GEOSCI/ ATM OCN 140	Natural Hazards and Disasters	3
ATM OCN 100	Weather and Climate	3
ATM OCN 101	Weather and Climate	4
ATM OCN/ ENVIR ST 171	Global Change: Atmospheric Issues and Problems	3
Geoscience Core		
Complete one course from:		
GEOSCI 202	Introduction to Geologic Structures	4
GEOSCI 203	Earth Materials: A Systems Approach	4
GEOSCI 204	Geologic Evolution of the Earth	4
GEOSCI/GEOG 320	Geomorphology	3
GEOSCI/G L E 360	Principles of Mineralogy	3
GEOSCI 375	Principles of Geochemistry	3
GEOSCI/G L E 455	Structural Geology	4
GEOSCI/CIV ENGR/ G L E/M S & E 474	Rock Mechanics	3
Specialization		
Complete one course from any area:		
Environmental Geoscience		
GEOSCI 304	Geobiology	3
GEOSCI/G L E 314	Introduction to Applied Hydrogeology	3
GEOSCI/GEOG 320	Geomorphology	3
GEOSCI 340	Geoscience Data Analysis	3
GEOSCI/ ATM OCN 353	Programming for Earth Scientists	3
GEOSCI 375	Principles of Geochemistry	3
GEOSCI 430	Sedimentology and Stratigraphy	3
GEOSCI 551	Paleoceanography	3
GEOSCI/G L E 627	Hydrogeology	3-4
GEOSCI/G L E 629	Contaminant Hydrogeology	3
Geology		
GEOSCI/GEOG 320	Geomorphology	3
GEOSCI 340	Geoscience Data Analysis	3
GEOSCI/G L E 350	Introduction to Geophysics: The Dynamic Earth	3
GEOSCI/ ATM OCN 353	Programming for Earth Scientists	3
GEOSCI/G L E 360	Principles of Mineralogy	3
GEOSCI/G L E 370	Elementary Petrology	3
GEOSCI 375	Principles of Geochemistry	3
GEOSCI/GEOG 420	Glacial and Pleistocene Geology	3
GEOSCI 430	Sedimentology and Stratigraphy	3
GEOSCI/G L E 455	Structural Geology	4
Geophysics		
GEOSCI 340	Geoscience Data Analysis	3
GEOSCI/G L E 350	Introduction to Geophysics: The Dynamic Earth	3
GEOSCI/ ATM OCN 353	Programming for Earth Scientists	3
GEOSCI/G L E 455	Structural Geology	4
GEOSCI/CIV ENGR/ G L E/M S & E 474	Rock Mechanics	3
GEOSCI/G L E 594	Introduction to Applied Geophysics	3
GEOSCI/G L E 596	Geomechanics	3
GEOSCI/G L E 627	Hydrogeology	3-4
Ice and Climate		
GEOSCI/G L E 314	Introduction to Applied Hydrogeology	3
GEOSCI/GEOG 320	Geomorphology	3
GEOSCI 340	Geoscience Data Analysis	3
GEOSCI/ ATM OCN 353	Programming for Earth Scientists	3
GEOSCI/GEOG 420	Glacial and Pleistocene Geology	3
GEOSCI 551	Paleoceanography	3
ATM OCN/ ENVIR ST/ GEOG 322	Polar Regions and Their Importance in the Global Environment	3
ATM OCN/ ENVIR ST/ GEOG 332	Global Warming: Science and Impacts	3
ATM OCN 425	Global Climate Processes	3
Paleontology		
GEOSCI 304	Geobiology	3
GEOSCI 430	Sedimentology and Stratigraphy	3
ZOOLOGY 275	Biology of the Dinosaurs	3
ZOOLOGY/ ENVIR ST/ F&W ECOL 360	Extinction of Species	3
Geoscience Elective		

Complete one course from:		
GEOSCI 202	Introduction to Geologic Structures	4
GEOSCI 203	Earth Materials: A Systems Approach	4
GEOSCI 204	Geologic Evolution of the Earth	4
GEOSCI 304	Geobiology	3
GEOSCI/G L E 314	Introduction to Applied Hydrogeology	3
GEOSCI/GEOG 320	Geomorphology	3
GEOSCI/ATM OCN/ ENVIR ST/ GEOG 335	Climatic Environments of the Past	3
GEOSCI 340	Geoscience Data Analysis	3
GEOSCI/G L E 350	Introduction to Geophysics: The Dynamic Earth	3
GEOSCI/ ATM OCN 353	Programming for Earth Scientists	3
GEOSCI/G L E 360	Principles of Mineralogy	3
GEOSCI/G L E 370	Elementary Petrology	3
GEOSCI 375	Principles of Geochemistry	3
GEOSCI/ ENVIR ST 411	Energy Resources	3
GEOSCI/GEOG 420	Glacial and Pleistocene Geology	3
GEOSCI 430	Sedimentology and Stratigraphy	3
GEOSCI/G L E 455	Structural Geology	4
GEOSCI/CIV ENGR/ G L E/M S & E 474	Rock Mechanics	3
GEOSCI/ ZOOLOGY 542	Invertebrate Paleontology	3
GEOSCI 551	Paleoceanography	3
GEOSCI/G L E 594	Introduction to Applied Geophysics	3
GEOSCI/G L E 596	Geomechanics	3
GEOSCI/G L E 627	Hydrogeology	3-4
GEOSCI/G L E 629	Contaminant Hydrogeology	3

RESIDENCE AND QUALITY OF WORK

- Minimum 2.000 GPA on all certificate courses.
- At least 6 certificate credits must be completed in residence.

CERTIFICATE COMPLETION REQUIREMENT

This undergraduate certificate must be completed concurrently with the student's undergraduate degree. Students cannot delay degree completion to complete the certificate.