

Breadth Requirement for MS & PhD Students in Geological Sciences

(Last updated: July 2020)

Graduate students in Geological Sciences are required to satisfy a graduate breadth requirement by completing 3-4 courses from six categories as shown in the table below. Students in the MS program must take three graduate breadth courses. PhD students must take four. Breadth credit will not be granted for more than one course per category. Courses listed in the table are in the current two-year teaching plan. All courses that have fulfilled this breadth requirement during its history are maintained by the G&G Sciences Programs Faculty Advisory Committee members and the SEOE Graduate Studies Office.

The G&G program will update the table annually in the spring and will maintain a record of approved courses. Students may satisfy the requirement with any course offered for breadth credit in the time period of their matriculation. Students enrolled prior to Fall 2019 have the option of adopting this requirement or finishing their degree under the old requirement.

<i>Breadth Categories</i>	<i>Breadth Courses</i>
Volcanology-Geochemistry-Petrology	GEOL 520: Introduction to Geochemistry GEOL 521: Isotope Geology and Geochronology
Geophysics - Tectonics - Basins	GEOL 531: Plate Tectonics GEOL 548: Environmental Geophysics GEOL 735: Regional Tectonics
Hydrology - Geomorphology	GEOL 570 / 770: Environmental Hydrogeology GEOL 501: Principles of Geomorphology
Organic Geochemistry - Biogeochemistry	GEOL 715: Stable Isotope Geochemistry MSCI 503: Environmental Microbiology
Oceanography	GEOL / MSCI 711: Paleoclimatology GEOL 545: Geological Oceanography GEOL/MSCI 781: Physical Oceanography GEOL/MSCI 782: Chemical Oceanography GEOL/MSCI 785: Atmospheric Dynamics
Data Analysis - Geoscience Education	GEOL 575/775: Numerical Modeling for Earth Science Applications GEOL/MSCI 783: Oceanographic Time Series Analysis GEOL 542: Methods in Geoscience Education Research MSCI 509: MATLAB-Based Data Analysis in Oceanography

G&G Program Administration

All graduate-level GEOL and closely related courses on the current two-year teaching plan are eligible to be included in one breadth category. Instructors who wish to offer their course for breadth credit may petition by email the G&G PFAC representatives, who will update the list annually in the spring semester and in consultation with the SEOE Associate Director. Breadth courses must be suitable for students who will be outside of their areas of specialization. Courses must be in the 2-year teaching plan at the time

they are added to the breadth list. Any course that falls out of the teaching plan will be automatically removed from the list. The program will maintain an annual record of approved breadth courses. Students may satisfy the requirement with any course offered for breadth credit in the time period of their matriculation.