

## Breadth Requirement for MS & PhD Students in Geological Sciences (October – 2021)

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 with a ~~strike through~~ are not in the current two-year teaching plan but may be counted for breadth credit for any student who has taken them in the past. The G&G Program will update the table at least once per year and will maintain a record of approved breadth 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.

| <b>Breadth Categories</b>                    | <b>Breadth Courses (P2019)</b>  |
|--|---|
| Volcanology –<br>Geochemistry –<br>Petrology | GEOL 520 Isotope Geology and Geochronology<br>GEOL 521 Introduction to Geochemistry   |
| Geophysics –<br>Tectonics–Basins             | <del>GEOL 531 Plate Tectonics</del><br><del>GEOL 548 Environmental Geophysics</del><br>GEOL 735 Regional Tectonics<br><del>GEOL 556 Seismic Reflection Interpretation</del>   |
| Hydrology -<br>Geomorphology                 | GEOL 570/770 Environmental Hydrogeology<br>GEOL 501 Principles of Geomorphology   |
| Organic<br>Geochemistry -<br>Biogeochemistry | GEOL 715 Stable Isotope Geochemistry<br><del>GEOL 717 Organic Geochemistry</del><br>MSCI 752 - Marine Biogeochemistry<br>MSCI 503 Environmental Microbiology  |
| Oceanography                                 | GEOL/MSCI 711 Paleoclimatology<br>GEOL 545 Geological Oceanography<br>GEOL/MSCI 781 Physical Oceanography<br><del>GEOL/MSCI 782 Chemical Oceanography</del><br>GEOL/MSCI 785 Atmospheric Dynamics   |
| Data Analysis -<br>Geoscience<br>Education   | <del>ENVR501 Methods in Geoscience Education Research</del><br>MSCI 509 MATLAB-Based Data Analysis in Oceanography<br>GEOL 542 Methods in Geoscience Education Research<br>GEOL 575/775 Numerical Modeling for Earth Science Applications |