Submitted by: Chuck Whipkey  
Date Prepared: 9/3/2013  
Department/Discipline and Course Number: Earth and Environmental Sciences/GEOL 302  
Course Title: Petrology

Type of change (check all applicable):  
Course Number*    Title    Credits    Description    Prerequisites    X    Deletion

*This course number must be approved by the Office of the Registrar before the proposal is submitted.

Effective Date: FALL Semester, Year 2014

<table>
<thead>
<tr>
<th>Current Catalog Entry</th>
<th>Proposed Catalog Entry</th>
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<tbody>
<tr>
<td>302 – Petrology (4)</td>
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<tr>
<td>Prerequisite: Geology 301. Study of metamorphic and igneous processes and important rock types in hand sample, microscopic thin-section and through field studies. Course is conducted as a mix of lecture and laboratory activities. Laboratory.</td>
<td>Prerequisite: Geology 301; prerequisite or corequisite: Chemistry 112. Study of metamorphic and igneous processes and important rock types in hand sample, microscopic thin-section and through field studies. Course is conducted as a mix of lecture and laboratory activities. Laboratory.</td>
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JUSTIFICATION (including impact on majors, minors, concentrations, and general education courses within the University curriculum; attach additional pages if required)
See attached sheet.

TRANSITION PLAN (describe how will students who are in Catalogs where the course is required for a major be accommodated; attach additional pages if required)
GEOL 302 is required for Geology majors. Because provision is made in this proposal for CHEM 112 to be taken concurrently with GEOL 302, all current and new majors will be able to take both courses during the Spring 2015 semester. All of our current and new majors will be informed, through advising, of the coming change.

Approvals
Department Chair  [Signature]  Date: 9-4-2013  
College Curriculum Chair  [Signature]  Date: ____________________________

Expedited course changes are posted for a 10-class day comment period. If no comments are raised during that time, the proposal becomes final. All expedited proposals approved in this way will be noted on the UCC web site.

If comments are raised, the proposal may be reviewed by the UCC and then approved or it may be returned to the CCC for additional deliberation (as required).

Expedited Course Change Cover Sheet (July 2012)
Proposal: CHEM 112 (General Chemistry II) should be made a co-requisite or prerequisite for GEOL 302 (Petrology)

Rationale: GEOL 302 (Petrology) is concerned to a large extent with the complex chemical reactions that take place as molten magma cools and crystallizes and as metamorphic rocks are altered by heat, pressure, and the infusion of chemically charged fluids below the Earth's surface. Just as knowledge of basic chemical principles, such as ionic and covalent bonding, phase changes, and chemical reactions (covered in CHEM 111) is necessary to understand concepts presented in Mineralogy, more advanced topics including kinetics, equilibria, and thermodynamics, which are covered in CHEM 112, are required for Petrology.

As with Mineralogy, chemical principles are currently covered as much as possible during Petrology lectures but the coverage is necessarily cursory and takes up valuable class time. We are proposing to list CHEM 112 as a prerequisite or co-requisite to Petrology to better prepare our students for the course content and to free up class time for coverage of material directly related to the subject.

After reviewing CHEM 112 syllabi, we believe that allowing our students to take CHEM 112 as a co- or prerequisite to Petrology will prepare our students for the material presented in this course.

Impact: This change will have no impact on other majors, minors, or concentrations. We have described our proposed changes to Leanna Giancarlo, Chair of Chemistry, and she has assured us that the impact will be minimal on her department, partly because all of our department's other majors, including Environmental Geology, already require CHEM 112 and also because many of our Geology majors already take CHEM 112 at the urging of their advisors.