UNIVERSITY OF MARY WASHINGTON – EXPEDITED COURSE CHANGE PROPOSAL
Submit this form electronically, beginning with the first required level of review (department or college level). Each level of review passes the form and any attachments to the next level when the action is approved.

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<tr>
<th>Submitted by: Chuck Whipkey</th>
<th>Date Prepared: 9/3/2013</th>
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<tbody>
<tr>
<td>Department/Discipline and Course Number: Earth and Environmental Sciences/EESC 307</td>
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<td>Course Title: Environmental Soil Science</td>
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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

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<th>Current Catalog Entry</th>
<th>Proposed Catalog Entry</th>
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<td>307 – Environmental Soil Science (3) Prerequisite: GEOL 112 or EESC 110 or GEOG 111. An introduction to soil formation processes; soil classification (both basic classification and soil taxonomy); physical properties of soil; soil chemistry; and discussion of soil as an environmental interface.</td>
<td>307 – Environmental Soil Science (3) Prerequisite: GEOL 112 or EESC 110 or GEOG 111; prerequisite or corequisite: CHEM 112. An introduction to soil formation processes; soil classification (both basic classification and soil taxonomy); physical properties of soil; soil chemistry; and discussion of soil as an environmental interface.</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)

Please 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)

EESC 307 fulfills elective credit requirements in all of our department's majors: Environmental Science, Social and Natural Tracks; Environmental Geology; and Geology. Because provision is made in this proposal for CHEM 112 to be taken concurrently with EESC 307, all current and new majors will be able to take both courses during the Spring 2015 semester. All of our majors will be informed, through advising, of the coming change.

Approvals

Department Chair Chuck Whipkey Date: 9-4-2013

College Curriculum Chair 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 2013)
Proposal: CHEM 112 (General Chemistry II) should be made a co-requisite or prerequisite for EESC 307 (Environmental Soil Science)

Rationale: A substantial portion of EESC 307 (Environmental Soil Science) is concerned with the processes involved in soil formation, soil evolution, and soil environmental degradation. Most of these processes involve chemical reactions in aqueous solutions. Some examples of such processes are the chemical transport of ions in solution, weathering reactions, and the fate and transport of pollutants in the subsurface. The basic chemistry behind these soil processes, including reaction kinetics, acid-base equilibria, ionic equilibria in aqueous solutions, and the properties of solutions and colloids, are covered in CHEM 112 (General Chemistry II). Currently, an overview of chemical principles is incorporated into Environmental Soil Science but the coverage is necessarily very limited and takes time away from material directly related to the class. We are therefore proposing to list CHEM 112 as a prerequisite or co-requisite to Environmental Soil Science to prepare our students for the course content and to free up class time for coverage of more 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 Environmental Soil Science will prepare our students for the material presented in this course. Listing CHEM 112 as a co-requisite will work well with Environmental Soil Science because the most relevant material is covered early in the chemistry course.

Although most students taking Environmental Soil Science are majoring in Environmental Science or Environmental Geology and are thus already required to take the intro chemistry sequence, the proposed change will ensure that those students take chemistry prior to (or concurrently with) this class.

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, primarily because the students most commonly taking Environmental Soil Science (Environmental Science majors and Environmental Geology majors) are already required to take CHEM 112 for their major.