Submitted by: Chuck Whipkey

Date Prepared: 8/30/2013

Department/Discipline and Course Number: Earth and Environmental Sciences/GEOL 311

Course Title: Sedimentation and Stratigraphy

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

Current Catalog Entry

311 – Sedimentation and Stratigraphy (4)
Prerequisite: GEOL 111; recommended: GEOL 301. This course provides an overview of the concepts associated with sedimentary rock formation, including theoretical sedimentology, process oriented facies analysis and applied stratigraphy in the context of cyclic sea level and climate change through time. Class work includes several field trips to collect samples for physical and chemical analysis. Laboratory.

Proposed Catalog Entry

311 – Sedimentation and Stratigraphy (4)
Prerequisite: GEOL 111; prerequisite or corequisite: CHEM 111; Recommended: GEOL 301. This course provides an overview of the concepts associated with sedimentary rock formation, including theoretical sedimentology, process oriented facies analysis and applied stratigraphy in the context of cyclic sea level and climate change through time. Class work includes several field trips to collect samples for physical and chemical analysis. Laboratory.

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)

GEOL 311 is required for Environmental Geology and Geology majors. Because provision is made in this proposal for CHEM 111 to be taken concurrently with GEOL 311, all current and new majors will be able to take both courses during the Fall 2014 semester. All of our current and new majors will be informed, through advising, of the coming change.

Approvals

Department Chair

Date: 9-4-2013

College Curriculum Chair

Date:

Expedited course changes are posted on a website with a 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 website.

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 111 (General Chemistry I) should be made a co-requisite or prerequisite for GEOL 311 (Sedimentation and Stratigraphy)

Rationale: Knowledge of introductory chemical concepts, including chemical equations, ionic and covalent bonding, and the basics of chemical reactions in aquatic solutions, is essential for understanding many concepts presented in Sedimentation and Stratigraphy. For example, a knowledge of the subsurface chemical environment is crucial for understanding sedimentary processes such as natural cementation of clastic sedimentary rocks (e.g. sandstone, shale, etc.), the formation of chemical sedimentary rocks (e.g. limestone, dolomites, etc.), and the precipitation of evaporite minerals. Valuable class time currently must be taken to review or introduce chemical principles that are needed to understand the course content. Even then, due to time constraints, the review must be so cursory that the level of student understanding is commonly inadequate. After reviewing CHEM 111 syllabi, our department believes that requiring our students to take CHEM 111 as a co- or prerequisite to Sedimentation and Stratigraphy will adequately prepare of 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 our department’s other majors, including Environmental Geology, already require CHEM 111, and also because many of our Geology majors already take CHEM 111 at the urging of their advisors.