

Request for Courses in the Core Curriculum

Originating Department or College: Department of Biology and Chemistry, College of Arts and Sciences

Person Making Request: Kenneth J. Tobin

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Course Number and Title: GEOL 1105 Environmental Geology Lab

Please attach in separate documents:

Completed Catalog Add/Change Form

Syllabus

List the student learning outcomes for the course (Statements of what students will know and/or be able to do as a result of taking this course. See appended hints for constructing these statements.)

Student Learning Objectives: Upon successful completion of this course, students will be able to:

1. Use critical thinking and the scientific method to examine questions relating to atmospheric science.
2. Collaborate effectively on a research project.
3. Communicate scientific information both verbally and through written reports.
4. Review and demonstrate knowledge of fundamental earth science principles.
5. Define, quantify and communicate geological processes that alter the earth's surface.
6. Discuss how geology is relevant to our society.

Core-Curriculum Learning Outcomes:

1. Critical Thinking: includes creative thinking, innovation, inquiry and analysis, evaluation, and synthesis of information. (SLOs: 1, 2)
2. Communication Skills: Students will demonstrate their ability to communicate effectively by using written communication. (SLOs: 3, 5, 6)
3. Empirical and Quantitative Skills: includes the manipulation and analysis of numerical data or observable facts resulting in informed conclusions. (SLOs: 4,5)
4. Teamwork: includes the ability to work effectively with others to support a shared goal. (SLOs: 2)

Component Area for which the course is being proposed (check one):

Communication

Mathematics

Language, Philosophy, & Culture

Creative Arts

Life & Physical Sciences

American History

Government/Political Science

Social & Behavioral Science

Component Area Option

Competency areas addressed by the course (refer to the appended chart for competencies that are required and optional in each component area):

Critical Thinking

Communication Skills

Written Communication

Oral Communication

Visual Communication

Empirical & Quantitative Skills

Teamwork

Personal Responsibility

Social Responsibility

Because we will be assessing student learning outcomes across multiple core courses, assessment assigned in your course must include assessment of the core competencies. For each competency checked above, indicate the specific course assignment(s) which, when completed by students, will provide evidence of the competency. Provide detailed information, such as copies of the paper or project assignment, copies of individual test items, etc. A single assignment may be used to provide data for multiple competencies.

Critical Thinking:

During the “River Flooding” lab, students will need to use their critical thinking skills to interpret string flow data and evaluate geological conditions in order to calculate river flow rate. The students will then be asked to make and defend a series of land management decisions based on their calculations. A critical thinking rubric with domains for creative thinking, depth of inquiry, evaluation of importance and synthesis of information can be scored by the instructor from the lab report, or the lab report can be up loaded for evaluation by the Core Curriculum Assessment Committee.

Communication Skills:

Upon the completion of the “River Flooding” lab each student will write a 3-4 page lab report addressing critical thinking questions concerning their calculations and land management decisions. The instructor can score the written lab report for organization, focus, style and grammar using a modified WIN rubric, or the report can be up loaded for evaluation by the Core Curriculum Assessment Committee.

Empirical & Quantitative Skills:

During the “River Flooding” lab, students will need to interpret the string flow data to calculate river flow rate and water level height. The instructor can assess the logical reasoning behind the calculations and extrapolations, or the written lab report can be up loaded for evaluation by the Core Curriculum Assessment Committee.

Teamwork: N/A

Personal Responsibility: N/A

Social Responsibility: N/A

Will the syllabus vary across multiple sections of the course? ___ Yes X No

If yes, list the assignments that will be constant across the sections:

Inclusion in the core is contingent upon the course being offered and taught at least once every other academic year. Courses will be reviewed for renewal every five (5) years.

The department understands that instructors will be expected to provide student work and to participate in university-wide assessments of student work. This could include, but may not be limited to, designing instruments such as rubrics, and scoring work by students in this or other courses. In addition, instructors of core courses may be asked to include brief assessment activities in their courses.

Reviewed and approved by the Core Curriculum Committee on February 15, 2013.