

Integrated Science Courses

UCGE Proposal Criteria Suggestions

The University of Idaho Faculty is invited to submit proposals for the Integrated Science requirement of the general education curriculum.

Proposal guidelines for an Integrated Science Course in the General Education curriculum and should consist of the following:

- 1) **Instructor.** Name and title of instructor. If the instructor is not a full-time faculty member, please briefly describe his or her experience teaching general education or in teaching in professional preparation.
- 2) **Course Outline and Description.** In one to two pages, describe the course and its objectives and provide a course outline/syllabus. Please include a list of likely materials and activities included in the course and discuss how the course emphasizes and measures the University of Idaho's five learning outcomes and the five GEM competencies (below), as well as the seven objectives of Integrated Science courses (below). Identify a specific learning activity (e.g., written paper, oral presentation, collaborative project, poster, etc.) of the course that directly emphasizes and is integrated with the University Learning Outcomes, and provides some means of measuring the students' competencies in meeting these Learning Outcomes. The course syllabus may also be included in the course proposal packet to supplement this information.
 1. Strengthen student understanding of the methodology of science so as to foster logical thinking about and the ability to make complex scientific and social decisions.
 2. Increase awareness of the nature and limitations of scientific knowledge.
 3. Emphasize the impact of science on society and the impact of society on science.
 4. Consider the ethical dilemmas and moral consequences of research that may confront the scientist.
 5. Create an understanding of the differences between belief and scientifically testable or validated results.
 6. Place scientific advances and issues in a historical context
 7. Stress collaborative work and problem solving techniques in providing the student with the opportunity to become actively engaged in conducting science.
- 3) **GEM SBOE Competencies** (*To meet the SBOE General Education Matriculation criteria the Natural, Physical & Applied Sciences requirement of the general education, courses must cover all five objectives below*).
 - **Definition:** A person who is competent in scientific reasoning adheres to a self-correcting system of inquiry (the scientific method) and relies on empirical evidence to describe, understand, and predict natural phenomena.
 - **Competency and Knowledge Objectives:**
 1. Apply foundational knowledge and models of a natural or physical science to analyze and/or predict phenomena.
 2. Understand the scientific method and apply scientific reasoning to critically evaluate

assertions.

3. Interpret and communicate scientific information via written, spoken, and/or visual representations.

4. Describe the relevance of specific scientific principles to the human experience.

5. Form and test a hypothesis in a laboratory, classroom, and/or in the field, using discipline-specific tools and techniques for data collection and/or analysis.

- 4) **Department Support.** A signature line indicating department support for the course.
- 5) The course should be taught by a faculty member who is willing to meet with the Director of General Education, as needed, to discuss pedagogical approaches, General Education assessment, and other issues common to this course and General Education. The faculty member should also be willing to provide a copy of the course syllabus to the Director of General Education at the beginning of the semester in which the course is taught.

For more information, contact the current UCGE Chair at ucge@uidaho.edu

For assistance with the course proposal, contact Kenton Bird Director of General Education at kbird@uidaho.edu or visit the General Education, Resources for Faculty page at <http://www.uidaho.edu/class/general-education/faculty-advisor-information/resources-for-faculty>

University Learning Outcomes to be considered in the development of the course:

University Learning Outcomes

University level learning outcomes broadly describe expected and desired consequences of learning through integrated curricular and co-curricular experiences. The outcomes become an expression of the desired attributes of an educated person and guide coherent, integrated and intentional educational experiences. They provide us with a basis for ongoing assessment to continuously improve teaching and learning.

- a. Learn and integrate - Through independent learning and collaborative study, attain, use, and develop knowledge in the arts, humanities, sciences, and social sciences, with disciplinary specialization and the ability to integrate information across disciplines.
- b. Think and create - Use multiple thinking strategies to examine real-world issues, explore creative avenues of expression, solve problems, and make consequential decisions.
- c. Communicate - Acquire, articulate, create and convey intended meaning using verbal and non-verbal methods of communication that demonstrate respect and understanding in a complex society.
- d. Clarify purpose and perspective - Explore one's life purpose and meaning through transformational experiences that foster an understanding of self, relationships, and diverse global perspectives.
- e. Practice citizenship - Apply principles of ethical leadership, collaborative engagement, socially responsible behavior, respect for diversity in an interdependent world, and a service-oriented commitment to advance and sustain local and global communities.

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