Version: 041912

University of Illinois at Springfield
General Education Council
Course Approval Criteria
Category: Sciences

To seek general education course approval, faculty or programs must complete two forms:

- UIS New Course Proposal and Change Form
- General Education Checklist

Forms are available at: http://www.uis.edu/generaleducation/curriculum/facultyforms.html
Forms and a syllabus for the course should be submitted to the appropriate college curriculum committee, then to the dean, and finally to the Office of Undergraduate Education (PAC525) for distribution to the General Education Council. For questions, please contact Dr. Karen Moranski, Office of Undergraduate Education (206-7413 or kmora1@uis.edu). The recommended UIS Syllabus Template is available at: http://www.uis.edu/generaleducation/curriculum/facultyforms.html

General Information on Lower Division General Education

Below is a checklist of criteria that faculty teaching lower division courses should meet:

Lower Division Gen. Ed. Requirements
My course is 100 or 200 level and provides introductory information or overviews rather than knowledge that is highly specific to a particular discipline or degree program;
My course is a 3-hour course, except for composition, laboratory science, and some math courses, which may be 4 hours.
My course is available and accessible to all students, regardless of major, and a student's prior knowledge of the topic or discipline(s) addressed in the course is *not* assumed.
My course meets selected Baccalaureate Learning Outcomes for Goals 1-4, and, whenever possible, selected outcomes for Goal 5, Engaged Citizenship. (Baccalaureate Goals and Learning Outcomes are listed below.)
My course meets selected category outcomes, listed below.

The General Education Council will use the above criteria in making determinations about the appropriateness of the course for the general education curriculum. For the GEC to make a positive determination, the above requirements should be visible in the syllabus. On the General Education Checklist, you will be asked to indicate that your course meets the above criteria. Feel free to use space on that form to explain how the proposed course meets these criteria.

Baccalaureate Goals and Learning Outcomes

1. **Discovery of Knowledge**
   a. Reading baccalaureate-level materials effectively, reflecting comprehension and synthesis.
   b. Exhibiting a knowledge of and ability to effectively locate, evaluate, interpret, and use information.
   c. Exhibiting a knowledge of and ability to use information and communication technologies.
2. **Integration of Knowledge**
   a. Engaging in critical thinking by analyzing, evaluating, and articulating a range of perspectives to solve problems through informed, rational, decision-making.
   b. Differentiating the approaches that underlie the search for knowledge in the arts, humanities, natural sciences, history, or social and behavioral sciences.
3. **Application of Knowledge**
   a. Exhibiting a knowledge of and ability to use contemporary technologies.
   b. Identifying, interpreting, and analyzing quantitatively presented material and solve mathematical problems.
   c. Constructing intellectual projects independently and work effectively in collaboration with others
4. **Communication of Knowledge**
   a. Expressing ideas, facts and arguments in a written format that depicts competency in the use of syntax, organization, and style appropriate to the audience.
   b. Exhibiting effective oral communication skills, paying attention to content and audience.
5. **Engaged Citizenship**
   a. Recognizing the social responsibility of the individual within a larger community.
   b. Practicing awareness of and respect for the diversity of cultures and peoples in this country and in the world.

c. Reflecting on the ways involvement, leadership, and respect for community occur at the local, regional, national, or international levels.
d. Identifying how economic, political, and social systems operate now and have operated in the past.
e. Engaging in informed, rational, and ethical decision-making and action.
f. Distinguishing the possibilities and limitations of social change.

Category Overview

Science courses cover material that enhances a student's ability to:

- Understand the fundamental natural and physical processes which govern the universe;
- Investigate questions about the natural and technological world;
- Critically evaluate research plans, procedures, and findings;
- Appreciate the roles of theory, conceptual schemes, experimentation and mathematics in science.

Criteria

Required learning objectives

Science courses should help students meet as many as possible of the following learning objectives:

All courses

- Develop knowledge of principles and applications of scientific inquiry;
- Develop an understanding of the role of science and scientific experts in society;
- Learn to effectively locate, evaluate, interpret, and use scientific information;
- Use appropriate methods of critical thinking and quantitative reasoning to solve scientific problems and engage in informed, rational decision-making;
- Communicate scientific results effectively to a general audience by applying skills in reading, writing, speaking, and listening and through appropriate use of information technology and computer applications.

Lab courses only

- Learn methods of collecting, processing, and interpreting data in the lab or field;
- Develop hypotheses based upon observations of natural phenomena and design experiments or sampling protocols to test these hypotheses;
- Construct research projects independently and in collaboration with others.

Preferred course features

Science courses are encouraged that help students:

- Consider how humans interact with and influence the environment;
- Analyze scientific topics involved in ongoing controversies;
- Distinguish the methods that underlie the search for knowledge in the arts, humanities, natural sciences, history, and social and behavioral sciences;
- Explore how various disciplines interact to understand natural systems;
- Analyze the historical and social contexts of cultural, economic, political, religious, and scientific developments;
- Enhance life-long learning and engaged citizenship (other general education documents outline in detail specific skills and outcomes associated with these goals).