



St. Olaf College General Education Curriculum Integrated Scientific Topics (IST) Requirement

Description:

One of two courses, each from a different department or program, that develop an integrative understanding of scientific content, scientific principles, and the methods of contemporary natural science.

Administrative guideline: A course may be designated as a Scientific Exploration and Discovery (SED-x) course, an Integrated Scientific Topics (IST-x) course, or both. Students must complete at least one SED course and one IST course, or one course with both attributes and a second course with either attribute, in order to fulfill the two-course Studies in Natural Science requirement.

Intended learning outcomes:

Students will demonstrate:

1. an ability to use concepts and tools from one or more natural sciences to understand an issue or topic.
2. an ability to use a variety of disciplinary perspectives, within or in addition to the natural sciences, to understand an issue or topic.
3. an ability to use scientific terminology appropriately in meaningful scientific dialogue.

Course guidelines with Curriculum Committee comments:

1. Courses must focus on scientific content and scientific principles from one or more fields within the natural sciences with respect to one or more specific topics.

Comment: IST courses are intended to promote scientific literacy by developing a natural science understanding of a specific issue or topic. Such courses must examine that issue or topic from its scientific basis using texts, papers, demonstrations, and/or hands-on experience as appropriate for the topic. They should engage students in meaningful scientific dialogue that emphasizes the appropriate use of scientific terminology.

2. Courses must incorporate a variety of disciplinary perspectives, within or in addition to the natural sciences, on the topic(s) being investigated.

Comment: IST courses may promote integration among varying natural sciences, across these disciplines and other liberal arts disciplines, or both. Courses emphasizing integration among the natural sciences may consider a topic principally from the perspective of a single scientific discipline while introducing examples and applications from other scientific disciplines, or may consider a topic from the perspective of an inherently interdisciplinary field such as neuroscience or bioinformatics. Proposals for IST courses emphasizing integration within the natural sciences should describe clearly the interdisciplinary treatment of course topics.

Other IST courses may have a component integrating natural science with perspectives, concepts, or methods from other liberal arts disciplines, such as philosophy, history, mathematics, political science, computer science, theology, statistics, literature, or the arts. In order to be accredited for IST, a majority of the substance of the course must consist of scientific content, scientific principles, and/or the methods of contemporary natural science. Proposals for IST courses emphasizing integration across the natural sciences and other liberal arts disciplines should provide evidence of sufficient scientific content while also indicating how integration with other disciplines will be achieved.

Information for instructors proposing IST credit for a specific course:

The St. Olaf Curriculum Committee is responsible for reviewing and approving proposals to designate individual courses as meeting the Integrated Scientific Topics requirement. Instructors may seek IST credit as part of a proposal for a new course, or may seek to add IST credit to an existing course. IST credit is attached to the *course*, not to the instructor or to the specific term in which the course is offered. A proposal for IST credit must show how the course meets each of the IST course guidelines; the comments following a guideline provide additional information about how the Curriculum Committee interprets and applies that guideline in reviewing proposals. Instructors are encouraged to consider the comments as well as the guidelines themselves in preparing proposals. Forms and additional instructions for submitting proposals electronically are available on the website of the [Office of the Registrar](#).

August 2011