TO: The Academic Senate
FROM: Committee on Instruction and Curriculum
SUBJECT: Application of Course for GE Area C4
PURPOSE: For Action by the Academic Senate

ACTION REQUESTED: That the Academic Senate approve the applications of the following course for General Education (G.E.) for Area C4 for the 04-12 and earlier catalogs.

HIST 3240 History of Science

BACKGROUND INFORMATION:
This course was approved by the G.E. Subcommittee at its meeting on February 22, 2010.

CIC unanimously approved this course for the G.E. area indicated above at its meeting on March 1, 2010.

All supporting documents (i.e., course syllabus, GE approval form) for this course are available for review on the 3/1/10 CIC Sharepoint meeting workspace.
Application for General Education Credit for Upper Division Humanities Course (Area C4)

Course title: The History of Science (1700 to present)  Course number: HIST 3240

Courses approved for general education credit must provide students with explicit instruction in the approved student learning outcomes. Please be as specific as possible, pointing to topics, readings, assignments, activities and assessments that illustrate how the course meets the requirements. Attach the course syllabus and any assignments and/or assessments needed to support your explanations.

Please use this template as a guide to address ALL of the following learning outcomes.

Upper-division humanities courses emphasize an advanced writing component and include significant oral communication or manual communication (sign language) and advanced critical thinking skills. Upper-division general education should enable students to master the four Student Learning Outcomes (SLOs) listed for lower-division general education humanities.

1. Students will demonstrate an understanding of and ability to apply the principles, methodologies, value systems, and thought processes employed in human inquiries.

HIST 3240 employs a wholly humanistic approach to understanding scientific values by analyzing evidence from historical, scientific and even artistic sources, including paintings, music and literature related to science. Students are introduced to science as a culture, one with its own customs and language and context (political, religious and economic). Students also study science of this period (17th century to the present) in relation to the ethical and social issues raised at the time, and the relationship between science, technology and postmodernism is explored. Students employ critical thought processes in their writing assignments, including two essays, one on the emergence of science as a dominant paradigm in society, and the other on the development of modern medicine. These essays ask students to think about the way science has gained cultural authority and about how modern values are shaped by—and in turn shape—science and medicine.

2. Students will demonstrate in their oral and written work an understanding of the cultural endeavors and legacies of human civilization.

Students are required to participate in class discussions for 20% of their course grade, with meaningful participation “contributing to the weekly discussion, doing in-class writing assignments and consistently engaging with class materials.” Participation in online debates via the Discussion Forum on Blackboard also earns students points for participation. Blackboard topics of discussion are addressed at the beginning of each class, to clarify specific points or questions. Students also engage in extensive primary and secondary source reading and are asked to use specific examples from both in their unit papers. Class discussions are grounded in primary sources, many of which present alternative or opposing views on a scientific topic, such as the development of the atomic bomb.
3. Students will demonstrate their ability to discuss, deliberate, and write about opposing viewpoints in an insightful and logical manner, to present an opposing side fairly, and to criticize the argument rather than attacking the person.

HIST 3240 includes two formal class debates, wherein students are assigned an argument (based on questions defined in the syllabus), and in small groups they pool their evidence in favor of or against a particular position, come to a consensus about what posture the group will take, and then present their material to the class for further discussion. Debates include: the arguments made in the late 19th century for and against Darwin’s theory of evolution by natural selection; historical arguments for and against medical innovations (such as reproductive technologies, interventional therapies, and genetic diagnostics); historical arguments for and against the funding of theoretical physics that will ultimately yield controversial technologies, such as the atomic bomb.

4. Students will demonstrate their developing intellectual curiosity and a habit of lifelong learning, through choice of research topics, the number and quality of questions asked in class, the application of course concepts or themes to lived experiences or world events, or through other similar means.

HIST 3240 is rich in ways for students to develop intellectual curiosity regarding human connections to the natural world. This outcome is achieved both from the imaginative way in which the course is organized and from the many questions it raises regarding links between scientific knowledge about the world and man’s relationship to that world as it becomes more mechanized and controlled. These questions are among the central controversies of contemporary life. Equally important, students will develop a scientific and medical vocabulary that renders them “literate” in discussions of science in society. Reading current newspaper and magazine articles will not only point them to the places where science is readily discussed in today’s culture, but will allow them to access current debates with a more robust sense for the history behind many of the current discussions about genetics, physics and medicine.

5. Students will demonstrate the potential for participating in and contributing to a democratic society as an informed, engaged, and reflective citizen.

Understanding the basic concepts of the history of science is among the best ways for students to be active and informed citizens in our technologically, medically, and environmentally complex world. HIST 3240 provides students with an historical understanding of science’s place in society, as well as tools to help them grasp essential aspects of this complexity. The implications for democratic citizenship are deep, since efforts to control or shape nature on a large scale have always had important implications for American civic life and democratic policy. An assignment that results in submission of letters to the editor of the New York Times Science section will reinforce the importance of active, civic participation.