

GE CRITERIA APPROVAL FORM

Course Number and Title: CHEM 344/ PHYS 344. Energy and Society

Faculty Member(s) Proposing Course: Philip Hampton, Simone Aloisio, Geoff Dougherty

Indicate which of the following categories would be satisfied by this course by marking an "X" on the appropriate lines.
Courses may be placed in up to two GE categories as appropriate. Upper Division Interdisciplinary GE courses may be placed in two categories plus the UDIGE category.

	A1: Oral Communication
	A2: English Writing
	A3: Critical Thinking
X	B1: Physical Sciences
	B2: Life Sciences
	B3: Mathematics
	B4: Computers and Technology
	C1: Fine Arts
	C2: Literature
	C3: Languages & Cultures
	D: Social Perspectives
	E: Human Psychological & Physiological Perspectives
X	Upper Division Interdisciplinary GE

Lab Included? Yes _____ No X

Please provide a brief explanation of how the proposed course meets each of the criteria for the selected General Education categories.

All Category B courses shall:

- Promote the understanding and appreciation of the methodologies of math or science as investigative tools and the limitations of mathematical or scientific endeavors

This course will examine the chemistry and physics principles behind energy generation and distribution. The course will begin with a discussion of the Scientific Method and how it is applied to energy sources, and the limitations of the Scientific Method. In addition, the strengths and limitations of chemistry and physics methodologies as applied to the development of new energy sources will be examined.

- Present mathematical or scientific knowledge in a historical perspective and the influences of math or science on the development of world civilizations, both past and present

The course will present a historical perspective on the development of various energy sources. The progress of the development of energy sources will be examined and the impact of these developments on civilization will be discussed.

- Apply inductive and deductive reasoning processes and explore fallacies and misconceptions in the mathematical or scientific areas.

The application of deductive and inductive reasoning processes is fundamental to the understanding and development of energy sources. Students in the course will be taught how to reason from experimental data to form conclusions regarding mock energy sources. In addition to presenting examples of good reasoning, students will learn to differentiate good reasoning from fallacies, misconceptions and poor reasoning, for example in the alleged development of a "cold fusion" process.

Category B-1 Physical Sciences—Chemistry, Physics, Geology, and Earth Sciences courses shall:

- Present the principles and concepts of the physical sciences and the physical universe.

The course will include chemistry and physics principles and concepts as applied to energy sources and their impact on society.

In addition to meeting Category A-E criteria as appropriate all Upper Division Interdisciplinary GE courses shall:

- Emphasize interdisciplinarity by integrating content, ideas, and approaches from two or more disciplines

The course will integrate content and ways of knowing from the physical and life sciences. Most of the content will be related to the disciplines of chemistry and physics, but many topics will also provide biology, biochemistry, and geology content. Team-teaching and/or guest lecturers from the Ventura County community will ensure that multiple perspectives are reflected in the course.

- Include substantive written work* consisting of in-class writing as well as outside class writing of revised prose.

As part of the course, students will write essay questions on examinations, and a major paper will be required of all students that will have a first and second draft format, where the first draft will be resubmitted to students for grammar, style, and content corrections.

Consultation:

Geoff Dougherty _____