

GE CRITERIA APPROVAL FORM

Course Number and Title: CHEM 305. Computer Applications in Chemistry

Faculty Member(s) Proposing Course: Prof. Simone Aloisio and Prof. Philip Hampton

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
	B1: Physical Sciences
	B2: Life Sciences
	B3: Mathematics
X	B4: Computers and Technology
	C1: Fine Arts
	C2: Literature
	C3: Languages & Cultures
	D: Social Perspectives
	E: Human Psychological & Physiological Perspectives
	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

The students will apply computer programs to solve chemical problems. The students will also use the technology to present data, including error bars. By performing molecular modeling calculations, the students will gain an appreciation of scientific methodologies as investigative tools. In presenting data, the student will be able to demonstrate, both symbolically and explicitly, the limitations of these endeavors.

- 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

Students will be using computer applications that are "standard" for the discipline for these types of applications. Past methodologies for achieving the same goal will be discussed. Students will examine a wide range of chemical literature that is influencing the development of world civilization.

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

The students will be exposed to the deductive and inductive reasoning process in their exposure to current scientific literature. The students will also apply these processes in determination of molecular structure calculations. In addition to presenting examples of good scientific reasoning, students will learn to differentiate good reasoning from fallacies, misconceptions and poor reasoning.

Category B-4 Computer and Information Technology courses shall:

- Include use of computers or information technology to solve problems as appropriate to the discipline

This course is designed to familiarize the chemistry student with computer applications used in all sub-disciplines of chemistry. The students will be able to apply their acquired skills to a wide variety of scientific problems.

Consultation:

Prof. Simone Aloisio

Prof. Philip Hampton
