GE CRITERIA APPROVAL FORM

Course Number and Title: CHEM 343/ BIOL 343. Forensic Science

Faculty Member(s) Proposing Course: Prof. Philip Hampton, Prof. Simone Aloisio, Prof. Ching-Hua Wang, Prof. Louise Lutze-Mann

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
X	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 __X____ No _____

Please provide a brief explanation of how the proposed course meets <u>each</u> 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 biological and chemical approaches to investigating crime scenes and uncovering evidence. The course will begin with a discussion of the Scientific Method and how it is applied to Forensic Science, and the limitations of the Scientific Method. In addition, the strengths and limitations of biological and chemical methodologies as applied to Forensic Science 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 biological and chemical approaches to Forensic Science. The progress of the field of Forensic Science from Physical Anthopometry and Fingerprinting to Serology and DNA testing 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 Forensic Science. Students in the course will be taught how to reason from experimental data to form conclusions regarding mock crime scenes. In addition to presenting examples of good reasoning in actual cases, students will learn to differentiate good reasoning from fallacies, misconceptions and poor reasoning.

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 Forensic Science.

Category B-2 Life Sciences—Biology courses shall:

- Present the principles and concepts that form the foundation of living systems.

The course will include biology and biochemical principles and concepts as applied to Forensic Science.

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 Life Science (biological and biochemistry), and Physical Science (chemical and biochemistry) perspectives. Team-teaching and/or guest lecturers from the Ventura County Forensic Science Laboratory will ensure that both 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 a minimum of six laboratory reports and several essay questions on examinations. The laboratory reports will be resubmitted to the students with feedback on how the grammar, style, and content of the laboratory reports could be improved; students will resubmit the lab reports with corrections. In addition, 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.