CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

NEW COURSE PROPOSAL

PROGRAM: BIOLOGICAL AND PHYSICAL SCIENCES

1. **Catalog Description of the Course.** *[Include the course prefix, number, full title, and units. Provide a course narrative including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of ___ units); time distribution (Lecture ___ hours, laboratory ___ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]*

   CHEM 100. CHEMISTRY AND SOCIETY (4)
   Three hours of lecture and one three-hour lab per week.
   An introduction to the basic principles of chemistry and a consideration of the benefits and problems arising from applications of chemistry. Discussions of foods and food additives, drugs, plastics and other materials of everyday life, fuel sources, the atmosphere, and fresh water. Lab fee required.
   GenEd: B1

2. **Mode of Instruction.**

	Units	Hours per Unit	Benchmark Enrollment
Lecture	3	1	40
Seminar			
Laboratory	1	3	18/section
Activity			

3. **Justification and Learning Objectives for the Course.** (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) *[Use as much space as necessary]*

   This course presents an introduction to Chemistry and the importance of Chemistry in society and is designed to satisfy the Physical Science and laboratory component requirements in the General Education.

   Students who successfully complete this course will be able to:
   - Outline the development of the field of chemistry from a historical perspective and how chemistry has impacted society
   - Describe the scientific method and how it is used to approach the study of chemicals/ molecules
   - Evaluate the relationship between the structures and function of molecules
   - Explain the basic chemical principles involved in the properties of materials
   - Explain the basic chemical principles involved in observed phenomena
   - Perform simple chemical reactions

4. **Is this a General Education Course** **YES** **NO**
   If Yes, indicate GE category:

A (English Language, Communication, Critical Thinking)	
B (Mathematics & Sciences)	**X**
C (Fine Arts, Literature, Languages & Cultures)	
D (Social Perspectives)	
E (Human Psychological and Physiological Perspectives)	

5. **Course Content in Outline Form.** *[Be as brief as possible, but use as much space as necessary]*

   Air Quality and Atmospheric Chemistry
   Chemistry of the Ozone Layer
   Carbon Dioxide Chemistry and Global Warming
   Energy: Chemistry of Fossil Fuels, Solar Energy, and Nuclear Energy
   Water Quality

Weapons of War: Explosives, Chemical Warfare, and Nuclear Fission/Fusion
Plastics and Polymers
Designing Pharmaceutical Drugs for a New Generation
Chemistry Behind Vitamins and Nutrition

6. References. *[Provide 3 - 5 references on which this course is based and/or support it.]*

C. L. Stanitski (Ed.), *Chemistry in Context: Applying Chemistry to Society*, 3rd Ed., McGraw Hill, 2000.
American Chemical Society, Ed. *Laboratory Manual To Accompany Chemistry In Context: Applying Chemistry To Society*, McGraw Hill, 1999.
K. K. Karukstis, G. R. Van Hecke *Chemistry Connections: The Chemical Basis of Everyday Phenomena*, 2nd Ed., Harcourt, 2003.

7. List Faculty Qualified to Teach This Course.

Dr. Philip Hampton, Dr. Simone Aloisio

8. Frequency.
a. Projected semesters to be offered: Fall __X___ Spring _____ Summer _____

9. New Resources Required.
None.

10. Consultation.
Attach consultation sheet from all program areas, Library, and others (if necessary)

11. If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

_____Philip Hampton_____1/8/03_____
Proposer of Course Date