CALIFORNIA STATE UNIVERSITY

CHANNEL ISLANDS

NEW COURSE PROPOSAL

PROGRAM AREA _____

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.]*

   BIOL 335 THE BIOSPHERE (3)
   Three hours of lecture per week
   The biosphere, the region of the planet where life exists, extends up into the atmosphere as well down into the deepest ocean trenches. This course will examine the origin, workings and human influence on earth's biosphere. Topics include: evolution of life on earth, atmosphere and climate change, earth's resources and human impacts.
   GenEd: B2, upper-division interdisciplinary

2. **Mode of Instruction.**

	Units	**Hours per Unit**	**Benchmark Enrollment**
Lecture	____3____	____1____	_____40___
Seminar	_____	_____	_____
Laboratory	_____	_____	_____
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 will be an elective course for Biology majors and will fulfill the life sciences general education requirement for non-majors. In addition, this course will be required of all students pursuing single-subject matter preparation in Biology.

   Upon completion of this course, students will be able to:
   - Explain how life evolved on the planet
   - Delineate how endosymbiosis can explain the origin of eucaryotic cells
   - Describe the structure and composition of the atmosphere
   - Differentiate between short- and long-term climate change and explain how these changes arise
   - Describe how earth's resources are utilized by humans and the resultant impacts on the environment

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

A (English Language, Communication, Critical Thinking)	
B (Life Sciences)	**B2 and interdisciplinary**
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]*

I. History of Life on Earth
- Conditions on prebiotic earth
- Emergence of life
- The oxygen revolution
- Endosymbiosis and the origin of eucaryotic cells
- The evolution of mitosis and meiosis
- The cambrian explosion

II. Earth's atmosphere: past and present
- Composition and structure of the atmosphere
- Radiation and Climate
- Factors that govern the movement of air
- Climate History of the Earth
- Human Impact and Climate change
- Predicting future climate

III. Impact of humans on the biosphere
- Water, soil, mineral and energy resources
- Renewable and non-renewable resources
- Waste disposal, water and air pollution
- Human population trends and implications

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

Margulis, Lynn and Dolan, Michael. (2002) *Early Life: Evolution on the precambrian earth, 2nd edition*. Jones and Bartlett.

Knoll, Andrew. (2003). *Life on a Young Planet: The first 3 billion years of evolution on earth*. Princeton Univ. Press.

Smil, Vaclav. (2002). *The Earth's Biosphere: evolution, dynamics and change*. MIT Press.

Montgomery, Carla. (2003). *Environmental Geology, 6th* edition. McGraw-Hill.

Seinfeld, John and Pandis, Spyros N. (1997). *Atmospheric Chemistry and Physics: From Air Pollution to Climate Change*. Wiley.

7. List Faculty Qualified to Teach This Course.
Nancy Mozingo, Simone Aloisio, Amy Denton

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

9. New Resources Required. none
a. Computer (data processing), audio visual, broadcasting needs, other equipment
b. Library needs
c. Facility/space needs

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.

_____Nancy Mozingo, Amy Denton and Simone Aloisio_____23 February 2004_____
Proposer of Course Date

Approvals

_____

Program Chair Date

_____

Curriculum Committee Chair Date

_____

Dean Date

California State University Channel Islands

New Course Proposal Consultation Sheet

1. Course Title: _____

_____

2. Program Area: _____

Recommend Approval

Program Area/Unit	**Program/Unit Chair**	**YES**	**NO** (attach objections)	**Date**
Art				
Biology				
Business & Economics				
Education				
English				
History				
Liberal Studies				
Mathematics & CS				
Multiple Programs				
Psychology				
Library				
Information Technology				