CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

NEW COURSE PROPOSAL

PROGRAM AREA _____BIOLOGY_____

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 304 COMPARATIVE ANIMAL PHYSIOLOGY (3)
   Three hours lecture per week
   Prerequisite: BIOL 200 and BIOL 201
   This course will use a comparative approach to examine physiological principles in a variety of vertebrate and invertebrate animals. Topics include homeostasis, respiration, excretion and physiological adaptations to environmental conditions.

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]*

   BIOL 304 is a required course for students earning a Bachelor of Science in Biology and an elective for students earning a Bachelor of Science in Biology with an emphasis in Cell and molecular Biology. This course will be will be of interest to students desiring a well-rounded education in biology as well as pre-professional students.

   Students who successfully complete this course will be able to:
   - Describe metabolic reactions which occur in cells
   - Compare the structure and function of organ systems in a variety of animal phyla
   - Explain how animals adapt to fluctuating environmental conditions
   - Outline the steps involved in transmission of nerve impulses

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

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

homeostatsis
cellular energetics/metabolism
effects of temperature
membrane physiology
sensory physiology

nervous systems
cell movement
support and locomotion
endocrinology
aquatic respiration
aerial respiration
circulation
blood and the immune system
water and solute balance
excretion
digestion

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

Withers, PC. 1992. Comparative Animal Physiology. Harcourt Brace.
Schmidt-Nielsen, K. 1997. Animal Physiology : Adaptation and Environment. Cambridge University Press.
Burggren, WW, French, K, Eckert, R and Randall, DJ. (2002) Eckert Animal Physiology: Mechanisms and Adaptations, 5th edition. WH Freeman and Co.

7. List Faculty Qualified to Teach This Course.

Nancy Mozingo, biology faculty

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

9. New Resources Required.
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_____5 December 2003_____
Proposer of Course Date