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 214. FROM EGG TO ORGANISM (3)

Three hours of lecture per week.

How does a single cell give rise to a complex organism? How are stem cells produced and what are possible uses of stem cell lines? How are clones produced and what are the ethical considerations for cloning human beings? How are test tube babies produced? This course will explore answers to these questions by presenting an overview of developmental biology and then focusing on the impact of biotechnology on humankind. No credit given toward the major in biology. GenEd: B2

2. Mode of Instruction.

	Units	Hours per Unit	Benchmark Enrollment
Lecture	3	1	60_
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 214 is a biology course for non-majors that is designed to introduce students to developmental biology and some of the emerging issues associated with this field such as stem cell research, cloning and reproductive technologies.

Students who successfully complete this course will be able to:

- Outline stages in the developmental of a human being
- Explain the process of cell division in both somatic and germ cells
- Describe the process by which embryonic stem cell lines are produced and their potential uses in curing disease.
- Explain how clones are produced and discuss the ethical consideration for cloning human beings
- Identify and interpret subject appropriate scientific literature

4. Is this a General Education Course <u>YES</u> NO

If Yes, indicate GE category:	
A (English Language, Communication, Critical Thinking)	
B (Life Sciences)	2
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] Early Development and The Fetal-Maternal Relationship Transport of Gametes and Fertilization Cleavage and Implantation The Formation of Germ Layers and Early Derivatives Establishment of the Basic Embryonic Body Plan Placenta and Extraembryonic Membranes Developmental Disorders -- Causes, Mechanisms, and Patterns Development of the Body Systems Reproductive technologies Embryonic stem cell technologies Cloning

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

Slack, J. *Essential Developmental Biology*. (2001). Blackwell Science Ltd.
Bier, E. The Coiled Spring: How Life Begins. (2000). Cold Spring Harbor Laboratory Press.
Wolpert, L. The Triumph of the Embryo. (1991). Oxford University Press
Carlson, B.M. Human Embryology and Developmental Biology, 2nd Edition. (1999). Mosby.
Gilbert, S.F. (2000). *Developmental Biology*, 6th edition. Sinauer Assoc., Inc.

7. List Faculty Qualified to Teach This Course.

Nancy Mozingo, Louise Lutze-Mann

8. Frequency.

a. Projected semesters to be offered: Fall _____ Spring ___x_ 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_	
Proposer of Course	

6 January 2003_____ Date