

NEW COURSE PROPOSAL**Courses must be submitted by November 3, 2008, for priority catalog review.**DATE (*Change if modified and redate file with current date*)

10.22.08 REV 11.17.08

PROGRAM AREA(S)

BIOLOGY

1. Course Information. *[Follow accepted catalog format.]***Prefix(es)** (Add additional prefixes if cross-listed) and **Course No.** **BIOL512****Title:** **ADVANCED TOPICS IN REGENERATIVE MEDICINE** **Units:** **1**☒ Prerequisites **BIOL511**☐ Corequisites☒ Consent of Instructor Required for Enrollment

Catalog Description (Do not use any symbols): **A seminar series involving** presentations and discussions of current knowledge of embryonic and adult stem cells and factors that regulate their growth and development. Emphasizes how advances in cell and molecular biology and tissue engineering can be applied to the use of stem cells in regenerative medicine. Discusses social and ethical impacts of stem cell technology.

Grading Scheme:☒ A-F Grades☐ Credit/No Credit☐ Optional (Student Choice)**Repeatability:**☐ Repeatable for a maximum of units

Total Completions Allowed

☐ Multiple Enrollment in Same Semester**Course Level Information:**☐ Undergraduate☐ Post-Baccalaureate/Credential☒ Graduate**Mode of Instruction/Components** (*Hours per Unit are defaulted*).

	Units	Hours per Unit	Benchmark Enrollment	Graded Component	CS & HEGIS # (Filled in by the Dean)
Lecture				<input type="checkbox"/>	
Seminar	1	1	15	<input checked="" type="checkbox"/>	
Laboratory				<input type="checkbox"/>	
Activity				<input type="checkbox"/>	
Field Studies				<input type="checkbox"/>	
Indep Study				<input type="checkbox"/>	
Other Blank				<input type="checkbox"/>	

Leave the following hours per week areas blank. The hours per week will be filled out for you.

1 hours **lecture** per week

hours blank per week

2. Course Attributes:

☐ **General Education Categories:** All courses with GE category notations (including deletions) must be submitted to the GE website: <http://summit.csuci.edu/geapproval>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

A (English Language, Communication, Critical Thinking)☐ A-1 Oral Communication☐ A-2 English Writing☐ A-3 Critical Thinking**B (Mathematics, Sciences & Technology)**☐ B-1 Physical Sciences☐ B-2 Life Sciences – Biology☐ B-3 Mathematics – Mathematics and Applications☐ B-4 Computers and Information Technology**C (Fine Arts, Literature, Languages & Cultures)**☐ C-1 Art☐ C-2 Literature Courses

- ☐ C-3a Language
- ☐ C-3b Multicultural
- ☐ **D (Social Perspectives)**
- ☐ **E (Human Psychological and Physiological Perspectives)**
- ☐ **UDIGE/INTD Interdisciplinary**
- ☐ **Meets University Writing Requirement**
- ☐ **Meets University Language Requirement**

☐ American Institutions, Title V Section 40404: ☐ Government ☐ US Constitution ☐ US History
Refer to website, Exec Order 405, for more information: <http://senate.csuci.edu/comm/curriculum/resources.htm>
☐ Service Learning Course (Approval from the Center for Community Engagement must be received before you can request this course attribute).

3. Justification and Requirements for the Course. (Make a brief statement to justify the need for the course)

A. Justification: Initiatives to support and advance stem cell research and regenerative medicine have led to the establishment of several stem cell training centers in the nation with an aim to train scientists for acquiring skills in stem cell techniques. BIOL512 is a required course for the MS degree in Biotechnology & Bioinformatics with an emphasis in Stem Cell Technology and Lab Management. It is going to be offered through Extended Education as part of a self-supported program. This course will expose students to a wide variety of topics in the fields of stem cell technology and regenerative medicine in the form of seminar presentations made by experts in the field of stem cell technology. Considering the demand for trained stem cell biologists, it is imperative that students be made aware of the latest advances in these fields so as to keep abreast of ensuing developments. Speakers in this seminar course will present overviews of their interests and discuss how these integrate within the greater picture of stem cell technology and regenerative medicine and ethical issues related to stem cell technology.

B. Degree Requirement: ☒ Requirement for the Major/Minor **Note: Submit Program Modification if this course changes your program.**
☐ Elective for the Major/Minor

4. Learning Objectives. (List in numerical order)

Upon completion of the course, the student will be able to:

1. Discuss new and relevant advances in stem cell biology.
2. Develop insights into the latest developments in the field of regenerative medicine.
3. Communicate with senior investigators involved in all areas of stem cell research ranging from fundamental biological and medical principles to novel applications in biotechnology and human disease.
4. Formulate cogent questions related to stem cell research.
5. Explore current literature and ethical issues in the field of stem cell technology.

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

The course will involve seminars presented by speakers who are expert in the following fields of stem cell technology and regenerative medicine:

1. Tissue engineering
2. Stem cells and cancer
3. Stem cells and therapeutics
4. Biomaterials as scaffolds
5. Germline specification and maintenance
6. Social impacts of the use of stem cells
7. Ethical issues behind regenerative medicine

Students are expected to actively participate in the seminars via group discussions and peer interactions

Does this course content overlap with a course offered in your academic program? YES ☐ NO ☒
If YES, what course(s) and provide a justification of the overlap.

Does this course content overlap a course offered in another academic area? YES ☐ NO ☒
If YES, what course(s) and provide a justification of the overlap.

Overlapping courses require Chairs' signatures.

6. Cross-listed Courses (Please note each prefix in item No. 1)

A. List Cross-listed Courses (Signature of Academic Chair(s) of the other academic area(s) is required).

List each cross-listed prefix for the course: [redacted]

B. Program responsible for staffing: **BIOLOGY**

7. References. [Provide 3 - 5 references]

1. **Journal of Stem Cells and Regenerative Medicine**

2. Cell Transplantation: The Regenerative Medicine Journal. A Biennial Analysis of Publications

3. Stem cells (Journal)

8. Tenure Track Faculty Qualified to Teach This Course.

Biology faculty

9. Requested Effective Date:

First semester offered: **Fall 2009**

10. New Resources Requested. YES ☐ NO ☒

If YES, list the resources needed.

A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)

[redacted]

B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)

[redacted]

C. Facility/Space/Transportation Needs

[redacted]

D. Lab Fee Requested (please refer to Dean's Office for additional processing) ☐ Yes ☐ No

E. Other

[redacted]

11. Will this new course alter any degree, credential, certificate, or minor in your program? YES ☒ NO ☐

If, YES attach a program update or program modification form for all programs affected.

Priority deadline for New Minors and Programs: **October 6, 2008** of preceding year.

Priority deadline for Course Proposals and Modifications: **November 3, 2008**, of preceding year.

Last day to submit forms to be considered during the current academic year: **April 15th.**

Nitika Parmar

10/7/2008

Proposer of Course (Type in name. Signatures will be collected after Curriculum approval)

Date

Approval Sheet

Program/Course:

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
General Education Chair		
	Signature	Date
Center for International Affairs Director		
	Signature	Date
Center for Integrative Studies Director		
	Signature	Date
Center for Multicultural Engagement Director		
	Signature	Date
Center for Civic Engagement Director		
	Signature	Date
Curriculum Chair		
	Signature	Date
Dean of Faculty		
	Signature	Date