CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

Courses must be submitted by November 3, 2008, to make the next catalog (2009-2010) production

DATE (CHANGE DATE EACH TIME REVISED): 2-9-09; REV 12.7.09

PROGRAM AREA(S) : BIOLOGY

Directions: All of sections of this form must be completed for course modifications. All documents are stand alone sources of course information.

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1. Course Information.

[Follow accepted catalog format.] ***(Add additional prefixes i f cross-listed)***

OLD

Prefix BIOL Course# 212 Title Neurobiology and Cognitive Science Units (3)
3 hours lecture per week
hours blank per week

x Prerequisites: BIOL 100 or BIOL 200 or BIOL 201 recommended
Consent of Instructor Required for Enrollment
Corequisites:

Catalog Description (Do not use any symbols): Principles of brain organization and function underlying behavior. Topics include neuroanatomy and physiology of language, vision, sexual behavior, memory and abnormal behavior.

General Education Categories B2, E
Lab Fee Requested

Course Level:
x Undergraduate
Post-bac/Credential
Graduate

Graded
CR/NC
x A - F
Optional (Student's choice)

Repeatable for up to units
Total Completions
Multiple Enrollment in same semester

NEW

Prefix BIOL Course# 212 Title Neurobiology and Cognitive Science Units (3)
3 hours lecture per week
hours blank per week

Prerequisites:
Consent of Instructor Required for Enrollment
Corequisites:

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2. Mode of Instruction (Hours per Unit are defaulted) **Hegis Code(s)**_____
(Provided by the Dean)

Existing

	Units	Hours Per Unit	Benchmark Enrollment	Graded
Lecture	3	1	20	
Seminar		1		
Lab		3		
Activity		2		
Field Studies				
Indep Study				
Other blank				

Proposed

	Units	Hours Per Unit	Benchmark Enrollment	Graded	CS No. (filled out by Dean)
Lecture	3	1	60	x	
Seminar		1			
Lab		3			
Activity		2			
Field Studies					
Indep Study					
Other blank					

3. 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
- x 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)

x **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).

4. Justification and Requirements for the Course. *[Make a brief statement to justify the need for the course]*

OLD	**NEW**
BIOL, PSY 212 is an elective course in biology and psychology and serves as a prerequisite for many advanced courses in psychology including PSY 300/301, 310,312, 313, 314, and 450. This course will explore the function of the nervous system with an emphasis on brain function.	BIOL, PSY 212 is an elective course in biology and psychology and serves as a prerequisite for advanced courses in psychology including PSY 300 and 450. This course will explore the function of the nervous system with an emphasis on brain function.
Requirement for the Major/Minor	Requirement for the Major/Minor
x Elective for the Major/Minor	x Elective for the Major/Minor
Free Elective	Free Elective

Submit Program Modification if this course changes your program.

5. Learning Objectives. (List in numerical order)

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

OLD	Upon completion of the course, the student will be able to: **NEW**
Students who successfully complete this course will be able to: • Describe the structure and function of cells that comprise the nervous system • Explain chemical and electrical signaling in the nervous system • Outline the sensory and motor systems • Explain brain development and complex brain functions • Generate a hypothesis from a set of observations and then suggest experiments to test the hypothesis	Students who successfully complete this course will be able to: • Describe the structure and function of cells that comprise the nervous system • Explain chemical and electrical signaling in the nervous system • Outline the sensory and motor systems • Explain brain development and complex brain functions • Generate a hypothesis from a set of observations and then suggest experiments to test the hypothesis

6. Course Content in Outline Form. (Be as brief as possible, but use as much space as necessary)

OLD	**NEW**

Introduction to Neuroscience.
Cellular and Molecular Neuroscience.
Nervous System Development
Sensory Systems.
Motor Systems
Regulatory Systems
Behavioral and Cognitive Neuroscience

Introduction to Neuroscience.
Cellular and Molecular Neuroscience.
Nervous System Development
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Behavioral and Cognitive Neuroscience

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

Overlapping courses require Chairs' signatures.

7. 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).
B. List each cross-listed prefix for the course: PSY
C. Program responsible for staffing: Biology/Psychology

8. References. *[Provide 3-5 references]*

OLD Bear, M., Connors, B. and Paradiso, M. Neuroscience: Exploring the Brain, 2nd edition. (2000). Lippincott Williams & Wilkins.
Zigmond, M.J., Bloom, F.E., Landis, S.C., Roberts, J.L. and Squire, L.R. Fundamental Neuroscience. (1998). Academic Press.
Nicholls, J.G., Martin, R.A., Wallace, B.G. and Fuchs, P.A. From Neuron to Brain, 4th edition. (2001). Sinauer.
Sobel, C. Cognitive Science, An Interdisciplinary Approach. (2001). McGraw-Hill.

NEW Bear, M., Connors, B. and Paradiso, M. Neuroscience: Exploring the Brain, 2nd edition. (2000). Lippincott Williams & Wilkins.
Zigmond, M.J., Bloom, F.E., Landis, S.C., Roberts, J.L. and Squire, L.R. Fundamental Neuroscience. (1998). Academic Press.
Nicholls, J.G., Martin, R.A., Wallace, B.G. and Fuchs, P.A. From Neuron to Brain, 4th edition. (2001). Sinauer.
Sobel, C. Cognitive Science, An Interdisciplinary Approach. (2001). McGraw-Hill.
"Basics of Biopsychology", by John P.J. Pinel (2007), Pearson Ed.
"Foundations of Physiological Psychology" by Neil R. Carlson, 7th ed. (2008), Pearson Ed.

9. Tenure Track Faculty qualified to teach this course.
Biology/Psychology faculty

10. Requested Effective Date or First Semester offered: S10

11. New Resource Requested: Yes No x
If YES, list the resources needed.

A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)
B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)
C. Facility/Space/Transportation Needs:
D. Lab Fee Requested: Yes No x (Refer to the Dean's Office for additional processing)
E. Other.

12. **Indicate Changes and Justification for Each.** *[Check all that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]*

Course title	Course Content
Prefix/suffix	Course Learning Objectives
Course number	x References
Units	GE
Staffing formula and enrollment limits	Other
x Prerequisites/Corequisites	Reactivate Course
Catalog description	
x Mode of Instruction	

Justification:
We would like to delete the language regarding recommended prerequisite courses because they are not necessary. We increased the enrollment cap due to the GE nature of the course. We added several more recent references.

13. **Will this course modification alter any degree, credential, certificate, or minor in your program? Yes** **No** x
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.
Last day to submit forms to be considered during the current academic year: April 15th.

GE CRITERIA APPROVAL FORM

Course Number and Title: Biol 212. Neurobiology and cognitive science (3)

Faculty Member(s) Proposing Course: Nancy Mozingo

Indicate which of the following categories would be satisfied by this course by marking an "X" on the appropriate lines.
Courses may be placed in up to two GE categories as appropriate. Upper Division Interdisciplinary GE courses may be placed in two categories plus the UDIGE category.

	A1: Oral Communication
	A2: English Writing
	A3: Critical Thinking
	B1: Physical Sciences
X	B2: Life Sciences
	B3: Mathematics
	B4: Computers and Technology
	C1: Fine Arts
	C2: Literature
	C3: Languages & Cultures
	D: Social Perspectives
X	E: Human Psychological & Physiological Perspectives
	Upper Division Interdisciplinary GE

Lab Included? Yes _____ No _____X_

Please provide a brief explanation of how the proposed course meets <u>each</u> of the criteria for the selected General Education categories.

This course will explore the function of the nervous system with an emphasis on brain function. Topic include principles of brain organization, neuroanatomy, behavior, physiology of language, vision and memory. In this course, students will be introduced to scientific methods and reasoning which will enhance their ability to think clearly and logically. Students will gain experience in finding and critically examining information by reading scientific literature. Students will be introduced to a broad range of topics in neurobiology and cognitive science which will impart a basic understanding of human brain function and behavior. Thus, this course meets the criteria for categories B2 and E.

Students who successfully complete this course will be able to:

- Describe the structure and function of cells that comprise the nervous system
- Explain chemical and electrical signaling in the nervous system
- Outline the sensory and motor systems
- Explain brain development and complex brain functions
- Explain how neural function influences moods, memories, language and behavior
- Generate a hypothesis from a set of observations and then suggest experiments to test the hypothesis

Ching-Hua Wang | 2-10-09

Proposer(s) of Course Modification | Date

Type in name. Signatures will be collected after Curriculum approval.

Approval Sheet

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 Intl Affairs Director		
	Signature	Date
Center for Integrative Studies Director		
	Signature	Date
Center for Multicultural Engagement Director		
	Signature	Date
Center for Civic Engagement and Service Learning Director		
	Signature	Date
Curriculum Chair		
	Signature	Date
Dean of Faculty		
	Signature	Date