General Education Course Proposal

Proposed Course: ~~Psych.~~ N SCI (Prefix) 131 (No.) Biological Bases of Neurological Disorders (Title) **Units** 4

Department: ~~Psychology~~ Natural Sciences **School:** Natural Sciences

GE Category (Indicate one category only):

Foundation: A1___; A2___; A3___; B4___
Breadth: B1___; B2___; C1___; C2___; D___; E___
Integration: B_X_; C___; D___; International/Multicultural___

Existing Course___; Revised Course___; New Course_X_
Course Included in Current GE Program____
New courses require the Undergraduate Course Proposal form in addition to this form.
Revised courses require the Undergraduate Course Change Request in addition to this form.

Proposed catalog description: Limit course description to 40 words using succinct phrases. Include prerequisites, limitations, lecture/lab hours. Indicate former course number, e.g., (Former Biol 105)

Prerequisites: General Education Quantitative Reasoning and Area B Breadth Requirements. Biological mechanisms which underlie various neurological disorders. Nervous system structure and function will be presented as a basis for understanding pathology. Topics include multiple sclerosis, Alzheimer's Disease, Parkinson's disease, language disorders, depression, obsessive-compulsive disorder, and schizophrenia.

Enrollment limit per section: 30

Expected number of sections per semester – Year 1 1 **; Year 3** 1

Attachments:

1. A statement presenting the ways in which this course meets the Specifications provided in the appropriate section of the General Education Policy as well as in the Policies for Inclusion and Evaluation of General Education Courses.
2. A statement of elements common to all sections of this course, identifying content, objectives, required student activities, grading policy, representative texts, and an approximate schedule for the course. Required student activities include such things as papers, research projects, homework, laboratory and/or studio performance, recitations, participation, attendance, and exams.
3. A typical syllabus for a particular offering of the course.
4. Any special cost factors associated with this course.

Approval for Inclusion in General Education

Department Chair — 9/22/98 Date
School Dean — 9/28/98 Date
Associate Provost — 12/22/98 Date
School Curriculum Committee — 9/22/98 Date
General Education Subcommittee — 12/22/98 Date

Forward Original and TWELVE copies to:
Associate Provost for Academic Affairs, M/S 54

2/5/98

September, 1998
Departments of Biology and Psychology

ATTACHMENT NO 2 General Syllabus

Proposed Course: Biology 131/Psychology 131 Biological Bases of Neurological Disorders

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Psychology 131 Biological Bases of Neurological Disorders
4 Units, no prerequisite

Catalog description: Biological mechanisms which underlie various neurological disorders. Nervous system structure and function will be presented as a basis for understanding pathology. Topics include multiple sclerosis, Alzheimer's Disease,. Parkinson's disease, language disorders, depression, obsessive-compulsive disorder, and schizophrenia.

General Education: This course meets the General Education requirement for upper division, INTEGRATIVE, Area B.

Instructor:	Name
Office:	Instructor's office
Office Hours:	Instructor's office hours (minimum of five per week)
Phone/E-mail:	Instructor's office phone/voice mail number; e-mail address
Dept. Office:	(Psychology): Psychology Human Services, Room 234; department hours: 0800-1700. (Biology): Science, Room 106, department hours: 0800-1200;1300-1700.
Dept. Phones:	Psychology 278-2691; Biology 278-2001.
Textbooks:	The following textbook(s)/primary reference sources/software are required/recommended for the course; they can be purchased at the Kennel Bookstore. Author(s)/editor(s). Title, publisher
Fees:	There are no fees attached to this course.

Course Goals:

1. To promote scholarship and disciplined/critical thinking.
2. To promote a more thorough appreciation and understanding of science and scientific methodology
3. To provide an opportunity to read primary resource material and to further hone writing skills by writing about the ideas, concepts, theories and empirical data contained in this reading material.
4. To provide the opportunity to discuss course material with other students and the instructor.
5. To provide the occasion to utilize and integrate information obtained in foundational physical science, life science, and quantitative reasoning courses into a more complete whole in the context of studying the biological bases of neurological disorders.
6. To present the current status of our understanding regarding the biological bases of selected neurological disorders.

Course Topics:

(Topic 1) Neurons and Neuronal Processes (1+ wks.)
Topic 1 includes minimally all of the following:
- a) nerve cells/glial cells
- b) resting membrane potential
- c) nerve impulse/propagation

(Topic 2) Synaptic Transmission (1+ wks.)
Topic 2 includes minimally all of the following:
- a) structure of the synapse/receptors
- b) steps in synaptic transmission
- c) neurotransmitter candidates

(Topic 3) Structure of the Nervous System (2+ wks.)
Topic 3 includes minimally all of the following:
- a) peripheral somatic nervous system
- b) peripheral autonomic nervous sytem
- c) brain stem
- d) basal ganglia and limbic system
- e) cerebral cortex

(Topic 4) Sensory Systems (1+ wks.)
Topic 4 includes minimally all of the following:
- a) coding in sensory systems
- b) visual, auditory and somatic systems

(Topic 5) Research Methods (1+ wks.)
Topic 5 includes minimally all of the following:
a) electroencephalography
b) structural imaging
c) functional imaging

(Topic 6) Neurological Disorders (2+ wks.)
Topic 6 includes minimally all of the following:
a) seizure disorders
b) Alzheimer's disease
c) multiple sclerosis

(Topic 7) Motor Disorders (2 wks.)
Topic 7 includes minimally all of the following:
a) Parkinson's disease
b) Huntington's disease
c) apraxia
d) myasthenia gravis

(Topic 8) Language Disorders (2 wks.)
Topic 8 includes minimally all of the following:
a) Broca's aphasia
b) Wernicke's aphasia
c) alexia and dyslexia

(Topic 9) Mental Disorders (2+ wks.)
Topic 9 includes minimally all of the following:
a) schizophrenia
b) unipolar and bipolar depression
c) obsessive-compulsive disorder
d) addiction

The order and emphasis in coverage of these topics may vary contingent upon the specific instrctor for the course and the texbook used.

TABLE RELATING COMMON CONTENT TOPIC AREAS

TO GENERAL EDUCATION AREA B SPECIFICATIONS

GE Specifications For Area B	Common content topics covered in this course	Total % time
Instructions in the fundamental principles and methods of the biological systems being studied	Topics 1-5	35
...and the development & testing of hypothesis	Topics 1-9	50-70
Instruction pertaining to...a linkage among the biological sciences to further the understanding of human behavior	Topics 6-9	60

Assignments:

1. Homework/classwork. Students are expected to keep up with the assigned reading and turn in their essays on the due date.

2. Exams. Exams are designed to assess you understanding of the material.

3. Papers. The general education policy states that each upper division GE course must have a 4,000 word writing requirement. In order to fulfill this requirement essays on topics related to the biological bases of neurological disorders will be assigned.

4. Final Exam: Day, date, time, place

Course Calendar: Approximate dates for: topics to be covered, reading assignments, exams, final exam and completed essays.

Criteria for evaluating student work: Each syllabus will contain the specific criteria which will be used in evaluating the student and in assigning a letter grade.

Eligibility for a passing grade: Each syllabus will contain a statement of the necessary conditions for passing the course.

Grades: Each syllabus will contain a grading policy which articulates all course requirements, the points awarded for the requirements and the explicit number of point needed to earn a particular letter grade.

General Information:

1. Attendance policy

2. Missed exams, make-up exams and work, late paper policy.

3. Cheating and plagiarism. Cheating is the practice of fraudulent or deceptive acts for the purpose of improving a grade or obtaining course credit. Plagiarism is a specific form of cheating which consists of the misuse of published or unpublished works of another by representing the material as one's own work. The consequences of cheating or plagiarism according to CSUF Faculty Handbook, pp. 87-90, Section 41301: Title 50: Executive Order No. 158, may lead to a student being expelled, suspended, place on probation or given an F for the course in which a memorandum explaining the offense will be placed in the student's permanent file.

4. Student Disabilities. Students with disabilities who have registered with Disabled Student Services will be accommodated according to their specific needs.

September, 1998
Departments of Biology and
Psychology

ATTACHMENT NO. 3: Ideal Syllabus

Proposed Course: Biology 131/Psychology 131 Biological Bases of Neurological Disorders

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Biology 131
Psychology 131
Biological Bases of Neurological Disorders
Course Syllabus (4 units)
M-Th. 0800-0900, SR 6, Room No. 1
Spring, 1998

Catalog Description: Biological mechanisms which underlie various neurological disorders. Nervous system structure and function will be presented as a basis for understanding pathology. Topics include multiple sclerosis, Alzheimer's Disease, Parkinson's Disease, language disorders, depression, obsessive-compulsive disorder, and schizophrenia.

General Description: The course is designed to provide you with an understanding of the biological bases of various neurological disorders. Nervous system structure and function will be presented as a basis for understanding pathology. Topics include multiple sclerosis, Alzheimer's disease, Parkinson's disease, language disorders, depression, obsessive-compulsive disorder, and schizophrenia.

Instructor: Dr. Thomas Breen
Office: Psychology Human Services (PHS) 245
Office Hours: M W F 0900-1000; W 1300-1500
Phone/e-mail 278-2855/tomb@csufresno.edu
Dept. Office: Psychology Human Services Room 234; department hours: 0800-1200; 1300-1700
Dept. Phone: 278-2691

Instructor: Dr. Lenore Yousef
Office: Science 314A
Office Hours: M & F 1210-1300; T 1310-1400, 1635-1725; Th. 1635-1725
Phone/e-mail 278-5264/lenorey@csufresno.edu
Dept. Office: Science 106; department hours: 0800-1200; 1300-1700.
Dept. Phone: 278-2001

Goals and Objectives

1. To promote scholarship and disciplined/critical thinking
2. To promote a more thorough appreciation and understanding of science and scientific methodology.
3. To provide an opportunity to read primary resource material and to further hone writing skills by writing about the ideas, concepts, theories and empirical data contained in this reading material.
4. To provide the opportunity to discuss course material with other students and the instructor.
5. To provide the occasion to utilize and integrate information obtained in foundational physical science, life science, and quantitative reasoning courses into a more complete whole in the context studying the biological bases of neurological disorders.
6. To present the current status of our understanding regarding the biological bases of selected neurological disorders.

Texts:

Fitzgerald, M.J.T. (1992). Neuroanatomy (2nd Ed.). London: Bailliere Tindal.

Selected primary source articles from Science, Nature, Nature Neuroscience, Scientific American and others.

Course Breakdown:

Writing Assignments(10)	50%	1000 pts.
2 Exams (12.5% each)	25%	500 pts.
Final Exam	25%	500 pts.
		2000 pts.

Grading Criteria:

A - Complete all writing assignments and earn 1800 or more points.

B - Complete all writing assignments and earn 1600-1799 points.

C - Complete all writing assignments and earn 1400-1599 points.

D - Complete all writing assignments and earn 1200-1399 points.

F - Failure to complete all writing assignments and/or earn 1200 or more points.

Nature of Exams:

Examinations cover textbook, assigned readings and lecture material. The exams will be identification and short answer in nature.

Nature of Final Exam:

The final examination will be comprehensive and will be essay in nature. A list of essay questions which require integration of course material will be provided the student prior to the final exam period; during the final examination period, the student will be asked to write on several of these essays as selected by the instructor.

Make-Up Exams:

Students will be allowed to make-up a maximum of one(1) missed exam. A legitimate, verified excuse (as determined by the instructor) must be provided in order to be eligible for taking a make-up exam. Make-up exams will be essay in nature.

Writing Assignments:

Ten (10) essays of one and one-half pages each written on topics relevant to the biological bases of neurological, motor, language and mental disorders will constitute the writing requirement for the course. The topics for the essays will be provided by the instructor. The articles and other reference sources upon which the essays will be based will be placed on reserve in the library. Fifty percent of the topics will be instructor-selected; the other fifty percent will be student-selected. Points for the essay will be awarded based upon content, organization, clarity of thought, continuity, cohesiveness and correct grammatical form. Failure to turn in the completed the written assignments on the designated due date will result in a loss of points awarded the essay.

Learning Through Discussion: On designated days the class will break-up into small groups for a discussion of questions generated from specific reading material. The group discuss process is designed to enhance the understanding of the material and to facilitate writing assignments.

Plagiarism and Cheating: Cheating is the practice of fraudulent or deceptive acts for the purpose of improving a grade or obtaining course credit. Plagiarism is a specific form of cheating which consists of the misuse of published and or unpublished works of another by representing the material as one's own work. Cheating and plagiarism will not be tolerated.

Student Disabilities: Students with disabilities who have registered with Disabled Student Services will be accommodated according to their specific needs.

LECTURE TOPICS AND EXAM SCHEDULE

Date		Topic
January	26	Neurons and Neuronal Processes (NNP)
	27	NNP: nerve cells/glial cells
	28	NNP: resting membrane potential
	29	NNP: nerve impulse/propagation
February	2.	Synaptic Transmission and neurotransmitter systems (STNS)
	3	STNS: structure of synapse/receptors
	4	STNS: steps in synaptic transmission
	5	STNS: neurotransmitter candidates
	9	Structure of the Nervous System (SNS)
	10	SNS: peripheral somatic nervous system
	11	SNS: peripheral somatic nervous system
	12	SNS: peripheral autonomic nervous system
	16	**Presidents' Day - No Class**
	17	SNS: peripheral autonomic nervous system
	18	SNS: brain stem
	19	SNS: basal ganglia and limbic system
	23	SNS: cerebral cortex
	24	Sensory Systems (SS)

	25	SS: coding in sensory systems
	26	SS: visual, auditory and somatic systems
March	2	Research Methods (RM)
	3	RM: electroencephalography
	4	RM: structural imaging
	5	RM: functional imaging
	9	**Examination I**
	10	Neurological Disorders (ND)
	11	ND: seizure disorders
	12	ND: seizure disorders
	16	ND: Alzheimer's disease
	17	ND: Alzheimer's disease
	18	ND: Alzheimer's's disease
	19	ND: multiple sclerosis
	23	ND: multiple sclerosis
	24	Motor Disorders (MD)
	25	MD: Parkinson's disease
	26	MD: Parkinson's disease
	30	MD: Huntington's disease
	31	MD: Huntington's disease
April	1	MD: apraxia
	2	MD: apraxia
	6-10	**Spring Recess**
	13	MD: myasthenia gravis
	14	Language Disorders (LD)
	15	LD: Broca's aphasia
	16	LD: Broca's aphasia
	20	LD: Wernicke's aphasia
	21	LD: Wernicke's aphasia
	22	LD: alexia and dyslexia
	23	LD: alexia and dyslexia
	27	**Examination II**
	28	Mental Disorders (MD)
	29	MD: schizophrenia
	30	MD: schizophrenia
May	4	MD: schizophrenia
	5	MD: unipolar and bipolar depression
	6	MD: unipolar and bipolar depression
	7	MD: obsessive-compulsive disorder
	10	MD: obsessive-compulsive disorder
	11	MD: addiction
	13	MD: addiction
	18	**Final Examination: 0845-1045**

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56 lectures

Cheating and Plagiarism: Cheating is the practice of fraudulent or deceptive acts for the purpose of improving a grade or obtaining course credit. Plagiarism is a specific form of cheating which consists of the misuse of published and or unpublished works of another by representing the material as one's own work. The consequences of cheating or plagiarism, as spelled out in the CSUF Faculty Handbook are serious. Cheating and plagiarism will not be tolerated in this class.