Cerro Coso College

Course Outline of Record Report

10/07/2021

PSYCC220 : Physiological Psychology

General Information

Author:	-
Course Code (CB01) :	PSYCC220
Course Title (CB02) :	Physiological Psychology
Department:	Social Science
Proposal Start:	Fall 2013
TOP Code (CB03) :	(2001.00) Psychology, General
SAM Code (CB09) :	Non-occupational
Distance Education Approved:	Yes
Course Control Number (CB00) :	CCC000547264
Curriculum Committee Approval Date:	10/02/2015
Board of Trustees Approval Date:	11/03/2015
External Review Approval Date:	12/03/2015
Course Description:	This course introduces the scientific study of the biological bases of behavior and its fundamental role in the neurosciences. Physiological, hormonal, and neurochemical mechanisms, and brain-behavior relationships underlying the psychological phenomena of sensation, perception, regulatory processes, emotion, learning, memory, and psychological disorders are addressed. The course also notes historical scientific contributions and current research principles for studying brain-behavior relationships and mental processes. Ethical standards for human and animal research are discussed in the context of both invasive and non-invasive experimental research.
Submission Type:	New Course
Author:	No value

Faculty Minimum Qualifications

Master Discipline Preferred:	• Psychology
Alternate Master Discipline Preferred:	No value
Bachelors or Associates Discipline Preferred:	No value
Additional Bachelors or Associates Discipline Preferred:	No value

Course Development Options

Basic Skills Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- Letter Grade Methods
- Pass/No Pass

☐ Allow Students to Gain Credit by Exam/Challenge

Allowed Number of Retakes

0

Course Prior To College Level (CB21)

Not applicable

Exam/Challenge	0	Not applicable.

Rationale For Credit By Exam/Challenge

No value

Retake Policy Description

Type:|Non-Repeatable Credit

☑ Allow Students To Audit Course

Course Support Course Status (CB26)

No value

Associated Programs

☑ Course is part of a program (CB24)

Associated Program	Award Type	Active
CC Liberal Arts: Social & Behavioral Sciences	A.A. Degree Major	Summer 2018 to Fall 2020
CC Psychology for Transfer	A.A. Degree for Transfer	Spring 2018
CSU General Education (CSU GE Breadth)	Certificate of Achievement	Fall 2020
Intersegmental General Education Transfer Curriculum Certificate of Achievement	Certificate of Achievement	Fall 2020
Liberal Arts: Social & Behavioral Sciences Associate in Arts Degree	A.A. Degree Major	Fall 2020
CSU General Education (CSU GE Breadth) (In Development)	Certificate of Achievement	Fall 2021
Intersegmental General Education Transfer Curriculum Certificate of Achievement (In Development)	Certificate of Achievement	Fall 2021
Liberal Arts: Social & Behavioral Sciences Associate in Arts Degree (In Development)	A.A. Degree Major	Spring 2022

Transferability & Gen. Ed. Options

Course General Education Status (CB25)

No value

Transferability	Transferability Status
Transferable to both UC and CSU	Approved

Cerro Coso General Education Requirements	Categories	Status	Approval Date	Comparable Course
Area 2.1	Social & Behavioral Sciences Social	Approved	No value	No Comparable Course defined.

CSU General Education Certification	Categories	Status	Approval Date	Comparable Course
Area D.9	Social Sciences Psychology	Approved	No value	No Comparable Course defined.

Intersegmental General Education Transfer Curriculum	Categories	Status	Approval Date	Comparable Course
Area 4.I	Social and Behavioral Sciences Psychology	Approved	No value	No Comparable Course defined.

Units and Hours:

Summary

Minimum Credit Units (CB07)	3
Maximum Credit Units (CB06)	3
Total Course In-Class (Contact) Hours	54
Total Course Out-of-Class Hours	108
Total Student Learning Hours	162
Faculty Load	0

Credit / Non-Credit Options

Course Credit Status (CB04)	Course Non Credit Category (CB22)	Non-Credit Characteristic
Credit - Degree Applicable	Credit Course.	No Value

Course Classification Status (CB11)	Funding Agency Category (CB23)	
Credit Course.	Not Applicable.	☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

Weekly Student Hours

Course Student Hours

In Class	Out of Classs	
Lecture Hours	3	6
Laboratory Hours	0	0
Activity Hours	0	0

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	0
Laboratory	0
Activity	0
Total	54
Course Out-of-Class Hours	
Lecture	0
Laboratory	0
Activity	0
Total	108

Time Commitment Notes for Students

No value

Faculty Load

Extra Duties: 0

Faculty Load: 0

Units and Hours: - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Prerequisite

PSYCC101H - General Psychology : Honors

Required by Four-Year College

Student may be enrolled in **either** Psyc 101 **OR** Psyc 101H

AND

Prerequisite

PSYCC101 - General Psychology

Required by Four-Year College
Student may be enrolled in **either** Psyc 101 **OR** Psyc 101H

AND

Prerequisite

ENGLC070 - Introductory Composition

Students are expected to read and comprehend college-level texts explaining complex psychological research. In addition, they must critically analyze scholarly articles for written assignments. Students are also expected to write papers as well as respond to essay questions on exams. This requires that they write in a clear and organized manner free from errors. The ENGL C70 prerequisite ensures students have the skills necessary for success in these assignments.

Entrance Skills

Entrance Skills	Description
No value	No value

Limitations on Enrollment

Limitations on Enrollment	Description
No value	No value

Specifications

Methods of Instruction

Methods of Instruction	Written work
Rationale	No value
Methods of Instruction	Presentations (by students)
Rationale	No value
Methods of Instruction	Lecture
Rationale	No value
Methods of Instruction	Outside reading
Rationale	No value

Methods of Instruction	In-class writing
Rationale	No value

Methods of Instruction	Instruction through examination or quizzing
Rationale	No value

Methods of Instruction	Group Work
Rationale	No value

Methods of Instruction	Audiovisual
Rationale	No value

Methods of Instruction	Discussion
Rationale	No value

Assignments

A. Reading assignment in text book and supplemental material. Example: Read the chapter on the ethical consideration of animal and human research of your text book. Be prepared to discuss the implications of invasive and non-invasive research methods and ethical considerations.
B. Diagram and explain the process of specific anatomical parts of the nervous system. Example: Draw a motor neuron, identifying each of its parts and explain the process of the neuronal impulse as it moves through the neuron and activates the post-synaptic neuron. Be prepared to discuss the neuron's function within the nervous system.
C. Conduct research and write on topics covered or related to the topical outline. Example Research the effects of a psychoactive drug on the nervous system and behavior.

Methods of Evaluation	Rationale
Other	B. Short essays explaining the relationship of specific behaviors to processing functions of the nervous and endocrine systems of the body. For example: Explain the recovery factors following a stroke.
Research Paper	C. Term paper requiring students to research on selected topics. For example, topics could include the phenomenon of phantom limb syndrome, Synesthesia, or REM deprivation.
Tests	A. Examinations - which can include multiple choice, diagrams, and short answers,to identify key concepts, terminology, anatomical features., and theoretical perspectives.

Equipment

No Value

Textbooks

Author	Title	Publisher	Date	ISBN

Kalat, James W.. (2013) Biological Psychology, 11th , Wadsworth Cengage Learning

Other Instructional Materials

No Value

Materials Fee

No

Learning Outcomes and Objectives

Course Objectives

Define and use basic biological, physiological, and psychological terminology of the neurosciences .

Differentiate among specialty areas within Biological Psychology and the related disciplines within the Neurosciences and the types of research that characterize the biopsychological approach.

Summarize the major issues in human evolution, genetics, and behavioral development that underlie the “biology of behavior.”

Generate and explicate concrete examples of invasive vs. noninvasive research methods and the general principles of research ethics for the study of animals and human beings, including the research safeguards and the peer-review process in science.

Explain scientific approaches used in methodologies for the study of brain-behavior relationships.

Explain the general anatomy and physiology of the nervous system and its relationship to behavior .

Describe neural conduction and synaptic transmission.

Discuss the role of the neuroendocrine system as it relates to behavior.

Exemplify with concrete examples various brain-behavior relationships including ingestive behavior, sexual behavior, sleep, learning, memory, stress, drug dependence, and psychiatric disorders such as affective disorders and schizophrenia.

CSLOs

Define and use basic biological, physiological, and psychological terminology of the neurosciences. Expected SLO Performance: 70.0

Social Science Psychology AA Degree for Transfer	1. The student will be able to apply psychological principles to the development of interpersonal, social, and occupational skills. Assessment:Examination through the use of multiple choice and short answer.

Explain scientific approaches used in methodologies for the study of brain-behavior relationships and the types of research that characterize the biopsychological approach. Expected SLO Performance: 70.0

Social Science PLOs for CSU GE COA	Describe the method of inquiry used by the social and behavioral sciences.
Social Science IGETC PLOs	Describe the method of inquiry used by the social and behavioral sciences.
Social Science Liberal Arts: Social & Behavioral Sciences AA Degree	Identify and apply the Scientific Method used by social scientists to study human behavior.
Social Science Psychology AA Degree for Transfer	3. The student will be able to evaluate psychological data and apply the scientific method to psychological theory. Assessment:The student will complete a research project scored by a rubric.

Explain and generate concrete examples of invasive vs. noninvasive research methods and the general principles of research ethics for the study of animals and human beings, including the research safeguards and the peer-review process in science. Expected SLO Performance: 70.0

Social Science Psychology AA Degree for Transfer	3. The student will be able to evaluate psychological data and apply the scientific method to psychological theory. Assessment:The student will complete a research project scored by a rubric.

Analyze the major issues in human evolution, genetics, and behavioral development that underlie the "biology of behavior." Expected SLO Performance: 70.0

Social Science Psychology AA Degree for Transfer	1. The student will be able to apply psychological principles to the development of interpersonal, social, and occupational skills. Assessment:Examination through the use of multiple choice and short answer.
	2. The student will be able to compare and contrast the major theoretical perspectives in psychology. Assessment:Examination through the use of multiple choice and short answer.
Social Science Liberal Arts: Social & Behavioral Sciences AA Degree	Identify and analyze theories explaining the individual, social, historical, economic, or political activities of humans.

Describe the neural conduction and synaptic transmission. Expected SLO Performance: 70.0

Social Science Psychology AA Degree for Transfer	2. The student will be able to compare and contrast the major theoretical perspectives in psychology. Assessment:Examination through the use of multiple choice and short answer.

Explain the role of the neuroendocrine system as it relates to behavior. Expected SLO Performance: 70.0

Social Science Psychology AA Degree for Transfer	1. The student will be able to apply psychological principles to the development of interpersonal, social, and occupational skills. Assessment:Examination through the use of multiple choice and short answer.
	2. The student will be able to compare and contrast the major theoretical perspectives in psychology. Assessment:Examination through the use of multiple choice and short answer.

Outline

Course Outline

1. Major Issues
    a. Biopsychology as a Neuroscience
    b. Genetics; behavior and human evolution
    c. Heredity and Environment
    d. Biopsychological Research Methods
    e. Ethics of Research
        i. Invasive vs. non-invasive studies
        ii. Human research studies
        iii. Animal research studies
2. Nerve Cells and Nerve Impulses and communication within the nervous system
3. Synapses
    a. Properties of the synapse
    b. Chemical events at the synapse
    c. Synapsis; drugs and addiction
        i. Abused drugs
        ii. Alcohol and alcoholism
        iii. Medications to combat substance abuse
4. Anatomy of the Nervous System
    a. Central Nervous System
    b. Peripheral Nervous System
    c. Cerebral Cortex
    d. Effects of brain stimulation
    e. Recording brain activity
    f. Correlating brain activity with behavior
5. Development of the Brain
    a. Maturation of the brain
    b. Vulnerability of the developing brain
    c. Experience and the development of the brain
    d. Brain development and behavioral development
6. Plasticity of the brain
    a. Brain damage and short term recovery
    b. Concussions and stoke
    c. Later mechanisms of recovery
    d. Learned adjustments in behavior
7. Sensory Systems
    a. Vision
    b. Audition
    c. Mechanical Senses
    d. Chemical Senses
    e. Phantom limb
    f. Synesthesia
8. Movement
    a. Control of movement
    b. Brain mechanisms of movement
    c. Movement disorders
        i. Parkinson's Disease
        ii. Huntington's Disease
9. Wakefulness and Sleep
    a. Stages of sleep and brain mechanisms
        i. endogenous cycles
        ii. Mechanisms of the Biological Clock
    b. Functions of sleep
        i. Sleep and memory
        ii. Functions of Rapid Eye Movement sleep
    c. Biological perspectives on dreaming
10. Internal Regulation
    a. Thirst
    b. Hunger
    c. Eating disorders
11. Endocrine System
12. Reproductive Behaviors
    a. Sex and hormones
    b. Variations in sexual behavior
13. Emotional Behavior

a. Emotions and autonomic arousal
b. Brain areas associated with emotion
c. Decision making after brain damage that impacts emotions
d. Attack behaviors
e. Fear and Anxiety
f. Stress and health
i. Immune system
ii. Post-traumatic stress disorder

14. Biology of Learning and Memory
a. Localized Representation of memory
b. Types of memory
c. Hippocampus
d. Basal Ganglia
e. Types of Amnesia
f. Storing information in the nervous system

15. Cognitive Functions
a. Lateralization of function
b. Evolution and physiology of language
c. Conscious and unconscious process of attention

16. Mood Disorders and Schizophrenia
a. Genetics
b. Biological Influences
c. Antidepressant drugs
d. Psychoactive drugs
e. Neurodevelopmental hypothesis of Schizophrenia

Delivery Methods and Distance Education

Delivery Method: Please list all that apply -Face to face -Online (purely online no face-to-face contact) -Online with some required face-to-face meetings ("Hybrid") -Online course with on ground testing -iTV – Interactive video = Face to face course with significant required activities in a distance modality -Other

Face 2 Face
Online
Interactive

Rigor Statement: Assignments and evaluations should be of the same rigor as those used in the on-ground course. If they are not the same as those noted in the COR on the Methods of Evaluation and out-of-class assignments pages, indicate what the differences are and why they are being used. For instance, if labs, field trips, or site visits are required in the face to face section of this course, how will these requirements be met with the same rigor in the Distance Education section?

Online All paper assignments are identical to those in an onsite class, except that they are submitted by e-mail attachment. Weekly class discussions are conducted by means of online discussion forums, such as Front Page, Web Board, or Moodle. Some instructors also use uploaded quizzes or exams accessible through the class web site. The instructor is responsible for providing feedback both in online discussion forums and through e-mail. The instructor must provide substantive critiques of all essays and at least general responses to discussion posts. Some instructors use rubrics, stated in the syllabus, to evaluate online discussion work, but these are not required. As with any on-ground class, all instructors are guided by departmental rubrics for the assessment of essays.

Effective Student-Instructor Contact: Good practice requires both asynchronous and synchronous contact for effective contact. List the methods expected of all instructors teaching the course. -Learning Management System -Discussion Forums -Moodle Message -Other Contact -Chat/Instant Messaging -E-mail -Face-to-face meeting(s) -Newsgroup/Discussion Board -Proctored Exam -Telephone -iTV -Interactive Video -Other (specify)

forums
message
chat
email

face2face
discussion
proctored
phone
itv

Software and Equipment: What additional software or hardware, if any, is required for this course purely because of its delivery mode? How is technical support to be provided?

No Value

Accessibility: Section 508 of the Rehabilitation Act requires access to the Federal government's electronic and information technology. The law covers all types of electronic and information technology in the Federal sector and is not limited to assistive technologies used by people with disabilities. It applies to all Federal agencies when they develop, procure, maintain, or use such technology. Federal agencies must ensure that this technology is accessible to employees and the public to the extent it does not pose an "undue burden". I am using -iTV—Interactive Video only -Learning management system -Publisher course with learning management system interface.

itv
LMS
publisher

Class Size: Good practice is that section size should be no greater in distance ed modes than in regular face-to-face versions of the course. Will the recommended section size be lower than in on-ground sections? If so, explain why.

No Value