

## PSYC103 : Physiological Psychology

### General Information

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Course Code (CB01) :	PSYC103
Course Title (CB02) :	Physiological Psychology
Department:	PSYCH
Proposal Start:	Fall 2025
TOP Code (CB03) :	(2001.00) Psychology, General
CIP Code:	(42.0101) Psychology, General.
SAM Code (CB09) :	Non-Occupational
Distance Education Approved:	Yes
Will this course be taught asynchronously?:	Yes
Course Control Number (CB00) :	CCC000093982
Curriculum Committee Approval Date:	11/27/2024
Board of Trustees Approval Date:	01/21/2025
Last Cyclical Review Date:	11/27/2024
Course Description and Course Note:	PSYC 103 introduces students to the scientific study of the biological bases of behavior and its fundamental role in the neurosciences. Students will explore physiological, hormonal, and neurochemical mechanisms and brain-behavior relationships underlying the psychological phenomena of sensation, perception, regulatory processes, emotion, learning, memory, and psychological disorders. The course includes historical and 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 experimental research.
Justification:	Mandatory Revision
Academic Career:	<ul style="list-style-type: none"><li>Credit</li></ul>
Mode of Delivery:	<ul style="list-style-type: none"><li>In-Person</li><li>Remote</li><li>Hybrid</li><li>Online</li></ul>
Author:	No value
Course Family:	No value

### Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none"><li>Psychology</li></ul>
Alternate Discipline:	No value
Alternate Discipline:	No value

## Course Development

### Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

### Course Special Class Status (CB13)

Course is not a special class.

### Pre-Collegiate Level (CB21)

Not applicable.

### Grading Basis

- Grade with Pass / No-Pass Option

### Course Support Course Status (CB26)

Course is not a support course

## General Education and C-ID

### General Education Status (CB25)

Not Applicable

### Transferability

Transferable to both UC and CSU

### Transferability Status

Approved

#### IGETC Area

5B-Biological Science

#### Area

Biological Science

#### Status

Approved

#### Approval Date

08/30/2010

#### Comparable Course

No Comparable Course defined.

#### CSU GE-Breadth Area

B2-Life Science

#### Area

Life Science

#### Status

Approved

#### Approval Date

08/30/2010

#### Comparable Course

No Comparable Course defined.

#### C-ID

PSY

#### Area

Psychology

#### Status

Approved

#### Approval Date

02/13/2012

#### Comparable Course

PSY 150 - Introduction to Biological Psychology

## 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

### Credit / Non-Credit Options

**Course Type (CB04)**

Credit - Degree Applicable

**Noncredit Course Category (CB22)**

Credit Course.

**Noncredit Special Characteristics**

No Value

**Course Classification Code (CB11)**

Credit Course.

 Variable Credit Course**Funding Agency Category (CB23)**

Not Applicable.

 Cooperative Work Experience Education Status (CB10)
**Weekly Student Hours**

	In Class	Out of Class
Lecture Hours	3	6
Laboratory Hours	0	0
Studio Hours	0	0

**Course Student Hours**

<b>Course Duration (Weeks)</b>	18
<b>Hours per unit divisor</b>	54
<b>Course In-Class (Contact) Hours</b>	
Lecture	54
Laboratory	0
Studio	0
<b>Total</b>	54

**Course Out-of-Class Hours**

Lecture	108
Laboratory	0
Studio	0
<b>Total</b>	108

**Time Commitment Notes for Students**

No value

**Units and Hours - Weekly Specialty Hours**

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

**Prerequisites, Corequisites, Recommended Corequisites, and Recommended Preparation****Prerequisite**

PSYCC1000 - Introduction to Psychology (in-development)

**Objectives**

- Demonstrate familiarity with the major concepts, theoretical perspectives, research methods, core empirical findings, and historic trends in psychology.
- Critically analyze major theoretical perspectives of psychology (e.g. behavioral, biological, cognitive, evolutionary, humanistic, psychodynamic, and socio-cultural).

- Describe biological bases of behavioral and mental processes, sensation, perception, learning, memory, cognition, consciousness, individual differences, personality, social psychology.
- Describe developmental changes across the lifespan, psychological disorders, emotion, and motivation.
- Discuss applied areas of psychology (e.g. clinical, counseling, forensic, community, organizational, school, and health).
- Recognize and the impact of diversity on psychological research, theory, and application.
- Apply psychological principles to personal experience as well as social and organizational settings.

## Entry Standards

Entry Standards	Description
No value	No value

## Course Limitations

Cross Listed or Equivalent Course	Description
No value	No value

## Specifications

### Methods of Instruction

Methods of Instruction	Lecture
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Methods of Instruction	Discussion
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Methods of Instruction	Multimedia
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Methods of Instruction	Collaborative Learning
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Methods of Instruction	Demonstrations
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Methods of Instruction	Field Activites (Trips)
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<b>Methods of Instruction</b>	Guest Speakers
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<b>Methods of Instruction</b>	Presentations
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<p><b>Out of Class Assignments</b></p> <ul style="list-style-type: none"> <li>• Homework assignment (e.g., contrast differences in brainwave activity for the stages of sleep)</li> <li>• Short papers or essays demonstrating the application of concepts and critical thinking skills (e.g., a short essay discussing the experimental design of an assigned journal article)</li> <li>• Research paper demonstrating the use of sources and critical thinking skills (e.g., a paper describing the causes, symptoms, types, and treatments for seizure)</li> <li>• Individual projects (e.g., presentation regarding electrophysiological techniques)</li> <li>• Group projects (e.g., informational poster about antidepressant medication).</li> </ul>
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<b>Methods of Evaluation</b>	<b>Rationale</b>
Exam/Quiz/Test	Four to five in-class tests and one final examination requiring demonstration of course exit standards
In-Class Activity (answering journal prompt, group activity)	Peer review or critique of student work
In-Class Activity (answering journal prompt, group activity)	In-class written assignments
Presentation (group or individual)	In-class presentations

<b>Textbook Rationale</b>
No Value

<b>Textbooks</b>				
<b>Author</b>	<b>Title</b>	<b>Publisher</b>	<b>Date</b>	<b>ISBN</b>
John P.J. Pinel and Steven J. Barnes	Biopsychology, 11th edition	Pearson	2021	9780135710883

<b>Other Instructional Materials (i.e. OER, handouts)</b>
No Value

<b>Learning Outcomes</b>
<b>Course Objectives</b>

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.

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

## SLOs

### Analyze psychophysiological techniques.

Expected Outcome Performance: 70.0

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<i>ILOs</i> Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.
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<i>ILOs</i> General Education	apply reasoning to evaluate hypotheses and theories
	examine causality or associations between or among variables of the natural world

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### Explain the process of neural communication.

Expected Outcome Performance: 70.0

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<i>ILOs</i> Core ILOs	Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.
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<i>ILOs</i> General Education	analyze, interpret, and present research evidence
	apply reasoning to evaluate hypotheses and theories
	examine causality or associations between or among variables of the natural world

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### Recognize and explain the anatomy of the nervous system.

Expected Outcome Performance: 70.0

*ILOs* Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or  
Core ILOs methodologies to solve unique problems.

*ILOs* examine causality or associations between or among variables of the natural world  
General  
Education

## Additional SLO Information

**Does this proposal include revisions that might improve student attainment of course learning outcomes?**

No

**Is this proposal submitted in response to learning outcomes assessment data?**

No

**If yes was selected in either of the above questions for learning outcomes, explain and attach evidence of discussions about learning outcomes.**

No Value

**SLO Evidence**

No Value

## Course Content

### Lecture Content

#### Research Methods and Ethics (6 hours)

- Scientific method
- Experimental design
- The scientific research process
- Research ethics applied to humans and animals

#### Quantitative Genetics and Behavior (6 hours)

- DNA, gene sequences, and protein products
- Family, adoption, and twin studies
- Genes, environment, and interactions
- Complex traits

#### Neural Communication and Neurochemicals (6 hours)

- Graded potentials and action potentials
- Neurotransmitters

#### Anatomy and Physiology (6 hours)

- Meninges, ventricles, and CSF
- Central nervous system (structure & function of forebrain, midbrain, & hindbrain)
- Peripheral nervous system (structure & function of somatic & autonomic systems)
- Terms for anatomical directions
- Planes/sections of the nervous system

#### Sensation and Perception (5 hours)

- Vision
- Audition
- Gustation and olfaction
- Cutaneous senses and proprioception

- Pain

**Hormone System, Sexual Development, and Sexual Behavior (6 hours)**

- Eating, thirst, and sleep
- Sexual development
- Hormonal and neural control of sexual behavior

**Memory (3 hours)**

- Learning
- Types of memory
- Hippocampus vs. cortex
- Long term potentiation
- Amnesia, dementia, and Alzheimer's disease

**Psychophysiological Techniques and Brain Imaging (3 hours)**

- Electrophysiological techniques
- Psychophysiological techniques
- Brain imaging approaches

**Neurological Disorders (4 hours)**

- Seizure and epilepsy
- Parkinson's disease
- Multiple sclerosis
- Stroke

**Emotion, Stress, and the Biological Bases of Psychological Disorders (9 hours)**

- Anxiety disorders
- Mood disorders
- Schizophrenia
- Addiction and drugs of abuse

**Total Hours: 54**

**Additional Information**

**Repeatability**

Not Repeatable

**Justification (if repeatable was chosen above)**

No Value

**Is it possible this course will have a material fee?**

No Value

**I have contacted my library liaison (<https://campusguides.glendale.edu/faculty/liasons>):**

No Value

**What term(s) will this course be offered?**

No Value

**Will any additional resources be needed for this course? (Click all that apply)**

No Value

If additional resources are needed, add a brief description and cost in the box provided.

No Value

## Resources

Did you contact your departmental library liaison?

No

If yes, who is your departmental library liaison?

No Value

Did you contact the DEIA liaison?

No

Were there any DEIA changes made to this outline?

No

If yes, in what areas were these changes made:

No Value

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value