PSYC G250: PSYCHOBIOLOGY

Item	Value
Curriculum Committee Approval Date	11/17/2020
Top Code	200100 - Psychology, General
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
Local General Education (GE)	• GWC Physical Universe*** (GB1) • GWC Lifelong Understanding (GE)
California General Education Transfer Curriculum (Cal-GETC)	• Cal-GETC 4 Social & Behavioral Sciences (4) • Cal-GETC 4I Psychology (4I) • Cal-GETC 5B Biological Sciences (5B)
Intersegmental General Education Transfer Curriculum (IGETC)	• IGETC 4 Social&Behavioral Sci (4) • IGETC 4I Psychology (4I) • IGETC 5B Biological Sciences (5B)
California State University General Education Breadth (CSU GE-Breadth)	• CSU B2 Life Science (B2) • CSU D9 Psychology (D9)

Course Description

This course introduces the biological bases of behavior, and its fundamental role in the neurosciences. How biological factors such as genetics, hormones, neurochemistry, and the brain influence psychological phenomena will be presented. Topics include the biopsychology of psychological disorders, personality, emotions, memory, gender, sexuality, addiction, sleep, and dreams. PREREQUISITE: PSYC C1000. Transfer Credit: CSU; UC. C-ID: PSY 150. **C-ID:** PSY 150.

Course Level Student Learning Outcome(s)

1. Course Outcomes
2. Critically evaluate theoretical perspectives, research, and applications in psychobiology.
3. Analyze the biopsychosocial components of behavior.
4. Apply neurological concepts and theories as they relate to everyday life.

Course Objectives

- 1. Define the terminology of the neurosciences.
- 2. Explain the research methods used to study brain-behavior relationships, including research ethics and safeguards.
- 3. Identify the anatomy of the nervous system and its relationship to behavior.
- 4. Describe the anatomy and functioning of the neuron, including neural conduction and synaptic transmission.
- 5. Explain how genetics and human evolution unerlie the biology of behavior.
- 6. Discuss the role of the neuroendrocrine system as it relates to behavior.
- 7. Explain the biopsychology of human emotions and motivations, including hunger, eating, stress, communication, sleep, and dreams.
- 8. Describe current research findings on the biology of sex, gender, sexual desire, and sexual orientation.
- 9. Identify the biological factors involved in learning, memory, forgetting, and false memories.
- 10. Describe the biological factors involved in psychological disorders including autism, addiction, mood disorders, anxiety disorders, and schizophrenia.

Lecture Content

The Nature of Biological Psychology A physiological approach to psychological issues Nature and nurture Research Methods Invasive and non-invasive methods Ethical considerations Genes and Behavior Genetic processes Evolutionary psychology Epigenetics Neural Foundations Structure and functioning of neurons Anatomy of the nervous system Communication within the nervous system Mechanisms of perception, attention, and consciousness Neurological Damage Caused by trauma Caused by disease Mechanisms of recovery Early Childhood Brain Development Plasticity and sensitive periods of development Causes of Autism Learning and Memory Neural processes of learning Brain damage and amnesia Implicit and explicit memory systems Hunger and Eating Biopsychological factors in starting and stopping eating Obesity and eating disorders Sex and Gender Sex hormones, sexual development, and sexual behavior Genetic and prenatal factors which shape sex and gender Biopsychology of sexual orientation and gender identity Sleep and Dreams Circadian rhythms Purpose of sleep and dreams Drugs and Addiction Effects of psycyhoactive drugs Biopsychology of addiction Emotion and Stress Neurochemistry of emotions Genetics and evolutionary psychology of emotions and stress Psychological Disorders Anxiety disorders Mood disorders Schizophrenia

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

Instructional Techniques

1. Lecture and discussion regarding reading materials and research.2. In-class group work to apply, discuss, and explore course concepts.3. Writing assignments evaluating additional materials and contemporary research.4. Out of class assignments to apply course concepts.

Reading Assignments

1. Readings assigned from the textbok. 2. Additional articles and handouts assigned by the instructor.

Writing Assignments

1. Analytical essays, applying the biopsychological concepts to concrete examples. 2. Papers critically analyzing published research reports and articles related to biological psychology. 3. Essay questions on exams. 4. In class writing assignments, individually and in group work.

Out-of-class Assignments

1. Instructor may assign activities which ask students to do research, and explore contemporary issus in biopsychology. 2. This may include a formal APA writing assignments.

Demonstration of Critical Thinking

1. Analytical papers, critiquing scientific articles. 2. Discussions and in-class activities involving complex application of psychological theories. 3. Essay questions on exams, requiring the ability to compare and contrast different theories and research. 4. Analysis of controversial issues related to ethics and applications of research in biological psychology. 5. Objective questions on exams, requiring the application of theories and research to different scenarios.

Required Writing, Problem Solving, Skills Demonstration

1. Analytical papers critiquing scientific articles. 2. Essay questions on exams requiring the ability to compare and contrast different theories and research. 3. Essays requiring the analysis of controversial issues related to ethics and applications of research in biological psychology.

Eligible Disciplines

Psychology: Masters degree in psychology OR bachelors degree in psychology AND masters degree in counseling, sociology, statistics, neuroscience, or social work OR the equivalent. Masters degree required.

Textbooks Resources

1. Required Pinel, J.P. Barnes, S.. Biopsychology, 10th ed. Pearson, 2018 2. Required Kalat, J.W.. Biological Psychology, 13th ed. Cengage, 2019 3. Required Freberg, L.. Discovering Behavioral Neuroscience: An introduction to biologicla psychology, 4th ed. Cengage, 2019