

Springfield Technical Community College
Academic Affairs**OBJECTIVES/COMPETENCIES**

Course Objectives	Competencies
1. Identify and apply multiple theories and models of the biological basis for behavior from a historical and contemporary context	1.1. Define physiological psychology and discuss its importance in the contribution to our body of knowledge to the field of psychology 1.2. Demonstrate knowledge and understanding of the historical development of physiological psychology 1.3. Describe and differentiate between various theories and models utilized in both the past and present 1.4. Compare and contrast the efficacy and application of the various theories and models discussed

<p>2. Develop an understanding of neuroanatomy, including the structure, function and communication of the central and peripheral nervous systems, the neuron, and the synapse</p> <p>3. Examine epigenetics and the impact of genes on behavior</p> <p>4. Develop an understanding of the function of the limbic system and describe associated major hormones in emotional and behavioral responses</p>	<p>2.1. Identify and describe the anatomical structures of the brain, spinal cord, and neuron</p> <p>2.2. Describe the major functions of the various areas within the brain as related to psychological processes such as affect and behavior</p> <p>2.3. Demonstrate the ability to explain the connection of the central nervous system's various structures to operate efficiently and effectively as a cohesive unit</p> <p>2.4. Explain the structure of neural pathways</p> <p>2.5. Describe the process of an action potential, including its path traveling down a neuron and changes in electroactivity</p> <p>2.6. Describe the transmission of neural impulses at both chemical and electrical synapses</p> <p>2.7. Identify major neurotransmitters and their role in behavior production and affective state</p> <p>3.1. Define epigenetics and associated basic terminology</p> <p>3.2. Explain heritability and environmentality</p> <p>3.3. Discuss the role of genes on the influence of behavior, cognition, and personality</p> <p>3.4. Evaluate the influence of nature versus nurture on behavior and emotional responses</p> <p>4.1. Identify the structures of the limbic system</p> <p>4.2. Describe the connection between the limbic system and regulating autonomous and endocrine function</p> <p>4.3. List and explain the functions of the major hormones within the body as related to behavioral and psychological response</p> <p>4.4. Describe the role of the limbic system in regulating emotion and motivation</p> <p>4.5. Identify and explain the disorders associated with limbic system impairment including mood and anxiety disorders, substance abuse and dependence, and memory disorders</p>
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5. Understand various physiological processes of sensation, perception, vision, hearing, sleep and cognition

6. Understand the basic physiological and psychological mechanisms involved in motor control, motivation, learning, language and memory

- 5.1. Identify the various ways in which the body senses information through sensory organs
- 5.2. Discuss the relationship between sensation and perception, explaining how physiological processes impact conscious experience
- 5.3. Describe the normal stages of sleep and associated physiological responses within each stage
- 5.4. Differentiate between normal and abnormal sleep patterns and their resulting impact on physiological and psychological systems
- 5.5. Define cognition and describe the physiological basis of cognitive function

- 6.1. Define motor control and discuss its placement in the field of physiological psychology
- 6.2. Differentiate between fine motor and gross motor control, explaining the neurological processes responsible for their function
- 6.3. Explain the influences of perception on motor control through various supported theories
- 6.4. Describe key components and physiological processes involved in motivation
- 6.5. Discuss major theories of motivation that fall under the biological/physiological perspective
- 6.6. Define learning and demonstrate an understanding of the neurophysiological structures involved in knowledge production
- 6.7. Discuss neuroplasticity as well as the processes of formation and deformation of the brain as related to learning
- 6.8. Identify and describe the role of the brain and nervous system in language development, including speech perception and articulation
- 6.9. Identify and describe the neurological structures and mechanisms involved in memory storage and retrieval

<p>7. Explore the impact of damage and abnormalities in the neurological systems on the development of mental dysfunction</p>	<p>7.1. Differentiate between normal and abnormal behavior 7.2. Discuss major historical cases portraying the impact of neurological damage on behavioral and mental functioning 7.3. Identify the role of the neurological systems in various affective disorders 7.4. Describe ways in which the nervous system can deteriorate resulting in neurocognitive disorders 7.5. Describe the connection between physiological dysfunction and speech, somatosensory and movement disorders 7.6. Identify and explain a variety of methods for treatment of disorders resulting from damage and/or abnormalities within or physiological systems 7.7. List and explain various neuropharmalogical treatment methods and their subsequent impacts the neurological systems</p>
<p>8. Critically analyze ethics and associated issues in physiological psychology</p>	<p>8.1. Describe the role of ethics within the study and application of physiological psychology 8.2. Demonstrate the ability to reflect and evaluate ethical practices utilized in the study and application of physiological psychology by examining past and present examples 8.3. Consider factors and internal/external influences that can potentially lead to unethical practices within the biopsychology/physiological psychology field 8.4. Discuss the implications of ethical dilemmas</p>
<p>9. Further develop an understanding of scientific methods used in physiological psychology to evaluate research and data presented in the field from various sources</p>	<p>9.1. Identify the major research methods used in the field of physiological psychology including study design and data collection tools 9.2. Demonstrate the ability to apply the scientific method in the collection of research and data 9.3. Interpret data from various sources including scientific studies, charts, tables and graphs</p>

	<ul style="list-style-type: none">9.4. Demonstrate an understanding of empirical findings from scientific literature9.5. Utilize best practices for evaluating the credibility of sources when participating in the research process
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