**Biological Bases of Behavior (8–10%)**

The structures of human biological systems and their functions influence our behavior and mental processes. Some psychologists study behaviors and mental processes from a biological perspective. This includes an examination of the influence that the interaction between human biology and our environment has on behavior and mental processes. This is a recurring topic throughout the course that will be used to explain many psychological phenomena. The biological perspective also provides insight into the causes of and treatments for psychological disorders. There is a complex interaction between a person’s biology and their behavior and mental processes. Heredity and environment play a role, as do variations in a person’s consciousness.

Topics:

* 1. Interaction of Heredity and Environment
  2. The Endocrine System
  3. Overview of the Nervous System and the Neuron
  4. Neural Firing
  5. Influence of Drugs on Neural Firing
  6. The Brain
  7. Tools for Examining the Brain Structure
  8. The Adaptable Brain

Learning Targets:

* Discuss psychology’s abiding interest in how heredity, environment, and evolution work together to shape behavior.
* Identify key research contributions of scientists in the area of heredity and environment.
* Predict how traits and behavior can be selected for their adaptive value.
* Discuss the effect of the endocrine system on behavior.
* Describe the nervous system and its subdivisions and functions.
* Identify basic processes and systems in the biological bases of behavior, including parts of the neuron.
* Identify basic process of transmission of a signal between neurons.
* Discuss the influence of drugs on neurotransmitters.
* Describe the nervous system and its subdivisions and functions in the brain.
* Identify the contributions of key researchers to the study of the brain.
* Recount historic and contemporary research strategies and technologies that support research.
* Identify the contributions of key researchers to the development of tools for examining the brain.
* Discuss the role of neuroplasticity in traumatic brain injury.
* Identify the contributions of key researchers to the study of neuroplasticity.

**Vocabulary for Flashcards**

*Chapter 2, Section 1: Neural and Hormonal Processes, pages 45-53*

1. Neuroscience
2. Neuron
3. Glial cells
4. Dendrites
5. Cell body
6. Axon
7. Myelin sheath
8. Terminal buttons
9. Action potential
10. All-or-nothing principle
11. Neurotransmitters
12. Synapse
13. Reuptake
14. Agonist
15. Antagonist
16. Endorphins
17. Endocrine system
18. Hormones

*Chapter 2, Section 2: Nervous System Organization, pages 54-60*

1. Central nervous system (CNS)
2. Peripheral nervous system (PNS)
3. Neuroplasticity
4. Neurogenesis
5. Stem cells
6. Reflex
7. Somatic nervous system
8. Autonomic nervous system
9. Sympathetic system
10. Parasympathetic system

*Chapter 2, Section 3: A Tour Through the Brain, pages 61-67*

1. Hindbrain
2. Medulla
3. Cerebellum
4. Pons
5. Cerebellum
6. Midbrain
7. Reticular formation
8. Brainstem
9. Forebrain
10. Limbic system
11. Hippocampus
12. Amygdala
13. Thalamus
14. Hypothalamus

*Chapter 2, Section 4: The Cerebral Cortex, pages 68-76*

1. Cerebral cortex
2. Frontal lobes
3. Executive functions
4. Motor cortex
5. Broca’s area
6. Wernicke’s area
7. Temporal lobes
8. Occipital lobes
9. Parietal lobes
10. Association areas
11. Split-brain surgery
12. Corpus callosum

*Test Date: September 2nd*