Chapter 3 Objectives
Biology and Behavior

After studying this chapter, students should be able to:

3.1 How Does the Nervous System Operate?
- Distinguish between the two basic divisions of the nervous system.
- Distinguish between the functions of distinct types of neurons.
- Describe the structure of the neuron.
- Describe the electrical and chemical changes that occur when neurons communicate.
- Identify the major neurotransmitters and their primary functions.

3.2 What Are the Basic Brain Structures and Their Functions?
- Identify the basic structures of the brain and their primary functions.

3.3 How Does the Brain Communicate with the Body?
- Differentiate between the subdivisions of the nervous system.
- Identify the primary structures of the endocrine system.
- Explain how the nervous system and the endocrine system communicate to control thought, feeling, and behavior.

3.4 How Does the Brain Change?
- Explain how environmental factors, including experiences, influence brain organization.
- Describe sex differences in brain structure and function.

3.5 What Is the Genetic Basis of Psychological Science?
- Explain how genes are transmitted from parents to offspring.
- Discuss the goals and methods of behavioral genetics.
- Explain how environmental factors, including experience, influence genetic expression.

In addition, you should be able to give examples and elaborate on the major concepts from the chapter.