

**Course Title : Brain and Behavior**

**Course Code : PSY-807**

**Credit Hours : 2**

**Pre Requisite : None**

**Course Description:**

This 2-credit course will provide an overview of key concepts of biological psychology. Students will understand the interplay of human behavior, emotions and cognitive processes. In addition, students will develop selected skills for assessment and evaluation of neurological functioning. Students will learn through discussion of relevant clinical cases and research in the field of neuroscience and neuropsychology.

**Course Objectives:**

The course is designed to:

- Provide students with an understanding of the basic structure and functions of the central and peripheral nervous systems.
- Educate students about the complex interplay of physiology, behavior, and environmental circumstances.
- Educate them about neurological and physiological patterns and processes associated with psychological disorders and with substance abuse.
- Facilitate students in applying the above knowledge and skills in understanding and addressing various clinical issues such as diagnosis, psychological assessment, treatment and prognosis.

**Learning Outcomes:**

The course will enable the students to:

- Demonstrate understanding of neurobiological basis of human behavior.
- Identify neurological and physiological processes associated with neuropsychiatric disorders and conditions.
- Integrate neurobiological aspects of mental disorders and substance abuse in treatment planning and prognosis of clients.
- Identify basic principles of psychopharmacology.

## **Course Contents:**

### **Central Nervous System**

#### **Neuro-chemical Basis of Behavior**

Neurotransmitters & Neuromodulators  
Psychopharmacology  
Drugs, brain and behavior (substance abuse)  
Neuroplasticity of the brain

### **Biopsychology of cognitive functions and associated impairments**

Sensation, Perception and Attention  
Learning and Memory  
Language and speech development

### **Biopsychology of Motivation, Emotions & associated disorders**

#### **Sleep & Sleep Disorders**

## **Other Readings**

- Carlson, N.R. (2004). Physiological of behaviour (8th.ed.). Boston: Allyn& Bacon.
- Kalat, J.W. (2004). Biological psychology (8th.ed.). Belmont: Wadsworth/Thomson learning
- Blackmore, S. (2003). Consciousness: An introduction. London  
Consciousness: An introduction. London: Hodder&Stoughton.
- Garrett, B. (2003). Brain and Behavior. Wadsworth, Thomson Learning Inc, USA.
- Freberg, L A. Discovering Biological Psychology (2nd ed.)(2006), Wadsworth, Belmont: USA
- Wagner, H., & Silber, K. (2004), Physiological Psychology, Garland Science, Abingdon: UK.