

COURSE TITLE	NEURO PSYCHOLOGY
COURSE CODE	10PY0703
COURSE CREDITS	4

Objective:

- 1 To introduce and review the core concepts of physiological psychology and its significance in understanding behavior and cognition.
- 2 To familiarize students with brain imaging techniques and their applications in studying brain activity and function.
- 3 To explore the neural functions of different lobes of the brain and the concept of neural networks and disconnection syndromes.
- 4 To investigate various neurological and psychiatric disorders and their physiological underpinnings.

Course Outcomes: After completion of this course, student will be able to:

- 1 To demonstrate an understanding of the basic concepts of physiological psychology and their relevance to behaviour and cognition.
- 2 To critically evaluate how drugs influence behaviour through their action on the brain and nervous system.
- 3 To be able to explain the concept of cerebral asymmetry, its variations, and their effects on brain function.
- 4 To discuss higher neural functions such as memory, learning, and problem-solving.
- 5 To be able to identify and describe key neurological and psychiatric disorders, along with their neurophysiological mechanisms and treatment approaches

Pre-requisite of course: Foundational knowledge of core psychological principles and research Knowledge of physiological psychology and core concepts

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
3	1	0	50	30	20	0	0

Contents : Unit	Topics	Contact Hours
1	Introduction and Basic Concepts Introduction to the Nervous system & Classification of the Nervous System, Central Nervous System, Structure and Function of the Brain	10
2	Sensory, Motor, and Neocortex Organization of the Sensory and Motor Systems, Principles of Neocortical Function, Cerebral Asymmetry & Variations in Cerebral Asymmetry.	10

Contents : Unit	Topics	Contact Hours
3	Lobes, Networks, and Higher Neural Functions Neural Function of the Lobes, Neural Networks & Disconnection Syndromes, Split Brain Experiment, Brain and Behaviour, Higher Neural Functions – Attention, Perception, Learning and Memory, Language, The Influence of Drugs on Behaviour	12
4	Brain Development, Plasticity, & Disorders Brain Development & Neurodevelopmental Disorders, Neurological and Psychiatric Disorders, Brain Imaging Techniques, Neuropsychological Assessments, Screening tests – Bender Gestalt Test, Mini Mental Status Examination, Plasticity, Recovery, and Rehabilitation of the Adult Brain	13
Total Hours		45

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	Issues related to Neuropsychology Issues related to Neuropsychology	15
Total Hours		15

Textbook :

- Walsh's neuropsychology: A clinical approach (5th ed.), Walsh, K. W., & Darby, D., ed.). Elsevier Churchill Livingstone., 2005
- Biopsychology, Pinel, J. P. J., New Delhi: Pearson Education., 2011

References:

- Textbook of Clinical Neuroanatomy, Fifth Edition., Textbook of Clinical Neuroanatomy, Fifth Edition., Singh, V., Elsevier India., 2024
- Neuropsychological assessment, Neuropsychological assessment, Lezak, M. D., Bigler, E. D., Finch, T. E., & Erdal, D. B., Oxford University Press., 2012
- Principles of neuropsychology, Principles of neuropsychology, Zillmer, E. A., Spiers, M. V., & Culbertson, W. C., Thomson Wadsworth., 2008

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
10.00	15.00	20.00	20.00	20.00	15.00

