

PHYSIOLOGICAL PSYCHOLOGY

Semester	Subject Code	Category	Lecture		Theory		Practical	Credit
			Hrs/Week	Hrs/Sem	Hrs/Week	Hrs/Sem		
V		Core-X	06	90	05	75	15	04

COURSE OBJECTIVE

This course familiarizes the students of Psychology with the most essential fundamental physiological processes underlying psychological events.

COURSE OUTCOMES

On successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Define and describe the human consciousness and research methods in Physiological Psychology	K1
CO2	Differentiate the various types of neurons and it's functions	K2
CO3	Discuss the structure and functions of nervous system and Crainal nerves	K3
CO4	Discover the role of endocrine system on human behaviour	K3
CO5	Relate and analyze the Physiology of emotions and stress in human health	K4

MAPPING WITH PROGRAMME OUTCOMES

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	M	M
CO2	S	S	S	S	M	M
CO3	S	S	S	S	S	S
CO4	S	S	S	S	S	S
CO5	S	S	S	S	S	S

S- Strong

M-Medium

L-Low

UNIT I Introduction

15 hrs

Definition-Meaning- Nature-Biological roots of Behavioral Neuroscience- Evolution of human and human brain- Career in neuroscience-Methods of Study of Research in Physiological Psychology.

UNIT II Neurons and its Functions

15 hrs

Structure of Neurons- Types- Neural Conduction- Communication within a Neurons-Communication between Neurons- Synaptic Condition- Neurotransmitters.

UNIT III The Structure Of Nervous System

20 hrs

Basic Features of Nervous System: Meninges- The Central Nervous system: Fore Brain-Mid Brain- Hind Brain-Spinal Cord-Spinal nerves- The Peripheral Nervous system-Autonomous Nervous System-Cranial Nerves.

UNIT IV Endocrine System And Biopsychology Of Learning And Communication

20 hrs

Endocrine System: Pituitary gland-Adrenal gland-Thyroid gland- Sex glands.

Nature of learning: Classical Conditioning, Instrumental Conditioning,
Perceptual – Speech production and Comprehension mechanism.

UNIT V

Biopsychology of Emotions and Stress

20 hrs

Emotions as response patterns: Fear, anger and aggression-Hormonal Control of Aggressive Behaviour-Neural Basis of the communication of Emotion: Recognition and Express.

Stress disorder: Physiology of Stress – Health effects of long term stress – Effects of stress on brain – PTSD – Psychoneuro immunology

Practicum:

(Note: Minimum of any two practicum should be carried out)

- Visit to physiology lab in the college or science Center
- Making use of you tube videos for better understanding nervous system
- Case study of any one endocrine system disorder and its influence on behaviour
- Examination of Cranial nerves
- Identifying the sources of stress
- Observing the physiological and behavioral changes during stress
- Presentation of research papers from journals in class, related to the course

Distribution of Marks: Theory 100% and Problems 0%

TEXT BOOKS:

S.No	Authors	Title	Publishers	Year of Publication
01	Carlson,N.R	Physiology of Behaviour(11 th Edition)	Allyn&Bacon,Boston	2016
02	Schneider.M .Alles	An Introduction to Physiological Psychology,(3 rd Edition)	Random House,USA	1990

REFERENCE BOOKS:

S.No	Authors	Title	Publishers	Year of Publication
01	Pinel, J.P.J	Biopsychology, (9th Edition.)	Pearson Education INC,New Jersey	2014
02	Wagner, H., Silver, K.	Instant Notes – Physiological Psychological.	Garland Science /BIOS Scientific Publishers: UK	2004
03	Carlson, N. R.	Foundations of Behavioral Neuroscience. Harlow	Pearson Education UK	2013
04	Hayward, S.	Biopsychology.	Macmillan Press, Basingstoke	1997
05	Kalat. J.W.	Biological Psychology, (13 th	Cengage, Boston, USA.	2017

		Edition)		
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WEB SOURCES:

- ❖ <https://www.calcoast.edu/psy-540-physiological-psychology.html>
- ❖ <https://www.studocu.com/en-us/document/university-of-phoenix/physiological-psychology/lecture-notes/psych-630-lecture-notes-assumptions-of-physiological-psychology/6823209/view>
- ❖ <https://www.albany.edu/faculty/cafrye/apsy601/Ch.01Feb1,HistoryofBiopsych.html>
- ❖ <https://courses.lumenlearning.com/wmopen-psychology/chapter/outcome-neurons/>
- ❖ <https://www.khanacademy.org/science/biology/human-biology/neuron-nervous-system/a/the-synapse>
- ❖ https://www.dartmouth.edu/~humananatomy/part_1/chapter_3.html
- ❖ <https://www.biology-pages.info/C/CNS.html>
- ❖ <https://opentextbc.ca/biology/chapter/11-4-endocrine-system/>
- ❖ <https://courses.lumenlearning.com/boundless-biology/chapter/endocrine-glands/>
- ❖ <https://journals.physiology.org/doi/full/10.1152/physrev.00041.2006>
- ❖ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3181681/>

TEACHING METHODOLOGIES:

- Discussion
- Lab visit
- Visual aids
- Assignment and Seminar
- Peer teaching.

SYLLABUS DESIGNER:

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