



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Forensic Science

Choice Based Credit System (CBCS)

B.Sc. with Major Forensic Psychology Batch (2023-26)

I SEMESTER

COURSE CODE	CATEGORY	COURSENAME	TEACHING & EVALUATION SCHEME									
			THEORY			PRACTICAL			L	T	P	CREDITS
			ENDESEM University Exam	Two Term Exam	Teachers Assessment*	ENDESEM University Exam	Teachers Assessment*					
BFPSY101	Major	Introduction to Forensic Science and Psychology	60	20	20	60	40	4	0	4	6	

Legends- Lecture's-Tutorial/Teacher Guided Student Activity; P- Practical's-Credit.

***Teacher Assessment** shall be based following components: Quiz/Assignment/Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Educational Objectives: The objective of studying the paper is -

- CEO.1. To know the significance of Forensic science to human Society.
- CEO.2. To know the fundamental principles and functions of Forensic Science.
- CEO.3. To know the Psychology as a discipline.
- CEO.4. To know the basic concept of Psychology.

Course Outcomes: The Outcome of studying the paper is-

- CO.1. Students will be able to understand the basics of forensic Science.
- CO.2. Students will be able to understand the methods of crime scene investigation.
- CO.3. Students will be able to understand the psychological aspect of Forensic science.
- CO.4. Students will be able to understand psychology as a domain.

UNIT I: Introduction to Forensic Science

Definition and Scope of Forensic Science, Historical perspective of forensic science in India, Principles of Forensic science, Branches of forensic science, Development of Forensic science laboratories in India, Organizational Setup of central and state forensic science laboratories, Role of Mobile forensic science unit in investigation .

UNIT II: Crime Scene Management

Crime Scene: Definition and types, Physical evidences- definition and types, Different search methods for locating physical evidences at scene of crime, Chain of Custody, Handling of physical Evidences at scene of crime, Chain of custody, Handling of physical evidences, preservation, packing, labeling, transportation forwarding of physical evidences of different nature.

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UNIT III: Detective Agencies and Training Institutes of Forensic Science

Fingerprint Bureaus, National Crime Record Bureaus (NCRB), Police & detective Training Schools (CDTS), Bureau of Police Research & Development, (BPR& D), Directorate of Forensic science (DFS), CBI, Police Academics, Role of Police Dogs, INTERPOL and FBI

UNIT IV: Psychology as Discipline

Psychology: as a science, perspectives, origin and development of psychology, Research Methods in Psychology: Experimental, Case study and Observation and Interview; Fields of psychology, Psychology as an interdisciplinary approach, Scope of psychology in modern India.

UNITV: Basic Concept of Psychology

Cognitive processes: Perception: nature of perception, Determinants of perception, Laws of perceptual organization and Figure-ground approach, Depth Perception, Memory and types of memory, Information processing model, Factors influencing memory and techniques for improving memory.

Practical's:

1. To write a case study of criminal case involving forensic investigation.
2. To review the annual reports of National Crime Record Bureau.
3. To review the working of State and Central Fingerprint Bureau.
4. To review the organizational setup of FSL at Central and State level.
5. To review the role of Bureau of police Research and development.
6. To review the functioning of criminal courts.
7. To study the Depth perception.
8. To perform Koh's Block Design Test.
9. To study Span of attention.

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Suggested Readings:

1. Houck, M .M & Siegel, J.A; Fundamentals of Forensic Science, Academic Press, London, 2006.
2. Sharma, B.R; Forensic Science in Criminal Investigation & Trials, Universal Publishing Co., New Delhi, 2003.
3. Nanda B. Band Tewari, R.K; Forensic Science in India-A vision for the Twenty First Century, Select Publisher, New Delhi, 2001.
4. James, S. Hand Nordby,J; Forensic Science-An Introduction to Scientific and Investigative Techniques, CRC Press, USA,2003.
5. Safer stein Criminalistic-An Introduction of Forensic Science, Prentice Hall Inc, USA 2007.
6. Barry, A.J. Fisher; Techniques of Crime Scene Investigation, 7th Ed, CRC Press, NewYork, 2003.
7. Mordby, J.& Reckoning, D; The Art of Forensic Detection, CRCPressNewYork,2003.
8. G.R. Chatwal; Analytical Spectroscopy 2nd Edn, Himalaya Publishing House New Delhi, 2002.
9. Aitken and Stoney; The Use of Statistics in Forensic Science, EllisHorwood,NewYork,1991.
10. Roberts on and Vignaux; Interpreting Evidence, John Wiley, NewYork,1995.
11. H.L. Blitzer and J. Jacobia; Forensic Digital Imaging and Photography, Academic Press, London, 2002
12. David Rewicker; The Practical Methodology of Forensic Photography-2ndEd. CRC Press, NewYork,2001.
13. R.E. Jacobson, S.F. Ray, G.G. Attridge; The Manual of Photography-Photographic and Digital Imaging,N.R. Oxford.
14. Gregory, R.J. (2005). Psychological Testing (4th ed.). Delhi: Pearson education Pvt. Ltd.
15. Thou Teisi (2011) Forensic Psychology. ABD Publishers, Jaipur-302018

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			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BFS102	Minor	Biology	60	20	20	60	40	4	0	4	6

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

***Teacher Assessment shall be based upon following components: Quiz / Assignment / Project / Participation in Class, given that no component shall exceed more than 10 marks**

Course Objectives: The course aims to provide the students with-

1. The overview of cell biology
2. The concepts of human anatomy and physiology
3. The concepts of plant anatomy and physiology

Course Outcomes: After studying this course, the students will-

1. Be able to understand the cell theory.
2. Be able to distinguish the prokaryotic cell and eukaryotic cell, animal cell and plant cell.
3. Be familiar to various physiological systems of human
4. Be able to know the anatomical and physiological features of plant.

UNIT I: Biology of Cell

History of Cellular Biology, Modern Cell Theory. Types of Cells: Prokaryotic and Eukaryotic Cells, Animal and plant cell. Chemical composition of cells. Ultra structure of cell. Cell cycle (Mitosis and Meiosis)

UNIT II: Human Anatomy and Physiology I

Anatomy and Physiology of Musculoskeletal system, Nervous system, Circulatory system and Respiratory system

UNIT III: Human Anatomy and Physiology II

Anatomy and Physiology of Digestive system, Reproductive system, Endocrine system and Excretory System.

UNIT IV: Plant Anatomy

Structure and functions of: Roots, Stems, Leaves. Plant tissues: Meristematic, Dermal, Ground and Vascular Tissue (Xylem & Phloem). Flower, Fruits.

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UNIT V: Plant Physiology:

Transport in plants, Photosynthesis, Respiration, Plant growth and development: Phase of growth, and Plant Growth regulator. Photoperiodism and flowering.

List of Practical's:

1. Study of construction and working of compound microscope.
2. Monochrome staining of prokaryotic cell (Bacterial cells).
3. Monochrome staining of eukaryotic cell (Yeast)
4. Gram staining of bacterial cells.
5. Detection of mitochondria by differential centrifugation.
6. Study of different stages of mitosis.
7. Study of different stages of meiosis.
8. Qualitative test for detection of DNA by diphenylamine method.
9. Qualitative test for detection of RNA by Orcinol method.
10. Staining of epithelial cells from oral cavity.
11. Study of permanent slides of muscular, bone tissues.
12. Osmosis – by potato osmoscope experiment.
13. Structure of endosperm (nuclear and cellular); Developmental stages of dicot and monocot embryos using permanent slides / Photographs.
14. Study of ovule types and developmental stages of embryo sac using permanent slides /Photographs.
15. Separation of plant pigments (chlorophyll) by chromatography.

Suggested Readings:

1. Gerald Karp, Cell Biology, Sixth Edition International, Wiley Publications,
2. Sherwood Lauralee Human Physiology: From Cells to Systems,
3. Lodish, H., Berk, A., Zipursky, S. L., Matsudaira, P., Baltimore, D. and James Darnell,
4. Karp, G. Cell and Molecular Biology: Concepts and Experiments. Wiley,
5. Morgan, David O. The Cell Cycle.
6. Hancock, J.T., Cell Signalling.
7. Gray H., Gray's anatomy.
8. Chaurasia B.D., Human Anatomy.
9. Chatterjee C.C., Human Physiology, Medical Allied Agency.
10. Drake R.L., Vogl A.W., Gray's Anatomy, Elsevier
11. Klein Jonathon, Plant Anatomy and Physiology

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