SHIVAJI UNIVERSITY, KOLHAPUR - 416004,
MAHARASHTRA
PHONE:EPABX-2609000, www.unishivaji.ac.in, bos@unishivaji.ac.in
शिवाजी विद्यापीठ, कोल्हापूर -४१६००४,महाराष्ट्र
दूरध्वनी-ईपीएबीएक्स -२६०९०००, अभ्यासमंडळे विभाग दुरध्वनी ०२३१-२६०९०९४
०२३१-२६०९४८७

Estd. 1962
"A++" Accredited by
NAAC (2021)
With CGPA 3.52

Ref.No.SU/BOS/Science/ 368 **Date: 08/09/2026**

The Principal,
All concerned Affiliated Colleges/Institutions
Shivaji University, Kolhapur.

Subject: Regarding revised syllabi of B.Sc. Part-I (Sem. I & II) **Forensic Science (Entire)** degree programme under the Faculty of Science and Technology as per NEP 2020 (2.0)

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the syllabi, nature of question paper **B.Sc. Part-I (Sem. I & II) Forensic Science (Entire)** degree programme under the Faculty of Science and Technology as per National Education Policy 2020 (NEP 2020).

This syllabus, nature of question and equivalence shall be implemented from the academic year 2026-2027 onwards. A soft copy containing the syllabus is attached herewith and it is also available on university website **www.unishivaji.ac.in>Syllabus>Syllabus as per NEP2020.**

You are therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

Yours faithfully,

Dy Registrar

Encl: as above

For information and necessary action

Copy to:

1	I/c Dean, Faculty of Science & Technology	7	I.T.Cell /Computer Centre
2	Director, Board of Examinations and Evaluation	8	Eligibility Section
3	Chairman, Respective Board of Studies	9	Affiliation (T.1) Section
4	B.Sc.-M.Sc. Exam Section	10	Affiliation (T.2) Section
5	Internal Quality Assurance Cell (IQAC Cell)	11	P.G. Seminar Section
6	Appointment A & B Section		

SHIVAJI UNIVERSITY, KOLHAPUR

Established: 1962

A++ Accredited by NAAC (2021) With CGPA 3.52

New Syllabus For

Bachelor of Science

[B.Sc. in Forensic Science (Entire)]

UNDER

Faculty of Science and Technology

B.Sc. Part- I

(Semester - I and II)

STRUCTURE AND SYLLABUS IN ACCORDANCE WITH

***NATIONAL EDUCATION POLICY* - 2020**

HAVING CHOICE BASED CREDIT SYSTEM

WITH MULTIPLE ENTRY AND MULTIPLE EXIT OPTIONS

(TO BE IMPLEMENTED FROM ACADEMIC YEAR 2026-27 ONWARDS)

STRUCTURE OF THE COURSE:

1. TITLE: B. Sc. FORENSIC SCIENCE (Entire)

2. YEAR OF IMPLEMENTATION: 2026-27

3. PREAMBLE:

This syllabus is framed to give sound knowledge with understanding of Forensic Science to undergraduate students. The goal of the syllabus is to make the study of Forensic Science popular, interesting and encouraging to the students for higher studies including research. Forensic science, an intricate and indispensable field, stands as the intersection of science, law, and justice. With its roots dating back centuries, forensic science has evolved into a multidisciplinary domain dedicated to uncovering the truth, elucidating mysteries, and ensuring fairness in the judicial system. In the pursuit of truth, forensic scientists employ a wide range of specialized tools and technologies, from microscopes and chromatography instruments to DNA profiling and digital forensics. They delve into the intricate details of crime scenes, scrutinize patterns, reconstruct events, and untangle complex puzzles to piece together an accurate and comprehensive picture of events.

The contributions of forensic science extend beyond the confines of the laboratory and crime scenes. Forensic experts may testify in court, offering their scientific expertise to help the legal system understand the significance of evidence and the implications it holds for the case at hand. They bridge the gap between science and the law, translating technical jargon into accessible language, and shedding light on the intricacies of complex scientific concepts for judges, juries, and legal professionals. The importance of forensic science cannot be overstated. It plays a vital role in promoting justice, safeguarding innocent lives, and ensuring the guilty are held accountable. It seeks to provide answers to the unresolved questions, to bring closure to grieving families, and to uphold the principles of truth, integrity, and fairness within society.

The syllabus is prepared after discussion at length with a number of faculty members of the subject and experts from Government and private sectors and research fields. The units of the syllabus are well defined, taking into consideration the level and capacity of students.

4. GENERAL OBJECTIVES:

1) Apply scientific knowledge and methodologies to investigate and analyze evidence in order to uncover the truth, establish facts, and assist in the administration of justice.

2) Provide accurate, reliable, and unbiased scientific information that can be used in legal proceedings.

3) To expose the students to various emerging areas of Forensic Science.

4) To prepare students for further studies, helping in their bright career.

5. PROGRAM OUTCOMES:

1) The student will graduate with proficiency in forensic Science.

2) The students will be eligible to continue higher studies in the subject.

3) The students will be eligible to pursue higher education abroad.

4) The students will be eligible to appear for the examination for a job in the government sector.

5) The students will be eligible to appear for jobs with minimum requirement for B.Sc. program.

6. PROGRAM SPECIFIC OBJECTIVES

1) The students are expected to understand the fundamentals, principles, concepts and recent developments in Forensic Science.

2) The practical course is framed in relevance with theory courses to improve understanding of various concepts in Forensic Science.

3) It is expected to inspire and boost interest of students in Forensic Science.

7. PROGRAM SPECIFIC OUTCOMES

1) Understand basics of Forensic Science.

2) Learn, design and perform experiments in the labs to demonstrate the concepts, principles and theories learnt in the classroom.

3) Develop the ability to apply the knowledge acquired in the classroom and laboratories to specific problems in theoretical and experimental Forensic Science.

4) Identify the area of interest in academic research and development.

5) Perform jobs in various fields like banking, private investigative agencies, and research labs and in the field of Government sectors, cyber security, Insurance frauds, and pharmaceuticals.

6) Be an entrepreneur with precision, analytical mind, innovative thinking, and clarity of thought, expression and systematic approach.

8. DURATION: Three years.

9. MEDIUM OF INSTRUCTION: English.

10. ELIGIBILITY FOR ADMISSION:

A candidate shall be admitted to the first year of B.Sc. Forensic Science degree course only if he/she satisfies the following conditions.

He must have passed the 12^{th} Science examination conducted by H.S.C. Examination Board of Government of Maharashtra or an examination recognized as equivalent thereto.

11. EXAM PATTERN: Examination will be semester wise with **60: 40** Patterns

12. STANDARD OF PASSING

A candidate who secures minimum 40% of the marks in each subject/paper will be declared to have passed the examination (Passing- 40%). Separate Passing for Theory and practical examination

13. EXAMINATION STRUCTURE: As per University guidelines

Theory Exam:
Semester end exam**, e**ach paper is of 30 Marks and examination duration is 90 minutes

Practical Exam:
Examination of practical course shall be of total 50 marks per semester. Practical course examination shall be conducted as 30 marks per semester (external) and 20 marks (Internal).

14. STRUCTURE OF COURSE:

SHIVAJI UNIVERSITY, KOLHAPUR **NEP-2020 (2.0): Credit Framework for UG (B. Sc.) Programme under Faculty of Science and Technology**									
SEM (Level)	**COURSES**			**OE**	**VSC/ SEC**	**AEC/ VEC/IKS**	**OJT/FP/CEP/ CC/RP**	**Total credits**	**Degree/Cum. Cr.MEME**
	Course-1	Course-2	Course-3						
SEM-I (4.5)	DSC-I(2) DSC-II (2) DSC P-I(2)	DSC-1(2) DSC-11 (2) DSC P-1(2)	DSC-1(2) DSC-11 (2) DSC P-1(2)	OE-1(2) (T/P)	-	IKS-I(2)	-	**22**	UG Certificate 44
SEM-II (4.5)	DSC-III(2) DSC-IV (2) DSC P-II(2)	DSC-111(2) DSC-IV (2) DSC P-II(2)	DSC-111(2) DSC-IV (2) DSC P-II(2)	OE-2(2) (T/P)	-	VEC-I (2) -DEC	-	**22**	
Credits	**8(T)+4(P)=12**	**8(T)+4(P)= 12**	**8(T)+4(P)=12**	**2+2=4(T/P)**	**--**	**2+2=4**	**--**	**44**	**Exit Option: 4 Credits NSQF/Internship/Skill courses**

	Major		MINOR						
SEM-III (5.0)	Major V(2) Major VI (2) Major P III (2)	--	Major V(2) Major VI (2) Major P- III (2)	OE-3(2) (T/P)	VSC I (2) (P) (Major specific SEC I(2) (T/P)	AEC I (2) (English)	CC-I (2)	**22**	**UG Diploma**
SEM-IV (5.0)	Major VII(2) Major VIII (2) Major P IV (2)	--	Major VII(2) Major VIII (2) Major P- IV (2)	OE-4(2) (T/P)	SEC II(2) (T/P)	AEC II (2) (English) VEC-II (2) (Environmental studies)	CEP-I (2)	**22**	
Credits	**8(T)+4(P)=12**		**8(T)+4(P)= 12**	**2+2=4(T/P)**	4(T/P)+2(P)	2+4=6	2+2=6	**44**	**Exit Option: 4Credits NSQF/Internship/Skill courses**
SEM-V (5.5)	Major IX (2) Major X (2) Major P V (4)	Major I (ELEC) (2) Major P-1 (ELEC) (2)	-	OE-5(2)	VSC II (2) (Major specific) (P)	AEC III (2) (English)	OJT (04)	**22**	**UG Degree 132**
SEM-VI (5.5)	Major XI (2) Major XII (2) Major P VI (4)	Major II (ELEC) (2) Major P-1I(2) (ELEC)	-		VSC III (Major specific) (P) SEC III (2) (T/P)	AEC III (2) (English) IKS 2 (Major specific) (2)	FP-(02)	**22**	
Credits	8(T0+8(P)=16	4(T)+4(P)=8	-	2 (T/P)	2(T/P)+4(P)= 6	4+2=6	4+2=6	**44**	
Total Credits	**40+20=60**		**24**	**10**	**12**	**16**	**10**	**132**	Exit Option

SEMVII (6.0)	Major XIII (4) Major XII (4) Major (P) VII (4) Major (P)-VIII(2)	MAJOR III (4) (ELEC)	RM-I(4)	-	-	-		22	UG Honours Degree 176
SEMVIII (6.0)	Major XV (4) Major XVI (4) Major (P) IX (4) Major (P)-X(2)	MAJOR IV (4) (ELEC)	-	-	-	-	OJT (04)	22	
Credits	**16 (T)+12(P)=28**	**8(T)**	**4**	**-**	**-**	**-**	**04**	**44**	
									Exit Option
Total Credits	**68+28=96**		**28**	**10**	**12**	**16**	**14**	**176**	
SEMVII (6.0)	Major-XIII (4) Major-XIV (4) Major (P)-VIII (2)	MAJOR (4) (ELEC)	RM-I (4)	-		-	**RP-4**	**22**	UG Honours with Research Degree 176
SEMVIII (6.0)	Major-XIII (4) Major-XIV (4) Major (P)-VIII (2)	MAJOR (4) (ELEC)					**RP-8**	**22**	
Credits	16(T)+4(P)=20	8(T)					**12**	**44**	
Total Credits	**60+28=88**		**28**	**10**	**12**	**16**	**22**	**176**	

SHIVAJI UNIVERSITY, KOLHAPUR NEP-2020 (2.0): Credit Framework for UG (B. Sc. Forensic Science) Programme under Faculty of Science and Technology						
Sem.	**Courses**			**OE**	**IKS**	**Credits**
	Course-1	**Course-2**	**Course-3**			
I	**DSC-1(2): Forensic science-I**	**DSC-I (2):Digital and Cyber Forensic-I**	**DSC -I(2) Forensic Chemistry-I**	**OE-I(2)**	**IKS-I(2)**	**22**
	DSC-II (2)- Forensic science-II	**DSC-II (2): Digital and Cyber Forensic-II**	**DSC II(2) Forensic Chemistry-II**			
	DSCP-I (2): Practical course – Lab.-I	**DSCP-I(2) : Practical course –Lab.-I**	**DSCP-I (2): Practical course –Lab.-I**			
II	**DSC-III(2): Advance forensic science-I**	**DSC-III (2): Forensic Biology-I**	**DSC _III(2) : Forensic Physics-I**	**OE-II (2)**	**VEC- I(2)**	**22**
	DSC-IV (2): Forensic Psychology	**DSC-IV (2) : Forensic Biology -II**	**DSC IV (2) : Forensic Physics-II**			
	DSCP-II(2) : Practical course – Lab.-II	**DSCP-II (2) : Practical course –Lab.-II**	**DSCP-II(2) : Practical course –Lab.-II**			
	12Credits	**12Credits**	**12Credits**	**4Credits**	**4Credits**	**44**

15. SCHEME OF TEACHING

Sem.	Courses			OE	IKS	Credits/Hours
	Course-1	Course-2	Course-3			
I	DSC-1(2): Forensic science-I 2 Hours /Week	DSC-I (2): Digital Cyber forensic 2 Hours /Week	DSC -I(2) Forensic Chemistry-I 2 Hours /Week	OE-I(2) 2 Hours /Week	IKS-I(2) 2 Hours /Week	22Cr/ 16hours Theory and 12 hours Practical/ Week
	DSC-II (2)-Forensic science-II 2 Hours /Week	DSC-II (2): Digital Cyber forensics 2 Hours /Week	DSC II(2) : Forensic Chemistry-II 2 Hours /Week	-	-	
	DSCP-I (2): Practical course – Lab.-I 4Hours/Week	DSCP-I(2) : Practical course –Lab.-I 4Hours/Week	DSCP-I (2): Practical course –Lab.-I 4Hours/Week	-	-	
II	DSC-III(2): Advance forensic science-I 2 Hours /Week	DSC-III (2): Forensic Biology 2 Hours /Week	DSC _III(2) : Forensic Physics-I 2 Hours /Week	OE-II (2) 2 Hours /Week	VEC- I(2) 2 Hours /Week	22Cr/ 16hours Theory and 12 hours Practical/ Week
	DSC-IV (2): Forensic Psychology 2 Hours /Week	DSC-IV (2) : Forensic Biology 2 Hours /Week	DSC IV (2) : Forensic Physics-II 2 Hours /Week			
	DSCP-II(2) : Practical course – Lab.-II 4Hours/Week	DSCP-II (2) : Practical course –Lab.-II 4Hours/Week	DSCP-II(2) : Practical course –Lab.-II 4Hours/Week			
	12Credits	12Credits	12Credits	4Credits	4Credits	44

16. EVALUATION STRUCTURE:

SEMESTER-I

Course Name	Course Code			Internal Evaluation			End Semester Exam (ESE)	Practical Exam.	Total Marks	Credits
		CIE-I	CIE-II	CIE-III	Mid - Semester	Total				
Course –I	DSC-I (FST-1)	5	5	5	5	20	30	-	50	2
	DSC-II (FST-2)	5	5	5	5	20	30	-	50	2
	DSCP-I (FSP-1)	5	5	5	5	20	-	30	50	2
Course –II	DSC-I (FST-3)	5	5	5	5	20	30	-	50	2
	DSC-II (FST-4)	5	5	5	5	20	30	-	50	2
	DSCP-I (FSP-2)	5	5	5	5	20	-	30	50	2
Course –III	DSC-I (FST-5)	5	5	5	5	20	30	-	50	2
	DSC-II (FST-6)	5	5	5	5	20	30	-	50	2
	DSCP-I (FSP-3)	5	5	5	5	20	-	30	50	2
	OE-I (FS P-OE-1)	5	5	5	5	20	-	30	50	2
	IKS (FST-IKS-1)	5	5	5	5	20	30	-	50	2
									550	22

SEMESTER II:

Course Name	Course Code	Internal Evaluation					End Semester Exam (ESE)	Practical Exam	Total Marks	Credits
		CIE-I	CIE-II	CIE-III	Mid - Semester	Total				
Course –I	**DSC-III (FST-7)**	**5**	**5**	**5**	**5**	**20**	**30**	**-**	**50**	**2**
	DSC-IV (FST-8)	**5**	**5**	**5**	**5**	**20**	**30**	**-**	**50**	**2**
	DSCP-II (FSP-4)	**5**	**5**	**5**	**5**	**20**	**-**	**30**	**50**	**2**
Course –II	**DSC-III (FST-9)**	**5**	**5**	**5**	**5**	**20**	**30**	**-**	**50**	**2**
	DSC-IV (FST-10)	**5**	**5**	**5**	**5**	**20**	**30**	**-**	**50**	**2**
	DSCP-II (FSP-5)	**5**	**5**	**5**	**5**	**20**	**-**	**30**	**50**	**2**
Course –III	**DSC-III (FST-11)**	**5**	**5**	**5**	**5**	**20**	**30**	**-**	**50**	**2**
	DSC-IV(FST-12)	**5**	**5**	**5**	**5**	**20**	**30**	**-**	**50**	**2**
	DSCP-II(FSP-6)	**5**	**5**	**5**	**5**	**20**	**-**	**30**	**50**	**2**
	OE-II(FSP-OE-2)	**5**	**5**	**5**	**5**	**20**	**-**	**30**	**50**	**2**
	VEC(FST-VEC-1)	**5**	**5**	**5**	**5**	**20**	**30**	**-**	**50**	**2**
									550	**22**

OE: Open Elective Course, IKS: Indian Knowledge System, VEC : Value Education Course

17.Syllabus

Semester-I
Course -I
DSC-1: Forensic science-I (Credits-2) 2hrs lecture/ Week

Course Objectives: Students should be able to…
1) Study the scope of forensic science
2) Study historical development
3) Learn the different branches of forensic Science.
4) Study organizational set up of laboratories
5. Understand the concept of crime

Course Outcomes: The students will be able to...
1) Explain scope of forensic science
2) Classify schools of criminology.
3) Explain laboratory organizational set up
4) Describe causes of crime concept of crime.

Module	Title	No. of hours
Unit -I	**1.Introduction to forensic science**	15
	1.1 Definition and scope of forensic science 1.2 History and Development of forensic science 1.3 Terminology in forensic science 1.4 Principles of forensic science 1.5 Functions of forensic science	
	2.Branches of forensic science	
	2.1 Forensic physics 2.2 Forensic chemistry 2.3 Forensic biology 2.4 Forensic toxicology 2.5 Forensic ballistics 2.6 Forensic psychology 2.7 Computer forensics 2.8 Forensic anthropology	
Unit-II	**3.Organization of forensic science laboratory**	
	3.1 Forensic science laboratories in India	
	3.2 Hierarchical setup of central forensic science laboratories 3.3 State forensic science laboratories 3.4 Fingerprints Bureaus, National crime records Bureau and Police and detective training schools, 3.5 Directorate of Forensic science and Mobile crime	

	laboratories	
	4. Scene of crime	
	4.1 Definition and scope of crime 4.2 Types of scene of crimes (Indoor ,outdoor, mobile) 4.3 Protection and preservation scene of crime (Videography, photography, sketching, searching methods) 4.4 Quality assurance in forensic science 4.5 Ethical principles and code of conduct in forensic science	**15**

Suggested readings:

1. Henry Lee's Crime Scene Handbook**:**Henry C Lee
2. Forensic Biology**:**Shrikant H. Lade
3. Crime Scene Processing and Laboratory Work Book **:** Patric Jones
4. Forensic Science: An Introduction to Scientific and Investigative Techniques 3rd ed. **:** Stuart H. James
5. Criminalistics: An Introduction to Forensic Science, 9th edn.**:** Richard Saferstein
6. Introduction to Forensic Sciences edited by William G. Eckert:
7. Textbook of Forensic Science edited by Pankaj Shrivastava
8. Forensic Science by Andrew R. W. Jackson, Julie M. Jackson, Harry Mountain and Daniel Brearley
9. Fundamentals of Forensic Science by Max M. Houck; Jay A. Siegel
10. Forensic Science: an introduction to scientific and investigative techniques by Suzanne Bell

Semester-I

Course-I

DSC-II - Forensic science-II (Credits-2)) 2hrs lecture/ Week

Course Objectives: Students should be able to…
1) Study theories of criminal behaviour
2) Learn concept of crime
3) Study crime and victimology .
4) Understand the criminal justice system

Course Outcomes: The students will be able to...
1) Explain theories of criminal behavior
2) Describe crime
3) Explain victimology
4) Describe Criminal justice system

Module	Title	No. of hours
Unit -I	**1.Basics of criminology**	**15**
	1.1 Definition, aim and scope 1.2 Theories of criminal behaviour –Classical, positivist and Sociological 1.3 Criminal Anthropology 1.4 Criminal profiling, Understanding mode of operanti	
	2.Crime	
	2.1 Element of crime 2.2 Nature of crime 2.3 Causes and consequences of crime 2.4 Deviant behaviour 2.5 Hate crimes and organized crimes 2.6 Public disorders, Domestic violence, Workplace violence and White Collar Crimes	
Unit-II	**3. Crime and Victimology**	**15**
	3.1 Definition and nature of victims 3.2 Victimology and Juvenile delinquency 3.3 Social changes and Crime 3.4 Psychological disorders and criminality 3.5 Situational crime prevention	
	4. Criminal Justice System	

	4.1 Broad components of criminal justice system 4.2 Policing style , principles Police's power of investigating and Filling of criminal charges 4.3 Community policing and policing of heterogenous society 4.4 Correctional measures and rehabilitation of offenders 4.5 human rights and Criminal justice system in india	

Suggested readings:

1. Law & Justice Forensic Science Revolution Of Criminal Law And Trends By Rajasi Guharoy, Anandita Thakur, Vyakhya Baweja Edition 2025.
2. Criminal Justice: A Very Short Introduction By Julian V. Roberts
3. Vinod Publication Criminal Justice System by Y P. Bhagat Edition 2019.
4. Criminal Justice by Ian Robinson
5. Criminology-1,Crime & Criminology by S.R.Myaneni, 2017
6. Computer Crime and Computer Forensic**:**Dr. R.K. Tiwari
7. Criminal Profiling: An Introduction to a Behavioral Evidence Analysis, 3rd edn. **:** BrentE. Turvey
8. Forensic Science in Criminal Investigation and Trial, 4th edn.**:** B.R. Sharma
9. Text Book of Medical Jurisprudence, Forensic Medicine and Toxicology**:** Parikh C.K.
10. The Identification of Firearms and Forensic ballistics **:** Barrard and Gerald

Semester –I

Course -I

DSCP-I: Practical course –Lab.-I (Based on DSC-I and DSC-II) (Credits -2) 4hrs/Week

Course Objectives: Students should be able to…
1) Study history of crime cases and case study
2) Study data collection and report preparation
3) Understand sections of forensic science and criminal behavior
4) Understand rehabilitation procedure

Course Outcomes: The students will be able to...
1) Explain case study
2) Describe the process of data collection and report preparation
3) Explain sections of forensic science and criminal behavior
4) Describe rehabilitation procedure

Practical

1. To study and prepare report of the history of crime cases from forensic science perspective
2. To study examples of crime cases in which apprehensions arose because of Daubert standards
3. To review the sections of forensic science a INTERPOL
4. To collect data of crime cases from annual reports of NCRB and depict the data by smart art and templates
5. To prepare report on different types of crime cases
6. To examine the hierarchical setup of different forensic science establishments
7. To review past criminal cases and elucidate which theory best explains the criminal behaviour of the accused
8. To review the crime cases where criminal profiling assisted the police to apprehend the accused
9. To Study and prepare report of example of crime cases in which the media acted as a pressure group
10. To correlate deviant behaviour of the accused with criminality (Specific Example)
11. 11.To evaluate victimology in a heinous crime
12. To examine a cases of juvenile delinquency and suggest remedial measures
13. To examine steps being taken for rehabilitation of former convicts and suggests improvements
14. To visit nearest Police Station and prepare report on FIR filing procedure
15. To visit rehabilitation centre and submit a report

Suggested reading:

1. Basic Concepts in Criminology: Handbook for Law Enforcement Personnel by Asongwe N. Thomas
2. Criminal Investigation: A Practical Handbook by Hans Gross
3. Criminology: A Complete Introduction by Peter Joyce and Wendy Laverick
4. Criminalistics Laboratory Manual: The Basics of Forensic Investigation by Elizabeth Erickson
5. Crime Scene Processing and Laboratory Workbook by Patrick Jones,
6. Crime Scene Investigation Laboratory Manual by Marilyn T. Miller.

Semester-I
Course -2
DSC-I Digital and Cyber forensic-I (Credits-2) 2hrs lecture/ Week

Course Objectives: Students should be able to…
1) Gain basic knowledge of computers
2) Learn basics of operating system,.
3) Study basics of networking and file system
4) Learn basics of internet

Course Outcomes: The students will be able to...
1) Explain the basic information of computers
2) Understand operating system
3) Describe networking and file system.
4) Explain about internet

Module	Title	No. of hours
Unit -I	**1. Fundamentals of Computers**	15
	1.1 Basics of Computers: Computer organization, 1.2 Input and Output devices, 1.3 Central Processing Unit, 1.4 Types of Memory – RAM, ROM etc. 1.5 Understanding working of internal and external Storage devices	
Unit-II	**2.Basics of operating system**	
	2.1 Introduction to Operating System 2.2 Process management 2.3 Concurrency 2.4 Scheduling 2.5 Synchronization, 2.6 Examples of operating Systems – Windows and Dos, Linux. 2.7 Types of Computers, Internal and external parts of computers - connectors, sockets etc.	
Unit-III	**3.Basics of networking**	15
	3.1 Basics of Networking-Types of topologies, 3.2 LAN, MAN, WAN, SAN, CAN etc. 3.3 Types of internet connections (Dialup, DSL, Cable, broadband, leased line, satellite, Wi-Fi, 3G-4G) 3.4 ISP, IP grouping.	

Unit-IV	**4.Basics of internet**	
	4.1 Introduction to Internet web and cloud-based application 4.2 World Wide Web 4.3 E-mails 4.4 Chat 4.5 Search Engines 4.6 Types of portals 4.7 Networking Protocols	**15**

Suggested readings:

1. Singh P.K. Introduction to Computer Networks, VK Global Publications Pvt Ltd; 2020th Edition (1 January 2020); VK Global Publications Pvt Ltd: 1 Jan 2020
2. Miller Michael. Computer basic Absolute Beginner's Pearson Publication, 9th Edition: 2020
3. Singh P K. Basic of Computer, V k Global Publication 2015
4. Thareja Reema. Fundamentals of Computer, Oxford Publication: 4 June 2014.
5. Computer Fundamentals: Concepts, Systems & Applications, 8th Edition. Pradeep K.
6. Sinha and Priti Sinha- 2020-2021**.**
7. Operating System Concepts, 10th Edition by Abraham Silberschatz, Peter B. Galvin and Greg Gagne, 2018.
8. Modern Operating Systems, 5th Edition by Andrew S. Tanenbaum and Herbert Bos., 2022.
9. Operating Systems: Internals and Design Principles, 9th Edition by William Stallings,2018.
10. Computer Networking: A Top-Down Approach, 9th Edition by James F. Kurose and Keith W. Ross, 2025.
11. Data Communications and Networking, 5th Edition by Behrouz A. Forouzan, 2013.
12. Computer Networking: A Top-Down Approach, 9th Edition by James F. Kurose and Keith W. Ross, 2025.

Semester-I

Course-2

DSC-II - Digital and cyber forensic -II (Credits-2) 2hrs lecture/ Week

Course Objectives: Students should be able to…
1) Understand digital and cyber forensic and its applications.
2) Learn network security
3) Study cyber crime and digital evidences
4) Comprehend the basic tools and Software required for analysis of Cybercrimes.

Course Outcomes: The students will be able to...
1) Define the basic concepts related to networking.
2) Explain the Networking and its types.
3) Describe the types of Internet connections.
4) Discuss technology related networking

Module	Title	No. of hours
Unit -I	**1. Network Security**	15
	1.1 Network security threats 1.2 Vulnerabilities 1.3 Access control 1.4 Virus 1.5 Trojans 1.6 Security plan and policies	
	2. Cyber crimes and digital evidence	
	2.1 What is cyber crime 2.2 Types of cyber crimes 2.3 Digital evidence 2.4 Digital vs Physical Evidence 2.5 Nature of Digital Evidence 2.6 Precautions while dealing with Digital Evidence.	
Unit-II	**3. Computing Investigations**	15
	3.1 Understanding computing investigations 3.2 Procedure for corporate high-tech investigations 3.3 Understanding data recovery 3.4 Workstation 3.5 Software conducting investigations	
	4. Crimes and incident scenes	
	4.1 Processing crimes and incident scenes	

	4.2 Securing a computer incident or crime 4.3 Seizing digital evidence at scene 4.4 Storing digital evidence 4.5 Obtaining digital hash Reviewing case.	

Suggested readings:

1. Guide to Computer Forensics and Investigations, 6th Edition by Bill Nelson, Amelia Phillips and Christopher Steuart, 2019.
2. Network Security Essentials: Applications and Standards, 7th Edition by William Stallings, 2024.
3. Computer Security: Principles and Practice, 5th Edition by William Stallings and Lawrie Brown, 2024.
4. Cybercrime and Digital Forensics: An Introduction, 2nd Edition by Marjie T. Britz, 2013.
5. Digital Evidence and Computer Crime: Forensic Science, Computers and the Internet, 3rd Edition by Eoghan Casey, 2011.
6. Digital Forensics with Open Source Tools by Cory Altheide and Harlan Carvey, 2011.
7. The Basics of Digital Forensics: The Primer for Getting Started in Digital Forensics by John Sammons, 2012.
8. Computer Forensics: Computer Crime Scene Investigation, 2nd Edition by John R. Vacca, 2005.
9. File System Forensic Analysis by Brian Carrier, 2005.
10. James, S.H. and Nordby, J.J. Forensic Science: An Introduction to Scientific and Investigative Techniques. CRC Press: USA; (2003).
11. Barry, A.J. Fisher- Techniques of Crime Scene Investigation, 7th ed. R.C. Press, New York(2003)

Semester –I

Course- 2

DSCP-I: Practical course –Lab.-I (Based on DSC-I and DSC-II (Credits -2) 4hr/Week

1. Identifying and Demonstrating Input, Output Devices and Parts of CPU.
2. Understanding and performing basic computer and networking operations
3. To study working of Internal and External Storage Devices
4. To study OS Structure, functions and process management in Windows
5. To study Concurrency and Scheduling in OS
6. Understanding and performing basic computer operations
7. To study working of Internal and External Storage Devices.
8. To study use of E-mail, creating e-mail, Sending and Receiving emails with Attachments
9. To study networking commands-like ping, IP-configuration, etc., with various switches
10. To study tracing E-mail, finding sender's IP address, of received email, tracing route of email Received using tools available on internet, e.g. Visual Trace Route etc commands-like ping, IP-configuration, etc., with various switches
11. Working with MS-office (word, excel, power-point).
12. To understand the Cyber Crime Investigation Process: Forensics Readiness, Warrants and Secure the crime scene, Collect the evidence, secure the Evidence
13. To understand the Searching and Seizing of Evidences.
14. Understanding the working of Firewall.
15. To understand the Cyber Crime Investigation Process: Forensics Readiness, Warrants and Secure the crime scene, Collect the evidence, secure the Evidence
16. To study the Searching and Seizing of Evidences.

Suggested reading:

1. Singh P.K. Introduction to Computer Networks, VK Global Publications Pvt Ltd; 2020th edition (1 January 2020); VK Global Publications Pvt Ltd: 1 Jan 2020
2. Miller Michael. Computer basic Absolute Beginner’s Pearson Publication, 9th Edition; 2020
3. Singh P K. Basic of Computer, V k Global Publication 2015
4. Thareja Reema. Fundamentals of Computer, Oxford Publication: 4 June 2014

5. Lyman M.D. Criminal Investigation- The Art and the Science. Pearson Education: India; (2013)
6. Morley D. Understanding Computers today 14th Edition Cengage Learning Publication: Feb. 2012
7. James, S.H. and Nordby, J.J. Forensic Science: An Introduction to Scientific and Investigative Techniques. CRC Press: USA; (2003).
8. Barry, A.J. Fisher- Techniques of Crime Scene Investigation, 7th ed. R.C. Press, New York (2003)
9. Sharma, B.R. Forensic Science in Criminal Investigation and Trails. Universal Law Publishing: (2003).
10. Meguire, M., Morgan, R. and Reiner, R. The Oxford Handbook of Criminology 2nd ed. Oxford University Press: New York; (2002)
11. Bell, W.R. Practical Criminal Investigation in Correctional Facilities. CRC Press: London; (2001).
12. Nanda, B.B. and Tiwari, R.K. Forensic Science in India- A Vision for the Twenty First Century. Select Publisher: New Delhi; (2001)
13. Prof. S. Venkatachalam. Introduction to Computers, New Delhi, Educational Publisher, 1999.
14. Saferstein, R. Criminalistics -An Introduction to Forensic Science. Prentice Hall: USA; (1995). Introduction to C **:**Kanetkar
15. Kent, K., Chevalier, S., Grance, T. & Dang, H. (2006). Guide to Integrating Forensic
16. Techniques into Incident Response, NIST Special Publication,
17. Nelson, B., Phillips, A. & Steuart, C. (2004). Guide to Computer Forensics and Investigations,
18. Vacca, J. R. (2002). Computer Forensics: Computer Crime Scene Investigation,
19. Casey, E. (2000). Digital Evidence and Computer Crime: Forensic Science, Computers and the Internet,
20. Prosise, C. & Mandia, K. (2003). Incident Response and Computer Forensics,

Semester – I,
Course -3
DSC-II : Forensic Chemistry-I (Credits-2) 2hrs Lecture/Week

Course Objectives: Students should be able to… 1) Study nomenclature of chemicals 2) Study types chemical bonding 3) Learn about petroleum products 4) Understand the gravimetric analysis and chromatography .		
Course Outcomes: The students will be able to... 1) Explain nomenclature of chemicals 2) Describe chemical bondings 3) Discuss the petroleum products 4) Explain gravimetric analysis and chromatography techniques		
Module	**Title**	**No. of hours**
Unit-I	**1. Basic Nomenclature chemistry:**	**15**
	1.1 IUPAC nomenclature of alkanes with examples 1.2. IUPAC nomenclature of alkenes 1.3 IUPAC nomenclature of haloalkanes 1.4 IUPAC nomenclature of alcohol and ether aldehydes 1.5 IUPAC nomenclature of ketones and carboxylic acids 1.6 IUPAC nomenclature of nitro compounds, nitrites including aromatic compounds.	
	2. Chemical Bonding:	
	2.1 Definition, Types of chemical bond, 2.2.Covalent Bond Characteristic, hybridization, various types of hybridization and shapes of simple molecules, bond strength and bond energy 2.3 Ionic bonds - definitions, factors affecting ionic bond formation 2.4 Hydrogen bonding, Van-der-Waals forces, coordination bond	
Unit-II	**3. Petroleum products** :	**15**
	3.1 Composition and Classification, 3.2 Definition of flash Point and fire Point 3.3 Knocking, octane number, aniline Point. 3.4Refining of Petroleum- cracking, thermal & catalytic cracking.	
	4. Gravimetric analysis and Chromatography:	

	4.1 Precipitation, digestion, filtration, washing, incineration, with reference to estimation of barium sulphate, 4.2 Volumetric analysis- standard solution,types of titrations- Acid-base or neutralisation titration, complexometric titrations, redox titration and double titration method, 4.3 Chromatographic separation- definition andclassification of chromatographic techniques and liquid chromatography	

Suggested readings:

1. Bansal, R. K. *A Textbook of Organic Chemistry*, 7th Edition. S. Chand & Company, 2010.
2. Clayden, Jonathan; Greeves, Nick; Warren, Stuart; and Wothers, Peter. *Organic Chemistry*, 2nd Edition. Oxford University Press, 2012.
3. Lee, J. D. *Concise Inorganic Chemistry*, 5th Edition. Blackwell Science/John Wiley, 1996.
4. Atkins, P. W.; de Paula, Julio; and Keeler, James. *Atkins' Physical Chemistry*, 10th Edition. Oxford University Press, 2010.
5. Jain, P. C. and Jain, Monica. *Engineering Chemistry*, 17th Edition. Dhanpat Rai Publishing Company, 2018.
6. Dara, S. S. and Umare, S. S. *A Textbook of Engineering Chemistry*, 12th Edition. S. Chand & Company, 2018.
7. Mendham, J.; Denney, R. C.; Barnes, J. D.; and Thomas, M. J. K. *Vogel's Textbook of Quantitative Chemical Analysis*, 6th Edition. Prentice Hall, 2000.
8. Skoog, Douglas A.; West, Donald M.; Holler, F. James; and Crouch, Stanley R. *Fundamentals of Analytical Chemistry*, 9th Edition. Cengage Learning, 2014.
9. Skoog, Douglas A.; Holler, F. James; and Crouch, Stanley R. *Principles of Instrumental Analysis*, 7th Edition. Cengage, 2017.
10. Willard, H. H.; Merritt, L. L.; Dean, J. A.; and Settle, F. A. *Instrumental Methods of Analysis*, 7th Edition. CBS Publishers, 2005

Semester – I
Course -3

DSC-I: Forensic Chemistry-II (2 Credits) 2hrs Lecture/Week

Course Objectives: Students should be able to… 1) Study the properties of liquids. 2) Study concentrations of solutions and distillations. 3) Learn thermo chemistry. 4) Understand the chemical kinetics.
Course Outcomes: The students will be able to... 1) Explain the properties of liquids 2) Describe preparation of solutions and distillation process. 3) Discuss the concept of thermo chemistry 4) Explain chemical kinetics

Module	Title	No. of hours
Unit-I	**1. Chemistry of Liquids**	15
	1.1 Free volume of liquid and density measurement 1.2 Physical properties of liquid, Vapor pressure, surface tension surfactants, viscosity, molar refraction, optical activity 1.3 Structure of liquid, determination of surface tension by stalagnometer method(drop number method) 1.4. Viscosity by Ostwald's viscometer method and refractive index by Abbe's refractometer method. 1.5 Effect of temperature on surface tension, viscosity and refractive index	
	2. Chemistry of Solutions:	
	2.1 Method of exploring concentration of solutions, binary liquids, vapor pressure, 2.2 Composite diagram of binary liquids and solutions, 2.3 Distillation, fractional distillations, vacuum distillations. 2.4 Conductance and conductometry	
	2.5 Electro motive force and potentiometry	
Unit-II	**3. Thermochemistry**:	
	3.1 Change in internal energy, enthalpy of reaction, relation between ΔH and ΔE, 3.2 Different types of thermochemical equations, energy change during transition or phase change, bond energy.	15
	4.Kinetics:	

	4.1 Chemical kinetics and its scope, 4.2.Rate of a reaction, factors influencing the rate of a reaction 4.3 Simple chemical reactions - zero order, first order, second order, and pseudo order reaction, Examples of first and second order reactions namely decomposition of H2O2, hydrolysis of methyl acetate, inversion of cane sugar and saponification of ethyl acetate 4.4 Half-life and mean life	

Suggested readings:

1. Puri, B. R.; Sharma, L. R.; and Pathania, M. S. *Principles of Physical Chemistry*, 47th Edition, Vishal Publishing Co., 2016.
2. Atkins, P. W.; de Paula, Julio; and Keeler, James. *Atkins' Physical Chemistry*, 11th Edition, Oxford University Press, 2018..
3. Levine, Ira N. *Physical Chemistry*, 6th Edition, McGraw-Hill, 2009.
4. Castellan, Gilbert W. *Physical Chemistry*, 3rd Edition, Addison-Wesley, 1983
5. Glasstone, Samuel. *Textbook of Physical Chemistry*, 2nd Edition, Macmillan, 1974.
6. Laidler, Keith J. *Chemical Kinetics*, 3rd Edition, Harper & Row, 1987.
7. Rajaram, J. and Kuriacose, J. C. *Thermodynamics for Students of Chemistry: Classical, Statistical and Irreversible*, 3rd Edition, Shoban Lal & Co., 2013.
8. Maron, S. H. and Lando, J. B. *Fundamentals of Physical Chemistry*, Collier Macmillan, 1974.
9. Benson, Sidney W. *Thermochemical Kinetics: Methods for the Estimation of Thermochemical Data and Rate Parameters*, 2nd Edition, John Wiley & Sons, 1976.
10. Frost, Arthur A. and Pearson, Ralph G. *Kinetics and Mechanism: A Study of Homogeneous Chemical Reactions*, 2nd Edition, John Wiley & Sons, 1961.

Semester –I
Course -3
DSCP-I: Practical course –Lab.-I (Based on DSC-I and DSC-II) (Credits -2) 4hrs/Week

Course Objectives: Students should be able to… 1) Study apparatus and instruments used in forensic science laboratories 2) Study hydrolysis and saponification processes 3) Learn determination of viscosity and surface tension 4) Study techniques used in forensic science
Course Outcomes: The students will be able to... 1) Explain instruments used in forensic science laboratories 2) Describe process of hydrolysis and saponification . 3) Determine viscosity and surface tension 4) Explain techniques used in forensic science

Practicals

1. Introduction to Forensic Chemistry lab apparatus and instruments
2. To determine hydrolysis of methyl acetate catalyzed by acid.
3. To estimate saponification of ethyl acetate with NaOH.
4. To find out rate of reaction of decomposition of iodide by H2O2.
5. To determine the relative viscosity of given liquid by using Ostwald's Viscometer.
6. To determine percentage composition of a given mixture of liquids by viscosity method.
7. To determine surface tension of the given liquid by using stalagmometer.
8. Standardization of given liquid by primary standard
9. TLC/paper chromatography: Qualitative separation of mixture of dyes using cyclohexane and ethyl acetate (8.5:1.5).
10. Chromatographic separation of 2, 4 DNP derivative of acetone and butanone-2 using toluene-petroleum ether (40:60).
11. To determine strength of given acid
12. Determination of alkali content in antacid tablet using HCl.
13. Estimation of hardness of water by EDTA.

14 Identification of organic compound

15 To prepare acetanilide from aniline by Acetylation

Suggested readings

1. Principles of Physical Chemistry and Puri, Sharma and Pathania

2.Advanced Inorganic Chemistry Vol II by Madan , Malik and Tuli

3.Organic Chemistry by Moris and Boyed.

4. Heterocyclic Chemistry by Gupta and Kumar Vol I and Vol II

5. Instrumental Analysis by Skoog, Holler and Crouch.

6. Essential of Physical Chemistry by Bahl, Bahl and Tuli.

7. Analytical Chemistry by G. R. Chatwal, Himalaya Publication.

8. Instrumental Methods of Analysis, Seventh Edition by Willard, Merrit, Dean and Settle.

9. Analytical Chemistry by Dr. Alka Gupta.

10. Instrumental Method of Analysis by G. R. Chatwal and S. K. Anand, Himalaya

Sem. II

Course-1

DSC-III: Advanced Forensic Science-I (2 Credits) 2Lectures/Week

Course Objectives: Students should be able to…

1) Earn the basics and concepts related to criminology.
2) Classify schools of criminology.
3) Study the crimes in India.
4) Understand the nature and scope of criminology.

Course Outcomes: The students will be able to...

1) Explain concept of crime.
2) Classify schools of criminology.
3) Explain crime scene management and investigation
4) Describe causes of crime.

Module	Title	No. of hours
Unit-I	**1. Basics Of Criminology**	**15**
	1.1 Introduction to Criminology- Definition, aim and scope, Theories of Criminal behavior- Classical school, Positivist school, Italian school and Chicago school of criminology. 1.2 Criminal Justice System- Definition, objective and goals of criminal justice system. Principles of criminal justice, Criminal justice system in India: Major components and Steps.	
	2. Juvenile Delinquency	
	2.1 Juvenile Delinquency- Causes and theories, Juvenile justice system, Prevention and intervention strategies. 2.2 Crime Typologies- Violent crimes, Property crimes, White-collar crimes, Cybercrimes.	
Unit-II	**3. Crime Scene Management**	**15**
	3.1 Introduction to Crime Scene Management: Definition and Significance of crime scene management, Roles and responsibilities of first responders. 3.2 Securing the Crime Scene: Establishing and maintaining the perimeter, controlling access and managing personnel at the crime scene. 3.3 Crime Scene Protocols: Step-by-step procedures from arrival to release of the scene, ensuring scene safety and preservation of evidence	

	3.4 Documentation and Reporting: Importance of accurate and thorough documentation, Reporting procedures and record maintenance.	
	4. Crime Scene Investigation	
	4.1 Introduction to Crime Scene Investigation Basics of crime scene investigation, types of crime scenes, and classification of evidence. 4.2 Crime Scene Survey and Search Methods Scene walkthrough, search patterns, and systematic evidence identification. 4.3 Evidence Collection and Preservation Methods of collecting, packaging, preserving, and transporting evidence safely using PPE. 4.4 Crime Scene Reconstruction Reconstruction of events using forensic analysis and modern technologies such as 3D modelling.	

Suggested readings:

1. Sutherland, E. H. and Cressey, D. R., *Principles of Criminology*, 11th Edition, J. B. Lippincott Company, 1978.
2. Siegel, L. J., *Criminology: Theories, Patterns, and Typologies*, 13th Edition, Cengage Learning, 2018.
3. Akers, R. L. and Sellers, C. S., *Criminological Theories: Introduction, Evaluation, and Application*, 7th Edition, Oxford University Press, 2013.
4. Paranjape, N. V., *Criminology and Penology*, 18th Edition, Central Law Publications, 2021.
5. Siegel, L. J. and Welsh, B. C., *Juvenile Delinquency: Theory, Practice, and Law*, 13th Edition, Cengage Learning, 2018.
6. Lyman, M. D., *Criminal Investigation: The Art and the Science*, 8th Edition, Pearson, 2014.
7. Fisher, B. A. J. and Fisher, D. R., *Techniques of Crime Scene Investigation*, 9th Edition, CRC Press, 2012.
8. Saferstein, R., *Criminalistics: An Introduction to Forensic Science*, 12th Edition, Pearson, 2020.
9. James, S. H. and Nordby, J. J. (eds.), *Forensic Science: An Introduction to Scientific and Investigative Techniques*, 4th Edition, CRC Press, 2014.
10. Gardner, R. M. and Krouskup, D., *Practical Crime Scene Processing and Investigation*, 2nd Edition, CRC Press, 2018.

Sem. II

Course-1

DSC-IV: Forensic Psychology (2 Credits) 2 lectures /Week

Course Objectives: Students should be able to…

1) Learn the basics and nature of forensic psychology.
2) Study biological perspectives of behavior
3) Study sensation and perception in forensic science .
4) Understand the cognition and intelligence.

Course Outcomes: The students will be able to...

1) Explain concept of forensic psychology.
2) Classify Nervous system
3) Define sensation and perception.
4) Describe theories and types. Intelligence

Unit-I	**1.Introduction to Psychology**	
	1.1 What is Psychology –Nature, Definition and its Goals 1.2History of Psychology, Psychology: The Science, Early Schools of Psychology 1.3. Modern Perspectives, and Scientific Study 1.4 Methods in Psychology- Naturalistic Observation, Experimental, Case Studies and Survey	
	2. Biological Perspectives of Behavior:	
	2.1Neurons -structure and function 2.2 Synapse,and neurotransmitters, Neuron and Nerves; Building the Network, 2.3 Central Nervous System and Peripheral Nervous System, 2.4 The Brain-structure and function, Glandular system.,	
Unit-II	**3. Sensation and Perception**:	
	3.1Definition, Perceptual constancies 3.2 Gestalt Principle of Perception-perceptual organization and Grouping of Stimuli in Perceptual 3.3 Organization, Depth Perception, Errors in Perception-Illusion, Hallucination	
	4.Cognition and Intelligence:,	

	4.1 Attention, Factors Influencing Attention 4.2 Types of Attention, Thinking-mental images, concepts, prototypes, Problem Solving and Decision Making 4.3 Intelligence, Measuring Intelligence-concept in measuring intelligence (C.A., M.A., I.Q), 4.4. Theories of Intelligence, Emotional intelligence, Individual,Differences in Intelligence- mental retardation, giftedness, What is 4.5 Psychological Tests?, Types of Tests, Characteristics of a good test.	

Suggested readings:

1. Coon, D. and Mitterer, J. O., *Introduction to Psychology: Gateways to Mind and Behavior*, 14th Edition, Cengage Learning, 2014.
2. Baron, R. A. and Misra, G., *Psychology: Indian Subcontinent Edition*, 5th Edition, Pearson Education, 2018.
3. Nolen-Hoeksema, S., Fredrickson, B. L., Loftus, G. R. and Wagenaar, W. A., *Atkinson & Hilgard's Introduction to Psychology*, 16th Edition, Cengage Learning India, 2014.
4. Feldman, R. S., *Understanding Psychology*, 6th Edition, Tata McGraw-Hill, 2004.
5. Morgan, C. T., King, R. A., Weisz, J. R. and Schopler, J., *Introduction to Psychology*, 7th Edition, Tata McGraw-Hill, 2001 (Indian reprints available).
6. Chadha, N. K. and Seth, S., *The Psychological Realm: An Introduction*, Revised Edition, Pinnacle Learning, 2014.
7. Ciccarelli, S. K. and Meyer, G. E., *Psychology: South Asian Edition*, Pearson Education, 2008.
8. Anastasi, A. and Urbina, S., *Psychological Testing*, 7th Edition, Prentice Hall, 1997.
9. Singh, A. K., *Uchchtar Samanya Manovigyan*, Motilal Banarsidass, 2000.
10. Atkinson, Rita L.; Atkinson, Richard C.; Smith, Edward E.; Bem, Daryl J.; and Nolen-Hoeksema, Susan. *Hilgard's Introduction to Psychology*, 14th Edition, Harcourt College Publishers, 2000.

Sem. II

Course-1

DSCP-II –Laboratory-II (DSC III and DSC-IV) 4hrs /Week

Course Objectives: Students should be able to…

1) Learn Mock trials
2) Study crime scene recording
3) Study crime investigation methods .
4) Understand behavior pattern

Course Outcomes: The students will be able to...

1) Explain steps involved in mock trislds.
2) Classify Nervous system
3) Explain investigation methods
4) Describe behavior pattern

Practicals

1. Organize a mock trial where students take on roles as prosecutors, defense attorneys, judges, and jury members.

2. Analyze a case from a forensic psychology perspective, focusing on the psychological aspects of criminal behaviour and mental health issues.

3. To perform Note taking, photography and videography of crime scene

4. To prepare a crime scene sketch by using various methods

5. To prepare report on crime scene investigation.

6. To investigate the indoor crime scene.

7. To investigate the outdoor crime scene.

8. To study different types of crime scene kit and its uses.

9. Analyze case studies to understand victimization, focusing on different types of crimes

10. To study recall-recognition

11. To study Bilateral Transfer

12. To study type A/B behavior patterns- UpinderDhar& Jain M

13.To perform Sinha's Comprehensive Anxiety Test – A.K.P. Sinha& L.N.K. Sinha

14. To study and prepare report on Facial expression

15. To perform Illusion (Muller-Lyre) test

Reference Book

1. Siegel, Larry J., and John L.. Worrall. Essentials of Criminal Justice. 10th ed. Boston: Cengage Learning, 2019.
2. O'Hara, Charles E., and Gregory L. O'Hara. Fundamentals of Criminal Investigation. 7th ed. Springfield: Charles C Thomas Publisher, Ltd., 2013.
3. Gardner, Ross, and Donna Krouskup. Practical Crime Scene Processing and Investigation. 2nd ed. Boca Raton: CRC Press, 2018.
4. Peterson, Joseph L., Steven G. Mihajlovic, and Michael J. Gilliland. "Forensic Science and the Courts: The Uses and Effects of Scientific Evidence in Criminal Case Processing." Journal of Forensic Sciences 29, no. 4 (1984): 959-971.
5. Turvey, Brent E. "Criminal Profiling: An Introduction to Behavioral Evidence Analysis." Journal of Forensic Psychology Practice 1, no. 3 (2001): 29-53.
6. Inman, Keith, and Norah Rudin. "The Origin of Evidence and the Role of the Crime Laboratory in the Criminal Justice System." Science & Justice 42, no. 1 (2002)
7. Mobile Forensic Investigations: A Guide to Evidence Collection, Analysis, and Presentation, Second Edition 2nd Edition by Lee Reiber.
8. Practical Mobile Forensics: Forensically investigate and analyze iOS, Android, and Windows 10 devices, 4th Edition Paperback April 9, 2020 by Rohi Tamma (Author), Oleg Skulkin (Author), Heather Mahalik (Author), Satish Bommisetty (Author).
9. Handbook of Digital Forensics and Investigation 1st Edition by Eoghan Casey, Elsevier Academic Press 2010.
10. Psychology, (2006) Ciccarelli, S. K. & Meyer G. E. New Delhi; Perason Education
11. Introduction to Psychology, (1986) Morgan C.T., King R.A., Weisz J.R., Schopler J., McGraw-Hill Book Co.
12. Principles of General Psychology,3rd ed. Kimble G.A., Garmezy, , New York.
13. Psychology, (2001), Baran R.A. New Delhi; Person Education Pvt.Ltd.
14. Cognitive Psychology Mind and Brain', Edward E. Smith, Stephen M. Kosslyn, New Delhi, Pearson Education.
15. Psychology-An Introduction, Thakkar P., Dr. Ambekar A.,

Semester-II
Course -2
DSC-1II: Forensic Biology-I (Credits-2)

Course Objectives: Students should be able to…

1) Study cell biology
2) Learn basics of biochemistry
3) Acquire knowledge plant morphology and anatomy
4) Learn basic instrumentation

Course Outcomes: The students will be able to...

1) Explain Cell types and structure
2) Describe biomolecules and their structure and role
3) Describe plant parts and internal structure
4) Explain different instruments and their uses

Module	Title	No. of hours
Unit -I	**1. Cell biology**	**15**
	1.1 Origin of life and theories of evolution, geological timscale 1.2 Discovery of cell, The cell theory, Ultra structure of prokaryotic & eukaryotic cell-(both plant and animal cells) 1.3 Structural organization and functions of plasma membrane and cell wall of prokaryotes & eukaryotes. 1.4 Cellular Organelles and Cytoskeleton structures (Microtubules, Microfilaments and Intermediate filaments).	
	2.Basic Biochemistry	
	2.1 Amino acids-Introduction types and role 2. 2 Carbohydrates and Proteins: Introduction types and role 2.3 Lipids: Introduction types and role 2.4 Nucleic acid : Introduction types and rol	
Unit-II	**3. Plant Morphology and Anatomy**	**15**
	3.1 Plant morphology of roots, stem, leaves 3.2 Plant anatomy: root stem and leaf 3.3 Mechanical tissue systems in plants 3.4 Conducting tissue systems in plants	
	4. Basic instrumentation:	
	4.1 Beer and Lambert's law 4.2 Colorimetry and spectrophotometry (UV & IR), principle 4.3 Methods and application of chromatography 4.4 Basics of PCR, electrophoresis, centrifugation, Gel documentation, and its forensic applications	

Suggested readings:

1. Satyanarayana, U. and Chakrapani, U., *Biochemistry*, 6th Edition, Elsevier India, 2021.

2. Verma, P. S. and Agarwal, V. K., *Cell Biology, Genetics, Molecular Biology, Evolution and Ecology*, S. Chand Publishing, 2010.

3. Rastogi, S. C., *Cell and Molecular Biology*, 3rd Edition, New Age International Publishers, 2006.

4. Pandey, B. P., *Plant Anatomy*, New Edition, S. Chand Publishing, 2001.

5. Chadha, A. and Pandey, S. N., *Plant Anatomy and Embryology*, Vikas Publishing House.

6. Chatwal, G. R. and Anand, S. K., *Instrumental Methods of Chemical Analysis*, 5th Edition, Himalaya Publishing House, 2025.

7. Wilson, K. and Walker, J., *Principles and Techniques of Biochemistry and Molecular Biology*, 8th Edition, Cambridge University Press, 2018.

8. Bajpai, P. K., *Biotechnology and Its Applications*, S. Chand Publishing.

9. Saferstein, R., *Criminalistics: An Introduction to Forensic Science*, 12th Edition, Pearson, 2020.

10. Willard, H. H.; Merritt, L. L.; Dean, J. A.; and Settle, F. A. *Instrumental Methods of Analysis*, 7th Edition, CBS Publishers & Distributors.

Semester-II

Course-2

DSC-IV - Forensic Biology -II (Credits-2)

Course Objectives: Students should be able to…

1) Study basics of microbiology
2) Learn immunity system
3) Acquire knowledge about basic genetics
4) Learn human physiology

Course Outcomes: The students will be able to...

1) Describe microbes , culture and microscopy
2) Understand immunity system
3) Describe genetic material ,chromosomes and genes
4) Explain applications of different instruments in forensic science

Module	Title	No. of hours
Unit -I	**1. Basics of microbiology**:	**15**
	1.1 Concept of pure culture technique 1.2 Stains and staining techniques 1.3 Control of Microorganisms: Physical & Chemical methods of control, 1.4 Microscopy principle and types of Microscopy 1.5 Broad classification of microorganisms	
	2. Immunity:	
	2.1 Definition, types-natural, acquired, active eand passive. 2.2 Antigens-Definition, types of antigens, Factors influencing antigenicity; 2.3 Antibody-Definition, structure, 2.4 Types, properties and functions of Immunoglobulin, Agglutination and Precipitation	
Unit-II	**3. Basic concepts of genetics**	**15**
	3.1 Genetic material – Discovery, experiments,composition and structure of DNA and RNA 3.2 Organization of DNA in chromosomes, DNA replication, genetic code, protein synthesis 3.2 Mendelian principles, sex linkage and sex determination systems	

	3.3 Introduction to recombinant DNA technology, its applications in forensics.	
	4. Human physiology:	
	4.1 Introduction to Nervous system, respiratory system, digestive system, circulatory system, endocrine system 4.2 Blood and its function, composition of blood, formation of blood cells, types of blood cells, and blood groups 4.3 Human skeletal system, Formation of bones, different types of bones, ossification 4.4 Dental structure of humans, types of teeth and arrangement.	

Suggested readings:

1. Ananthanarayan, R. and Paniker, C. K. J., *Ananthanarayan and Paniker's Textbook of Microbiology*, 11th Edition, Universities Press, 2020.
2. Dubey, R. C. and Maheshwari, D. K., *A Textbook of Microbiology*, 5th Edition, S. Chand Publishing, 2019.
3. Chakravarty, A. K., *Immunology*, Oxford University Press India, 2006.
4. Verma, P. S. and Agarwal, V. K., *Cell Biology, Genetics, Molecular Biology, Evolution and Ecology*, S. Chand Publishing, 2010.
5. Gupta, P. K., *Genetics*, 4th Edition, Rastogi Publications, 2019.
6. Rastogi, S. C., *Cell and Molecular Biology*, 3rd Edition, New Age International, 2006.
7. Chatterjee, C. C., *Human Physiology*, 13th Edition, CBS Publishers & Distributors, 2021.
8. Sembulingam, K. and Sembulingam, P., *Essentials of Medical Physiology*, 9th Edition, Jaypee Brothers Medical Publishers, 2022.
9. Chaurasia, B. D., *BD Chaurasia's Human Anatomy: Regional and Applied*, 8th Edition, CBS Publishers & Distributors, 2021.
10. Nanci, A., *Ten Cate's Oral Histology: Development, Structure, and Function*, 9th Edition, Elsevier, 2017.
11. Saferstein, R., *Criminalistics: An Introduction to Forensic Science*, 12th Edition, Pearson, 2020.

Semester –II

Course -2

DSCP-II: Practical course –Lab.-II (Based on DSC-III and DSC-IV (Credits -2)

Course Objectives: Students should be able to…

1) Study basic instruments used in forensic laboratory
2) Learn qualitative analysis of sugars ,proteins and lipids
3) Acquire skill of DNA and RNA isolation
4) Study basic instruments

Course Outcomes: The students will be able to...

1) Explain instruments
2) Describe procedure of quantitative estimations of biomolecules
3) Explain DNA and RNA isolation technique
4) Explain different instruments and their uses

Practicals

1. Study of instruments: Microscope, Autoclave, Hot air oven, incubator, pH meter, colorimeter, centrifuge, Laminar air flow

2 Qualitative analysis of sugar, proteins, and lipids

3 Study of activity of Enzyme(Amylase),

4 Estimation of protein by Folinlowry method

5 Estimation of DNA by DPA method & RNA by orcinol method

6 Staining Techniques, Simple, Negative staining, Gram Staining,

7 To demonstrate bacterial and fungal inoculation technique

8. Preparation of blood smear, staining and identification of different wbc's

9. To study Haemagglutination (Blood grouping)

10 Study of mitosis using onion root tip

11 To study anatomy ,digestive system, reproductive system of cockroach

12 Isolation of chromosomal DNA

13 Separation of amino acids, sugars and lipids by paper chromatography

14. Estimation of proteins thin layer chromatography

15. Study of human skeletal system and dental structure

Suggested reading

1. Lehninger ,Principles of Biochemistry5th ed.(2005)**:** Nelson and Cox, W.H Freeman
2. Harper's Illustrated Biochemistry(2009)**:** Murray et.al McGraw Hill professional,
3. Cell and molecular biology 3rd ed.**:** P.K Gupta, Rastogi publications
4. Modern Spectroscopy 4th ed.(2004)**:** J. Michael Hollas John, Wiley and sons.
5. Analytical Biochemistry (1998)**:**Holme,Longman
6. Understanding enzymes4th ed.(1995)**:** Trevor Palmer, Prentice Hall/Ellis Horwood
7. Enzyme Kinetics (1971)**:** Kent Plownan, McGraw-Hill
8. Biochemistry (2008)3rd ed.**:** Satyanarayan, Books and Allied (P) ltd.
9. Microbiology(1993)**:** Pelczar, Tata McGraw-Hill Education
10. Practical Microbiology **:** Dubey and Maheshwari, S.Chand and company, New Delhi
11. Cell Biology (1984)**:** C.BPowar, Himalaya Publications
12. Principles of genetics (2006) 8th ed.**:** Gardner et.al, John Wiley and sons
13. Molecular Biology of Gene 5thed. **:**Watson, Baker, et.al. Pearson

Sem-II

Course-3

DSC-III - Forensic Physics-I (2 Credits) 2Lectures /Week

Course Objectives: Students should be able to…

1) Study mechanics and elasticity
2) Learn fluid dynamics
3) Acquire knowledge about viscosity
4) Understand the surface tension

Course Outcomes: The students will be able to...

1) Explain Newton's laws of motion
2) Describe concept of fluid dynamics
3) Discuss about viscosity
4) Explain surface tension

Module	Title	No. of hours
Unit-I	**1. Mechanics and Elasticity**	15
	1.1 Interpretation and applications of Newton's laws of motion 1.2 Collisions, types of collisions and conservation laws in collisions and Pseudo forces, 1.3 Stress and strain, Elastic properties of matter, elastic constants and their interrelations. 1.4 Bending of beams and its bending moment.	
	2. Fluid Dynamics	
	2.1 Streamline and turbulent flow, 2.2 Reynolds number 2.3 Equation of continuity 2.3Bernoulli's equation	
Unit-II	**3. Viscosity**	
	3.1Newton's law of viscosity 3.2 Concept of viscosity and viscous fluids 3.3 Flow of liquid through through capillary tube: Poiseuille's equation 3.4 Experimental determination of coefficient of viscosity of liquid by Poiseuille's method, 3.5 Effect of temperature and pressure on viscosity of liquid	
	4. Surface Tension	

	4.1 Concept of surface tension 4.2 Angle of contact and Wettability 4.3 Hydrophobic and hydrophilic surfaces 4.4 Experimental determination of surface tension by Jaeger's method	**15**

Suggested readings:

1. Mehta, V. K. and Mehta, Rohit, *Principles of Physics*, S. Chand Publishing, 2019.
2. Jha, A. K., *Mechanics*, Narosa Publishing House, 2013.
3. Mathur, D. S., *Mechanics*, S. Chand & Company, 2012.
4. Gaur, R. K. and Gupta, S. L., *Engineering Physics*, Dhanpat Rai Publications, 2011.
5. Avadhanulu, M. N. and Kshirsagar, P. G., *A Textbook of Engineering Physics*, S. Chand Publishing, 2019.
6. Kakani, S. L. and Hemrajani, C., *A Textbook of Engineering Physics*, New Age International Publishers, 2006.
7. Harbola, M. K., *Engineering Mechanics*, Cengage Learning India, 2013.
8. Bhavikatti, S. S., *Engineering Mechanics*, New Age International Publishers, 2012.
9. N. Subrahmanyam and Brij Lal, *A Textbook of Optics and Modern Physics*, S. Chand Publishing, 2012.
10. R. S. Khurmi**,** *A Textbook of Engineering Physics,* S. Chand Publishing**,** 2010**.**

Sem.-II
Course-3
DSC-IV- Forensic Physics-II (2 Credits) 2 Lectures /Week

Course Objectives: Students should be able to…

1) Study basic concept of aberration

2) Learn about interference and diffraction

3) Study laser and its applications

4) Understand concept of holography

Course Outcomes: The students will be able to...

1) Explain aberration

2) Describe interference and diffraction

3) Discuss laser and its applications

Module	Title	No. of hours
Unit-I	**1. Aberration in Images** 1.1 Basic concept of aberration 1.2 Spherical aberration and methods to minimize it 1.3 Chromatic aberration 1.4 Achromatic combination of two thin lenses separated by finite distance 1.5 Common types of eyepieces 1.6 Huygen's eyepiece and Ramsden's eyepiece **2. Interference and Diffraction** 2.1 Interference in parallel films (reflected light only) 2.2 Wedge shaped films 2.3 Newton's rings 2.4 Elementary theory of plane diffraction grating (qualitative treatment only)	**15**
Unit-II	**3. Laser and its applications**	

	3.1 Absorption, Spontaneous and stimulated emission 3.2 Einstein's Coefficients 3.3 Population inversion 3.4 Pumping process 3.5 Conditions for lasing action 3.6 Characteristics of laser 3.7 Ruby laser	**15**
	4. Applications of laser	
	4.1 Applications of laser 4.2 Idea of Holography	

Reference books

1. Ghatak, A., *Optics*, 7th Edition, McGraw Hill Education (India), 2020.
2. Lal, Brij and Subrahmanyam, N., *A Textbook of Optics*, 25th Edition, S. Chand Publishing, 2018.
3. Avadhanulu, M. N. and Kshirsagar, P. G., *A Textbook of Engineering Physics*, 11th Edition, S. Chand Publishing, 2019.
4. Gaur, R. K. and Gupta, S. L., *Engineering Physics*, 8th Edition, Dhanpat Rai Publications, 2011.
5. Kakani, S. L. and Hemrajani, C., *A Textbook of Engineering Physics*, New Age International Publishers, 2006.
6. Thyagarajan, K. and Ghatak, A., *Lasers: Fundamentals and Applications*, 2nd Edition, Springer India, 2010.
7. Singh, S. P., *Optics and Laser Physics*, New Age International Publishers, 2004.
8. Chandra, S. and Sharma, M. K., *A Textbook of Optics*, 1st Edition, Springer, 2024.
9. Hecht, E., *Optics*, 5th Edition, Pearson, 2016
10. Jenkins, F. A. and White, H. E., *Fundamentals of Optics*, 4th Edition, McGraw-Hill, 2001

Sem. II
Course-3
DSCP-II : Practical course –Lab.-II (Papar-III and IV) 4hrs/Week

Course Objectives: Students should be able to…
1) Study the coefficient viscocity
2) Learn the surface tension
3) Study refractive index
4) Study laser beams

Course Outcomes: The students will be able to...
1) Determine coefficient viscocity
2) Measure surface tension
3) Calculate refractive index
4) Measure wavelength o laser beam

Practicals
1. Y by bending
2. Coefficient of viscosity by Poiseuille's method
3. Exponential decay of amplitude of simple pendulum
4. Surface tension by Jaeger's method
5. Surface tension of soap film
6. Refractive index of liquid by liquid lens
7.Bifilar pendulum
8.Poisson's ratio of rubber tube
9.Calibration of spectrometer
10.Determination of grating element
11.Spherical aberration
12.Thickness of thin film by interference
13.Wavelength of laser beam using diffraction grating
14.Divergence of laser beam

References

1. Mechanics and Properties of Matter**:** J. C. Upadhyaya

2. Engineering Physics**:** A. S. Vasudeva, S- Chand

3. Engineering Mechanics**:** D.P Sharma et. al. , Pearson

4. Modern Physics**:** R. Murugeshanet et al., S. Chand

5. Advanced Practical Physics – B.L. Worsnop and H.T. Flint, Methuen and Co.Ltd.

6. A Textbook of Optics – Brijlal and N. Subrahnmanyam, S. Chand

7. Optics – Ajoy Ghatak, McGraw Hill

8. Fundamentals of optics - Devraj Singh, PHI Learning

9. Principles of laser - O. Svelto, Springer Lasers and Non- Linear Optics: B. B. Laud, Wiley Easter Ltd.

B. Sc. FORENSIC SCIENCE
Semester-I
OE Course -I
OE-1: Fundamentals of Psychology -I (Credits-2) 2hrs lecture/ Week

Course Objectives: Students should be able to…
1) Study the scope of Psychology
2) Study Methods of psychology
3) Learn biological behavior
4) Study motivation and emotion

Course Outcomes: The students will be able to...
1) Explain scope of Psychology
2) Classify psychological methods
3) Explain biological behavior
4) Describe motivation and emotion

Module	Title	No. of hours
Unit -I	**1.Introduction to Human behaviour**	**15**
	1.1 Definition and scope and brief history 1.2 Basic method of psychology 1.3 Biology of behaviour	
	2.Cognative Process	
	2.1 Sensation and Perception 2.2 Basic learning principles 2.3 Memory and forgetting 2.4 Intellegence	
Unit-II	**3.Motivation ,Emotion and Personality**	**15**
	3.1 Motivation 3.2 Emotion 3.3 Personality	
	4. Mental Health	
	4.1 Understanding stress 4.2 Coping strategies 4.3 Mental wellbeing	

References

1. Atkinson, R. L., Atkinson, R. C., Smith, E. E., Bem, D. J. and Nolen-Hoeksema, S., *Hilgard's Introduction to Psychology*, 14th Edition, 2000.
2. Baron, R. A. and Misra, G., *Psychology: Indian Subcontinent Edition*, 5th Edition, Pearson Education, 2018.

3. Chadha, N. K. and Seth, S., *The Psychological Realm: An Introduction*, Revised Edition, Pinnacle Learning, 2014.
4. Ciccarelli, S. K. and Meyer, G. E., *Psychology: South Asian Edition*, Pearson Education, 2008.
5. Coon, D. and Mitterer, J. O., *Introduction to Psychology: Gateways to Mind and Behavior*, 12th Edition, Cengage Learning India, 2010.
6. Feldman, R. S. (2018). *Understanding Psychology* (14th ed.). McGraw-Hill.
7. Hilgard, E. R., Atkinson, R. L., & Atkinson, R. C. (2009). *Introduction to Psychology*. Harcourt Brace.
8. Mangal, S. K., *General Psychology*, Sterling Publishers, 1999.
9. Morgan, C. T., King, R. A., Weisz, J. R. and Schopler, J., *Introduction to Psychology*, 7th Edition, Tata McGraw-Hill, 2001.
10. Myers, D. G. (2014). *Psychology* (10th ed.). Worth Publishers.
11. Rao, K. R., Paranjpe, A. C. and Dalal, A. K. (eds.), *Handbook of Indian Psychology*, 1st Edition, Cambridge University Press India, 2008.
12. Singh, R. N. (2012). *General Psychology*. Agra Psychological Research Cell.
13. Smith, E. E., Nolen-Hoeksema, S., Fredrickson, B. L., & Loftus, G. R. (2015). *Atkinson & Hilgard's Introduction to Psychology* (16th ed.). Cengage Learning.

B. Sc. FORENSIC SCIENCE

सेमिस्टर – I

OE अभ्यासक्रम – I

OE-1 : मानसशास्त्राची मूलतत्त्वे – I

(क्रेडिट्स – २) : आठवड्याला २ तास व्याख्याने

अभ्यासक्रमाची उद्दिष्टे (Course Objectives)

विद्यार्थी पुढील बाबींचा अभ्यास करतील :

1. मानसशास्त्राचे स्वरूप व व्याप्ती समजून घेणे.
2. मानसशास्त्रातील विविध पद्धतींचा अभ्यास करणे.
3. जैविक वर्तनाचा अभ्यास करणे.
4. प्रेरणा व भावनांचा अभ्यास करणे.

अभ्यासक्रम निष्पत्ती (Course Outcomes)

अभ्यासक्रम पूर्ण झाल्यानंतर विद्यार्थी पुढील गोष्टी करू शकतील :

1. मानसशास्त्राचे स्वरूप व व्याप्ती स्पष्ट करू शकतील.
2. मानसशास्त्रीय पद्धतींचे वर्गीकरण करू शकतील.
3. जैविक वर्तनाचे स्पष्टीकरण करू शकतील.
4. प्रेरणा व भावनांचे वर्णन करू शकतील.

घटकनिहाय अभ्यासक्रम

घटक	विषय	तास
एकक – I	**1. मानवी वर्तनाची ओळख**	15
	1.1 व्याख्या, व्याप्ती व संक्षिप्त इतिहास	
	1.2 मानसशास्त्राच्या मूलभूत पद्धती	
	1.3 वर्तनाचा जैविक पाया	
	2. संज्ञानात्मक प्रक्रिया (Cognitive Process)	
	2.1 संवेदना व प्रत्यक्षीकरण (Sensation and Perception)	
	2.2 शिकण्याची मूलभूत तत्त्वे	

	2.3 स्मृती व विस्मरण	
	2.4 बुद्धिमत्ता	

घटक	विषय	तास
एकक – II	**3. प्रेरणा, भावना व व्यक्तिमत्त्व**	15
	3.1 प्रेरणा (Motivation)	
	3.2 भावना (Emotion)	
	3.3 व्यक्तिमत्त्व (Personality)	
	4. मानसिक आरोग्य	
	4.1 तणाव समजून घेणे	
	4.2 तणावाशी सामना करण्याच्या युक्त्या	
	4.3 मानसिक स्वास्थ्य (Mental Wellbeing)	

संदर्भ ग्रंथ (References)

1. Myers, D. G. (2014). *Psychology* (10th ed.). Worth Publishers.
2. Morgan, C. T., King, R. A., Weisz, J. R., & Schopler, J. (2013). *Introduction to Psychology* (7th ed.). McGraw-Hill.
3. Smith, E. E., Nolen-Hoeksema, S., Fredrickson, B. L., & Loftus, G. R. (2015). *Atkinson & Hilgard's Introduction to Psychology* (16th ed.). Cengage Learning.
4. Weiten, W. (2017). *Psychology: Themes and Variations* (10th ed.). Cengage Learning.
5. Feldman, R. S. (2018). *Understanding Psychology* (14th ed.). McGraw-Hill.
6. मंगळ, एस. के. (2019). *General Psychology*. Sterling Publishers.
7. सिंह, आर. एन. (2012). *General Psychology*. Agra Psychological Research Cell.
8. Hilgard, E. R., Atkinson, R. L., & Atkinson, R. C. (2009). *Introduction to Psychology*. Harcourt Brace.
9. Ciccarelli, S. K., & White, J. N. (2020). *Psychology* (6th ed.). Pearson.
10. Rathus, S. A. (2014). *Essentials of Psychology* (6th ed.). Cengage Learning.

B. Sc. FORENSIC SCIENCE
Semester-II

OE Course-II

OE-II –Social Psychology (Credits-2)) 2hrs lecture/ Week

Course Objectives: Students should be able to…
1) Study concept of social psychology
2) Learn concept of attributes and social influence
3) Understand prejudice and discrimination

Course Outcomes: The students will be able to...
1) Explain social psychology
2) Describe attributes and social influence
3) Explain prejudice and discrimination

Module	Title	No. of hours
Unit -I	**1.Introduction to social psychology**	15
	1.1 Definition, aim and scope 1.2 Theories of Social psychology 1.3 Social psychology vs Sociology	
	2.Social Cognition and perception	
	2.1 Introduction 2.2 Concept of social cognition 2.3 Concept of perception	
Unit-II	**3. Attributes and social influence**	15
	3.1 Attitude formation and change 3.2 Social influence 3.3 Interpersonal attraction 3.4 Aggregation	
	4. Prejudice,stereotype and discrimination	
	4.1 Concepts 4.2 Origin of prejudice 4.3 Reduction strategies	

Suggested reading:

1. Aronson, E. (2018). *The Social Animal* (12th ed.). Worth Publishers.
2. Aronson, E., Wilson, T. D. and Akert, R. M., *Social Psychology*, 7th Edition, Pearson Education, 2010.

3. Baron, R. A. and Byrne, D., *Social Psychology*, 10th Edition, Pearson Education India, 2004.
4. Baron, R. A., Branscombe, N. R. and Byrne, D., *Social Psychology*, 13th Edition, Pearson Education, 2012.
5. Feldman, R. S. (2017). *Understanding Psychology*. McGraw-Hill Education.
6. Hogg, M. A. and Vaughan, G. M., *Social Psychology*, 7th Edition, Pearson Education, 2010.
7. Krech, D., Crutchfield, R. S., & Ballachey, E. L. (2017). *Individual in Society: A Textbook of Social Psychology*. McGraw-Hill.
8. Kuppuswamy, B. (2017). *Social Psychology*. Konark Publishers Pvt. Ltd.
9. Mangal, S. K. (2018). *Social Psychology*. Sterling Publishers Pvt. Ltd.
10. Misra, G., *Psychology in India: Theoretical and Methodological Developments*, Vol. 1, Pearson Education India, 2011.
11. Myers, D. G., *Social Psychology*, 10th Edition, McGraw-Hill Education, 2010.
12. Young, K. (2016). *Handbook of Social Psychology*. Routledge.

B. Sc. FORENSIC SCIENCE

सेमिस्टर – II

OE अभ्यासक्रम – II

OE-II : सामाजिक मानसशास्त्र (Social Psychology)

(क्रेडिट्स – २) : आठवड्याला २ तास व्याख्याने

अभ्यासक्रमाची उद्दिष्टे (Course Objectives)

विद्यार्थी पुढील बाबींचा अभ्यास करतील :

1. सामाजिक मानसशास्त्राची संकल्पना समजून घेणे.
2. अभिवृत्ती (Attitude) व सामाजिक प्रभाव यांच्या संकल्पना शिकणे.
3. पूर्वग्रह व भेदभाव यांचे स्वरूप समजून घेणे.

अभ्यासक्रम निष्पत्ती (Course Outcomes)

अभ्यासक्रम पूर्ण झाल्यानंतर विद्यार्थी पुढील गोष्टी करू शकतील :

1. सामाजिक मानसशास्त्राचे स्पष्टीकरण करू शकतील.
2. अभिवृत्ती व सामाजिक प्रभाव यांचे वर्णन करू शकतील.
3. पूर्वग्रह व भेदभाव यांचे स्पष्टीकरण करू शकतील.

घटकनिहाय अभ्यासक्रम

घटक	विषय	तास
एकक – I	**1. सामाजिक मानसशास्त्राची ओळख**	15
	1.1 व्याख्या, उद्दिष्टे व व्याप्ती	
	1.2 सामाजिक मानसशास्त्रातील सिद्धांत	
	1.3 सामाजिक मानसशास्त्र व समाजशास्त्र यांतील फरक	
	2. सामाजिक बोधन (Social Cognition) व प्रत्यक्षीकरण	
	2.1 प्रस्तावना	
	2.2 सामाजिक बोधनाची संकल्पना	
	2.3 प्रत्यक्षीकरणाची संकल्पना	

घटक	विषय	तास
एकक – II	**3. अभिवृत्ती व सामाजिक प्रभाव**	15
	3.1 अभिवृत्तीची निर्मिती व अभिवृत्तीतील बदल	
	3.2 सामाजिक प्रभाव	
	3.3 आंतरवैयक्तिक आकर्षण	
	3.4 समूह एकत्रीकरण (Aggregation)	
	4. पूर्वग्रह, साचेबद्ध प्रतिमा व भेदभाव	
	4.1 संकल्पना	
	4.2 पूर्वग्रहांची उत्पत्ती	
	4.3 पूर्वग्रह कमी करण्यासाठी उपाययोजना	

संदर्भ ग्रंथ (Suggested Reading)

1. Myers, D. G., & Twenge, J. M. (2022). *Social Psychology* (14th ed.). McGraw-Hill Education.
2. Baron, R. A., Byrne, D., & Branscombe, N. R. (2019). *Social Psychology* (14th ed.). Pearson Education.
3. Taylor, S. E., Peplau, L. A., & Sears, D. O. (2018). *Social Psychology* (14th ed.). Pearson.
4. Aronson, E., Wilson, T. D., & Akert, R. M. (2019). *Social Psychology* (10th ed.). Pearson.
5. Kuppuswamy, B. (2017). *Social Psychology*. Konark Publishers Pvt. Ltd.
6. मंगळ, एस. के. (2018). *Social Psychology*. Sterling Publishers Pvt. Ltd.
7. Young, K. (2016). *Handbook of Social Psychology*. Routledge.
8. Krech, D., Crutchfield, R. S., & Ballachey, E. L. (2017). *Individual in Society: A Textbook of Social Psychology*. McGraw-Hill.
9. Feldman, R. S. (2017). *Understanding Psychology*. McGraw-Hill Education.
10. Aronson, E. (2018). *The Social Animal* (12th ed.). Worth Publishers.

18. Nature of Question Paper

Nature of question paper and scheme of marking: B. Sc. PROGRAMME RULES FOR 60:40 EVALUATION PATTERN

a) Theory (Semester exam) for each paper:

Students appearing for the B.Sc. will be evaluated as per the 60:40 scheme where in the term end examination will be of 30 marks each paper, while 20 marks will be through internal evaluation for each paper.

A. Theory Examination

- ✓ Theory examination semester end (University) will be of 30 marks each paper
- ✓ Time allotted is one and half hour (90minutes) for 30 marks examination
- ✓ Equal weightage shall be given to all units of the theory paper
- ✓ Total number of questions – 03
- ✓ Question No. 1 will be of an objective type. 10 objective questions will carry-10 Marks.
- ✓ Question No. 2 will be descriptive. One question to be attempted out of two and will carry 10 Marks.
- ✓ Question No. 3 will be short answer type. Two questions are to be attempted out of three questions and will carry 10 Marks, 05 Marks each.
- ✓ Nature of questions - Multiple choice, Descriptive and Short answer type.
- ✓ All these questions will be answered in the same answer book.
- ✓ All questions shall be compulsory with internal choice within the questions

Nature of question paper (for 2 Credit Course)

Total Marks: 30 **Time:** 1 and half Hrs (90 minutes)

Instructions:

1. All questions are compulsory.
2. Figures to the **RIGHT** indicate **FULL MARKS.**

Q.1 Select Correct Answer (Multiple choice questions)---------- 10 marks

a)

b)

:

j)

Q.2 Attempt any **ONE** of the following.

(Essay type / Broad answer questions)---------- 10 marks

a)

b)

Q.3 Attempt any **TWO** of the following---------- 10 marks

a)

b)

c)

b) Theory (Semester exam) for each Theory paper: Maximum marks – 60

Students appearing for the B.Sc. will be evaluated as per the 60:40 scheme where in the term end examination will be of 60 marks each paper, while 40 marks will be through internal evaluation for each paper.

B. Theory Examination

- ✓ From each unit there will be at least one question asked.
- ✓ All questions shall be compulsory with internal choice within the questions
- ✓ The duration of this exam will be of 2 Hrs
- ✓ Equal weightage shall be given to all units of the theory paper
- ✓ Total number of questions – 04
- ✓ Question No. 1 will be of an objective type. 8 objectives will carry- 8 Marks.
- ✓ Question No. 2 will be short notes. Two question to be attempted out of two and will carry 4 Marks.(2 marks for each question)
- ✓ Question No. 3 will be of descriptive answer type. 4 questions are to be attempted out of 6 questions and will carry 16 Marks.(04 Marks for each question)

- ✓ Question No. 4 will be of descriptive answer type. 4 questions are to be attempted out of 6 questions and will carry 32 Marks.(08 Marks for each question)
- ✓ **Nature of questions** - Multiple choice, Short answer type and Descriptive type.
- ✓ All these questions will be answered in the same answer book.

Nature of question paper (for 4 Credit Course)

All Questions are compulsory

Time duration (2 hours) Total Marks: 60

Q. 1. Select the correct answers: MCQ **1 x 8 = 8**

i) ii)

iii) iv)

v) vi)

vii) viii)

Q. 2. Write short notes on: **2 x 2 = 4**

a) b)

Q. 3. Answer any four of the following: **4 x 4 = 16**

a)

b)

c)

d)

e)

f)

Q.4. Answer any four of the following: **8 x 4 = 32**

a)

b)

c)

d)

e)

f)

B. Internal Assessment 40%

Level	Semester	Activities Per Semester	4 credits	2 credits
4.5 (First year)	I & II	1 Home Assignment	10 marks	5 marks
		2 Class Assignment (Tutorial type)	10 marks	5 marks
		3 Quiz	10 marks	5 marks
		4 Midterm Test	10 marks	5 marks
5.0 (Second Year)	III & IV	1 Oral Examination	10 marks	5 marks
		2 Group Discussion	10 marks	5 marks
		3 Seminar	10 marks	5 marks
		4 Midterm Test	10 marks	5 marks
5.5 (Third Year)	V & VI	1 Case Study / Problem solving	10 marks	5 marks
		2 Field Work / Seminar	10 marks	5 marks
		3 Book Review / Poster Presentation	10 marks	5 marks
		4 Midterm Test	10 marks	5 marks
6.0 (Fourth Year)	VII & VIII	1 Seminar	10 marks	5 marks
		2 Case Study/ Problem Solving	10 marks	5 marks
		3 Book Review / Poster Presentation	10 marks	5 marks
		4 Midterm Test	10 marks	5 marks

Note:

1. For two credit course, unit test of 10 marks shall be conducted and it is converted into 5 marks.
2. For four credit course, unit test of 10 marks shall be conducted.
3. Book Review (Any relevant Reference Book)

PRACTICAL EXAMINATION

- There will be semester wise practical examination to be conducted at the end of each semester. The question paper along with marking scheme and skeleton / Question paper will be given by respective BOS before practical examination.
- Practical examination will be evaluated by two internal examiners.
- Internal examiners are from respective college fulltime regular faculty. If fulltime regular faculty is not available in college, then principal of the college shall invite internal examiner from fulltime regular faculty appointed in nearby college.
- Duration of Practical Examination shall be decided by respective BOS.

Internal Examination Pattern for Practical Course as follows:

Sr. No.	Activity	Internal Evaluation	
		4 credits	**2 credits**
1	Assessment of Journal	10 marks	5 marks
2	Assessment of Regular Notebook	10 marks	5 marks
3	Attendance for every Practical	10 marks	5 marks
4	Test Based on Practical work (Conduct at least Two Test in Each Semester)	10 marks	5 marks
	Total	40 marks	20 marks