SDGI GLOBAL UNIVERSITY

School of Sciences (SOS)

Bachelor of Science

(Hons) Forensic Science
Undergraduate Programmes

(*w.e.f. Academic Year 2025-26***)**

As Per National Education Policy 2020

SDGI GLOBAL UNIVERSITY
NH-9, Delhi-Hapur Road, NCR, Ghaziabad, Uttar Pradesh 201015

National Education Policy 2020

Objectives: The proposed new structure for the undergraduate programs of the university aims to achieve the following key goals enunciated by the National Education Policy 2020 (NEP-2020:

Multi-disciplinary and inter-disciplinary learning
Holistic curriculum (including teaching of Indian and International languages, ethics andculture, social and emotional learning and co-curricular activities)
Skill enhancement (including skills relating to information technology and data analysis)
Research to be incorporated as a key component of the learning process
Adoption of appropriate pedagogies to promote active student participation in the learningprocess so as to promote creativity and a spirit of exploration and adventure
Capacity building for gaining as well as creating employment.
Engagement with industry and society (including dissertations, projects and internships)
Enhancing prospects for socially and economically disadvantaged and differently abledstudents.
Provision for credit transfer in both national and international contexts

Bachelor of Science (Honors) in Forensic Sciences (Three Years /

Four Years):

In the first three years of the new program, students shall study the following courses in additionto the courses that exist in the current B.Sc. Program:

Language and Literature -II: The current BSc Program includes only one language course (English/MIL) The new program structure would require students to study two 'Language and Literature' courses, of which at least one should be in an Indian Language (IL).

Social and Emotional Learning: An interdisciplinary course that promotes well-being and health.

Innovation and Entrepreneurship: An interdisciplinary course that helps students acquire skills relating to creative social and business entrepreneurship, and organizational skills.

Co-curricular: Co-scholastic activities such as music, art, gardening, sports.

Ethics and Culture: An interdisciplinary course that shall include experience of community service.

Multidisciplinary and Research: In the fourth year (semesters VII and VIII), students can chooseone discipline out of the three disciplines that they have pursued in the first three years of study, and study six courses in this discipline. (The discipline courses offered will aim to strengthen fundamental knowledge in the discipline). Students would also be required to complete a researchdissertation on the Major discipline of study, and an inter-disciplinary research dissertation on theMajor

and Minor disciplines of study.

Course Introduction: B.Sc. (Hons.) Forensic Sciences with effect a.y. 2025-26

The **B.Sc. (H) Forensic Sciences** program is a multidisciplinary undergraduate course designed in alignment with the transformative vision of the **National Education Policy (NEP) 2020**. This program integrates **core scientific principles**, **investigative techniques**, and **technological advancements** to equip students with the knowledge and skills necessary to support the criminal justice system.

Rooted in **experiential learning**, **flexibility**, and **interdisciplinary approaches**, the course enables learners to explore the dynamic intersections of biology, chemistry, physics, medicine, psychology, and law. The curriculum is thoughtfully structured to promote **critical thinking**, **analytical reasoning**, **ethical practices**, and **problem-solving skills**, nurturing a generation of forensic professionals who can contribute effectively to society.

Under the NEP 2020 framework, the program offers **multiple entry and exit options**, **credit-based learning**, **internships**, and **skill-based modules** to ensure academic mobility and holistic development. Emphasis is laid on **hands-on training**, **crime scene simulation**, **digital forensics**, and **research-based learning**, empowering students to adapt to evolving technologies and global standards in forensic science.

Graduates of this program will be well-prepared for **careers in forensic laboratories, law enforcement agencies, legal consultancy, research institutions**, and **higher education** in India and abroad. The course fosters a strong foundation for those aspiring to bring scientific objectivity and justice to society while upholding constitutional values and national development goals as envisioned by NEP 2020.

Program Educational Objectives (PEOs)

Graduates of the B.Sc. (H) Forensic Sciences program will:

PEO 1: Establish themselves as competent forensic professionals with strong scientific knowledge, technical expertise, and ethical grounding to contribute effectively to criminal justice systems, research organizations, and industries.

PEO 2: Pursue higher education, research, and specialized training in forensic science and allied disciplines to continually expand their intellectual and professional capabilities.

PEO 3: Demonstrate leadership qualities, effective communication skills, and collaborative abilities, fostering interdisciplinary problem-solving in real-world forensic investigations.

PEO 4: Uphold social responsibility by applying forensic science in service to the community, maintaining integrity, objectivity, and commitment to truth and justice.

Program Specific Outcomes (PSOs)

Upon completion of the program, graduates will be able to:

PSO 1: Apply scientific principles and analytical techniques to identify, analyze, and interpret physical, biological, chemical, and digital evidence from crime scenes.

PSO 2: Demonstrate expertise in forensic methodologies including crime scene management, fingerprint analysis, forensic biology, toxicology, ballistics, cyber forensics, and document examination.

PSO 3: Utilize modern laboratory instruments, software tools, and forensic technologies to conduct investigations with precision, adhering to legal standards and chain-of-custody protocols.

PSO 4: Communicate forensic findings effectively through technical reports, expert testimony, and professional presentations in both legal and scientific communities.

PSO 5: Engage in lifelong learning, research, and innovation to adapt to evolving technologies, laws, and methodologies in the field of forensic science.

Program Outcomes (POs)

Graduates of the B.Sc. (H) Forensic Sciences program will demonstrate:

PO 1: Apply the knowledge of basic sciences, forensic principles, and investigative methods to solve complex problems related to criminal and civil investigations.

PO 2: Identify, formulate, and analyze complex issues related to forensic evidence and crime scene reconstruction using logical and scientific approaches.

PO 3: Plan and perform experiments, analyze and interpret data, and synthesize information to draw valid conclusions in forensic investigations.

PO 4: Use appropriate techniques, resources, and modern tools including IT applications, forensic software, and laboratory equipment for professional practice.

PO 5: Apply ethical principles, respect professional codes of conduct, and perform duties with integrity, impartiality, and accountability.

PO 6: Communicate effectively through clear forensic reports, expert witness testimony, and professional interactions with legal, scientific, and law enforcement communities.

PO 7: Function efficiently as an individual, and as a member or leader in diverse teams, and multidisciplinary settings.

PO 8: Recognize the need for, and engage in independent learning and continuous professional development in forensic science and allied areas.

PO 9: Understand the societal, legal, and environmental contexts of forensic science applications and contribute to sustainable and responsible forensic practices.

PO 10: Demonstrate knowledge of forensic project management principles and apply them to work individually or in teams, in multi-disciplinary environments, and explore entrepreneurial opportunities.

SDGI GLOBAL UNIVERSITY, GHAZIABAD

SCHOOL OF SCIENCES

STUDY AND EVALUATION SCHEME FOR BACHELOR OF SCIENCE

DEPARTMENT OF LIFE SCIENCES (Forensic Sciences)

BRANCH: - B.Sc. Forensic Sciences as per NEP 2020

SESSION - 2025-26

SEMESTER - 1st

S. No	Status	Subject Code	Subject Name	Study Scheme Lec/ Week			Hours	Credits	Marks in Evaluation						Passing Marks	Total Marks
									Continuous Internal			End of Semester				
				L	T	P			Th	Pr	Total	Th	Pr	Total		
1	DSC (Core/	B100224101	Introduction to Forensic	3	0	0	3	3	50	-	50	50	-	50	40	100
2	(Core/	B100224	Introduction to	3	0	0	3	3	50	-	50	50	-	50	40	100
3	(Electiv	B100224	Criminal Law	3	0	0	3	3	50	-	50	50	-	50	40	100
4	GE	B10GE2401	Entrepreneurship and IPR	3	0	0	3	3	50	-	50	50	-	50	40	100
5	AEC	SGUAE24	English Language	2	0	0	2	2	50	-	50	50	-	50	40	100
6	VAC	SGUVA24	Introduction to Indian	3	0	0	3	3	50	-	50	50	-	50	40	100
7	SEC	SGUSE24	Office	2	0	0	2	2	25	-	25	25	-	25	20	50
8		SGUSE24	Office	0	0	1	2	1		30	30		20	20	20	50
9	Practical	100224151	Introduction to Forensic	0	0	1	2	1	-	60	60	-	40	40	40	100
10	Practical	100224152	Crime and Society	0	0	1	2	1		60	60	-	40	40	40	100
			*Courses host By SWAYAM					3								
				19+3		3		25								900

SEMESTER - 2nd (Certificate in "Techniques in Biotechnology")

S. No	Status	Subject Code	Subject Name	Study Scheme Lec/ Week			Hours	Credits	Marks in Evaluation						Passing Marks	Total Marks
									Continuous Internal			End of Semester				
				L	T	P			Th	Pr	To	Th	Pr	To	Ma	rks
1	DSC (C	B100224	Forensic	3	0	0	3	3	50	-	50	50	-	50	40	100
2	DSC (C	B100224	Forensic	3	0	0	3	3	50	-	50	50	-	50	40	100
3	DSE (El	B100224203	Technological Methods in	3	0	0	3	3	50	-	50	50	-	50	40	100
4	GE	B10GE2402	Research methodology	3	0	0	3	3	50	-	50	50	-	50	40	100
5	AEC	BSGUAE2406	Team building & Leadership	2	0	0	2	2	50	-	50	50	-	50	40	100
6	VAC	BSGUVA2401	Environmental Education	3	0	0	3	3	50	-	50	50	-	50	40	100
7	SEC	BSGUSE2414	Essential Techniques in	2	0	0	2	2	25	-	25	25	-	25	20	50
8		BSGUSE2464	Essential Techniques in	0	0	1	2	1		30	30		20	20	20	50
9	Practica	B100224251P	Forensic PsychologyPrac	0	0	1	2	1	-	60	60	-	40	40	40	100
10	Practica	B100224	Forensic	0	0	1	2	1		60	60	-	40	40	40	100
			*Courses host					3								
				19+3		3		25								900

Introduction to Forensic Science

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-1st**
Course Name-Introduction to Forensic Science			
A.Y-2025-2026	**Course Code-B100224101**	**Batch-2025-2029**	**CIE Marks- 50 (MM)**
Total Teaching Hours-45	**Total Credits-3-0-0**		**ESE Marks- 50(MM)**
Type of Course- Theory			**Total Marks- 100 (MM)**

Course Objective :

To provide foundational knowledge of forensic science, its interdisciplinary nature, and practical applications in crime scene investigation, evidence analysis, and legal proceedings, fostering scientific thinking and skills essential for contributing effectively to criminal justice and forensic research.

Course Description:

This course introduces students to the principles, history, and methods of forensic science, focusing on crime scene management, biological and chemical evidence analysis, and forensic specialties such as ballistics and document examination, with an emphasis on legal relevance and real-life case studies.

UNIT-1	Topics	No. of Teaching hours/ (Lecture)
1	**Unit 1:** Development and progress of forensic science in the Indian context. Core functions and objectives of forensic science. Historical timeline and key milestones in forensic science. Key terminologies and definitions.	8
2	**Unit 2:** Relevance and applications of forensic science in criminal	9

	justice.Essential principles guiding forensic investigations.Landmark judicial cases: Frye case and the Daubert standard. Analyze the historical evolution of criminal cases from a forensic perspective.	
3	**Unit 3:** Overview of major branches within forensic science.Global outlook: Structure and functions of agencies like INTERPOL and the FBI.Roles and responsibilities of forensic scientists.Ethical norms and professional conduct expected of forensic practitioners.Educational qualifications and skills required to become a forensic scientist.Techniques for data presentation and effective forensic report writing.	**10**
4	**Unit 4:** Administrative framework of Central and State Forensic Science Laboratories.Overview of institutions such as the Government Examiners of Questioned Documents, Fingerprint Bureaus, and the National Crime Records Bureau (NCRB).Introduction to police and detective training academies..	**9**
5	**Unit 5:** Functions of the Bureau of Police Research & Development (BPR&D), Directorate of Forensic Science, and mobile forensic units.Use and training of police dogs in crime detection. Description of essential and auxiliary services provided by forensic laboratories.	**9**

Course Outcomes

1. Explain forensic science scope and relevance to criminal justice.
2. Apply crime scene investigation and evidence collection techniques.
3. Analyze biological evidence using forensic biology techniques.
4. Perform basic forensic toxicology and chemical analysis procedures.
5. Interpret and report forensic findings within legal frameworks.

Textbooks:

1. *B.S. Nabar* – Forensic Science in Crime Investigation, *Asia Law House*
2. *Richard Saferstein* – Criminalistics: An Introduction to Forensic Science, *Pearson*
3. *S.N. Tiwari* – Forensic Science in India, *Select Publications*

Reference Books:

1. *H.J. Walls* – Forensic Science: An Introduction to Scientific Crime Detection, *Universal Law Publishing*
2. *Barbara Wheeler & Lori J. Wilson* – Practical Forensic Microscopy, *Wiley*
3. *Keith Inman & Norah Rudin* – Principles and Practice of Criminalistics, *CRC Press*

Assessment method: (Continuous Internal Assessment = nth%, Final Examination = nth%)

Introduction to Criminology

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-1st**
Course Name-Introduction to Criminology			
A.Y-2025-2026	**Course Code-B100224102**	**Batch-2025-2029**	**CIE Marks- 50 (MM)**
Total Teaching Hours-45	**Total Credits-3-0-0**		**ESE Marks- 50(MM)**
Type of Course- Theory			**Total Marks- 100 (MM)**

Course Objective:

To provide a foundational understanding of criminology, examining the nature, causes, and consequences of crime, criminal behavior, and the functioning of the criminal justice system, encouraging critical thinking about crime prevention, social justice, and rehabilitation strategies.

Course Description:

This course explores the key concepts, theories, and methodologies of criminology. Students will study the causes of crime, types of offenders, victimology, law enforcement systems, and correctional methods, enhancing analytical skills and fostering a comprehensive understanding of criminal behavior and justice.

UNIT-1	Topics	No. of Teaching hours/ (Lecture)
1	**Unit 1:** Definitions, objectives, and scope of criminology as a social science.Theoretical approaches to criminal behavior: classical, positivist, and sociological perspectives.Insights from criminal anthropology.Role and methods of criminal profiling.Analysis of	9

	modus operandi and its importance in crime investigation.Developing effective investigative strategies.Media's influence and involvement in criminal justice processes.	
2	**Unit 2:** Essential elements and characteristics of crime.Examination of the origins, nature, and consequences of criminal acts.Study of deviant behavior and its transformation into criminality.Analysis of hate crimes, organized crime networks, public disorder incidents, domestic and workplace violence.Understanding white-collar crimes and their societal impact.Victimology: assessing the experiences and rights of crime victims.	**9**
3	**Unit 3:** Juvenile delinquency: causes, trends, and interventions.Influence of societal change on criminal trends.Psychological disorders and their link to criminal conduct.Strategies for situational crime prevention and control.	**7**
4	**Unit 4:** Key pillars of the criminal justice system: police, judiciary, and corrections.Policing methods, operational styles, and principles guiding law enforcement.Legal powers of investigation entrusted to police forces.Procedures for initiating criminal charges and prosecution.Community policing and its role in trust-building.Challenges of policing in a diverse and pluralistic society.	**9**
5	**Unit 5:** Correctional systems and the rehabilitation of offenders.Human rights concerns within the Indian criminal justice framework. Present instances where media intervention influenced the course of justice as a pressure group. Study the current state of interrogation rooms and recommend practical upgrades.	**11**

Course Outcomes

1. Define criminology and explain its scope and societal importance.
2. Analyze major criminological theories explaining criminal behavior.

3. Identify different types of crime and criminal typologies.
4. Understand criminal justice system structure and operational challenges.
5. Apply crime prevention and rehabilitation strategies effectively.

Textbooks:

1. Sutherland, Edwin H. – *Principles of Criminology*, Rowman & Littlefield
2. Larry J. Siegel – *Criminology: The Core*, Cengage Learning
3. Vold, Bernard & Snipes – *Theoretical Criminology*, Oxford University Press.

Reference Books:

1. Frank Schmalleger – *Criminology Today: An Integrative Introduction*, Pearson
2. Walter C. Reckless – *The Crime Problem*, Appleton-Century-Crofts
3. Robert M. Bohm & Keith N. Haley – *Introduction to Criminal Justice*, McGraw-Hill

Assessment method: (Continuous Internal Assessment = nth%, Final Examination = nth%)

Criminal Law

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-1st**
Course Name- Criminal Law			
A.Y-2025-2026	**Course Code-B100224103**	**Batch-2025-2029**	**CIE Marks- 50 (MM)**
Total Teaching Hours-45	**Total Credits-3-0-0**		**ESE Marks- 50(MM)**
Type of Course- Theory			**Total Marks- 100 (MM)**

Course Objective:

To provide students with comprehensive knowledge of criminal law principles, classifications of offenses, elements of crime, and procedures, enabling them to analyze, interpret, and apply criminal statutes critically in real-world legal situations and judicial processes.

Course Description:

This course offers an in-depth study of criminal law, focusing on definitions, types of crimes, essential elements, defenses, punishments, and judicial interpretations. It integrates case studies and landmark judgments to develop legal reasoning and application skills in criminal justice.

UNIT-1	Topics	No. of Teaching hours/ (Lecture)
1	**Unit 1: Introduction to BND,BNSS,BSA,** Classification of cases under the Indian legal system: civil vs. criminal.Fundamental elements and structure of criminal law.Organization and jurisdictional hierarchy of criminal courts in India.Overview of the Criminal Procedure Code (CrPC).Distinction between cognizable and non-cognizable offences.Understanding bailable and non-bailable offences.Sentencing powers of the Chief Judicial Magistrate.Provisions related to summary trials under Section 260(2) of CrPC.Abridged form of judgments under Section 355. **Selected Sections from the Indian Penal Code (IPC):** • **Offences against persons:** Sections 121A, 299, 300, 302, 304A, 304B, 307, 309, 319, 320, 324, 326, 351, 354, 359, 362. • **Sexual offences and amendments:** Sections 375 and 377. • **Offences against property:** Sections 378, 383, 390, 391, 405, 415, 420, 441, 463, 489A, 497, 499, 503, 511. **Indian Evidence Act – Key Provisions:** • Concepts of evidence and rules of relevancy. • Role of expert witnesses in trials. • Procedures of cross-examination and re-examination. • Significant sections: 32, 45, 46, 47, 57, 58, 60, 73, 135, 136, 137, 138, 141. • Section 293 of CrPC concerning expert evidence.	9

2	**Unit 2:** Introduction to the Preamble, Fundamental Rights, and Directive Principles of State Policy, Detailed study of Articles relevant to forensic and criminal justice: o **Article 14:** Right to Equality before Law. o **Article 15:** Prohibition of discrimination. o **Article 20:** Protection in respect of conviction for offences. o **Article 21:** Right to Life and Personal Liberty. o **Article 22:** Protection against arrest and detention. o **Article 51A:** Fundamental Duties.	**9**
3	**Unit 3:** Acts addressing various categories of crime and social threats: o **Narcotic Drugs and Psychotropic Substances Act** o **Essential Commodities Act** o **Drugs and Cosmetics Act** o **Explosive Substances Act** o **Arms ammunition Act** o **Dowry Prohibition Act** o **Prevention of Food Adulteration Act** o **Prevention of Corruption Act** o **Wildlife Protection Act** o **Information Technology Act (I.T. Act)** o **Environment Protection Act** o **Untouchability Offences Act**	**7**
4	**Unit 4: Practice Applications** 1. Compile a comparative list of five cognizable and five non-cognizable offences. 2. Study the jurisdiction, powers, and limitations of the Judicial Magistrate of First Class. 3. Prepare a list of offences that qualify for summary trial under Section 260(2) of CrPC.	**9**

	4. Analyze a case in which an individual was convicted under Section 302 (murder). 5. Review a rape case tried under Section 375 and its legal outcome.	
5	**Unit 5: Case Study Analysis** 1. Present a case where expert opinion was crucial under Section 45 of the Indian Evidence Act. 2. Analyze a detention case under Article 22(5) and evaluate whether constitutional rights were upheld. 3. Cite a case involving a possible violation of Article 14 (Right to Equality). 4. List the constitutional limitations on the Right to Freedom of Religion. 5. Statistically analyze age distribution among convicts under the Narcotic Drugs and Psychotropic Substances Act. 6. Study an actual case prosecuted under the Drugs and Cosmetics Act. 7. Examine a case involving the Explosive Substances Act. 8. Analyze a criminal case under the Arms Act. 9. Explore a dowry death case prosecuted under Section 304B of IPC. 10. Examine a case prosecuted under the Untouchability Offences Act in the context of Article 15.	**11**

Course Outcomes

1. Explain fundamental principles and purpose of criminal law.
2. Identify essential elements constituting a crime legally.
3. Classify various criminal offenses under legal categories.
4. Analyze legal defenses available to accused individuals.
5. Understand punishments, sentencing, and judicial criminal procedures.

Textbooks:

1. **K.D. Gaur** – *Textbook on Indian Penal Code*, Universal Law Publishing
2. **Ratanlal & Dhirajlal** – *The Indian Penal Code*, LexisNexis

3. **K.N. Chandrasekharan Pillai** – *General Principles of Criminal Law*, Eastern Book Company

Reference Books :

1. **Wayne R. LaFave** – *Principles of Criminal Law*, West Academic Publishing
2. **Glazebrook, P.R.** – *Blackstone's Statutes on Criminal Law*, Oxford University Press
3. **Andrew Ashworth** – *Principles of Criminal Law*, Oxford University Press

Assessment method: (Continuous Internal Assessment = nth%, Final Examination = nth%)

Practical's
Introduction to Forensic Science Practical

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-1st**
Course Name-Introduction to Forensic Science			
A.Y-2025-2026	**Course Code-B100224151P**	**Batch-2025-2029**	**CIE Marks- 60 (MM)**
Total Teaching Hours-15	**Total Credits-0-0-1**		**ESE Marks- 40 (MM)**
Type of Course- Practical			**Total Marks- 100 (MM)**

Course Objective:

To develop practical skills in forensic science through hands-on training in evidence collection, examination, and analysis techniques, enabling students to apply theoretical knowledge to real-world scenarios in crime scene investigation and forensic laboratory practices.

Course Description:

This course provides experiential learning in forensic science techniques, including fingerprinting, blood analysis, document examination, and tool mark identification. Students gain proficiency in evidence handling, laboratory analysis, and the preparation of forensic reports through practical exercises and simulated investigations.

S.No.	Topics
1	Present case studies that raised concerns under the Daubert standard.
2	Examine the forensic divisions of INTERPOL and compare them with India's Central Forensic Science Laboratories, including proposed improvements.
3	Study NCRB annual crime reports and visually present data using smart art or infographic templates.

4	Draft investigative reports on various categories of crime.
5	Evaluate how the Central Fingerprint Bureau in New Delhi coordinates with State Fingerprint Bureaus.
6	Review the hierarchical setup of multiple forensic institutions and propose enhancements.
7	Investigate ongoing and completed projects by the BPR&D and identify key research focus areas in Police Science.
8	Differentiate between the roles of Police Academies and Police Training Schools.
9	Compare ethical codes of conduct for forensic scientists across different organizations.

Crime and Society Practical

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-1st**
Course Name-Crime and Society Practical			
A.Y-2025-2026	**Course Code-B100224152P**	**Batch-2025-2029**	**CIE Marks- 60 (MM)**
Total Teaching Hours-15	**Total Credits-0-0-1**		**ESE Marks- 40 (MM)**
Type of Course- Practical			**Total Marks- 100 (MM)**

Course Objective:

To develop an applied understanding of the relationship between crime and society through practical activities, case studies, and fieldwork, helping students critically analyze social factors influencing crime and evaluate preventive and corrective societal strategies.

Course Description:

This course provides hands-on learning experiences focusing on crime patterns, societal reactions, victim studies, and community-based crime prevention. Through surveys, case analysis, and interaction with social agencies, students gain insights into real-world criminological issues and societal dynamics.

S.No.	Topics
1	Analyze historical criminal cases to determine the most suitable criminological theory explaining the accused's behavior.
2	Study cases where offender profiling significantly aided in solving the crime.

3	Assess post-traumatic stress disorders experienced by victims of racial violence.
4	Link deviant behaviors observed in offenders with their criminal activities through specific examples.
5	Investigate how improvements in living standards might correlate with fluctuations in crime rates.
6	Review modernization policies for police stations and analyze their implementation across various jurisdictions.
7	Visit a model police station and compare its facilities and functioning with conventional police stations.
8	Examine a real-life juvenile delinquency case and propose actionable rehabilitation strategies.

Second Semester

Forensic Psychology

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-2nd**
Course Name-Forensic Psychology			
A.Y-2025-2026	**Course Code-B100224201**	**Batch-2025-2029**	**CIE Marks- 50 (MM)**
Total Teaching Hours-45	**Total Credits-3-0-0**		**ESE Marks- 50 (MM)**
Type of Course- Theory			**Total Marks- 100 (MM)**

Course Objective :

To equip students with theoretical and practical knowledge of forensic psychology, focusing on criminal behavior, psychological assessment, and the legal system, enabling them to evaluate, interpret, and assist in criminal investigations and courtroom procedures effectively.

Course Description:

This course introduces key concepts in forensic psychology, including offender profiling, mental health assessments, eyewitness testimony, and courtroom behavior. Students will learn to apply psychological theories and methods to real-world legal and investigative contexts, enhancing forensic analysis skills.

UNIT-1	Topics	No. of Teaching hours/ (Lecture)
1	**Unit 1: Introduction to Forensic Psychology**: Definition, core principles, and the relationship between forensic psychology and	9

	forensic psychiatry, The interface between psychology and legal systems, Ethical dilemmas and professional responsibilities in forensic psychological practice.	
2	**Unit 2: Legal Competence and Courtroom Psychology**: Evaluation of mental fitness to stand trial, Role of mental health disorders within forensic contexts, Psychological aspects of legal evidence – including eyewitness reliability and confession validity, Techniques of criminal profiling and behavioral analysis, Function of psychological expertise in court, with specific reference to Section 84 of the Indian Penal Code (IPC).	**9**
3	**Unit 3: Criminal Behavior and Psychological Assessment**: Understanding psychopathology and personality disorders in criminal populations, Importance of psychological testing in crime investigation, Case studies on serial killers and terrorists from a psychological viewpoint, Biological, social, and psychological contributors to criminal conduct, Theories of juvenile delinquency, including social cognition and moral reasoning, Issues related to child abuse and juvenile sexual offenders, along with legal debates on juvenile justice.	**11**
4	**Unit 4: Deception Detection Techniques**: Use of investigative interviews, analysis of non-verbal cues, statement content, voice stress analysis, and hypnosis as lie detection methods.	**7**
5	**Unit 5: Advanced Forensic Technologies**: Polygraphy: operational protocols, question structuring techniques, and the associated legal and ethical considerations, Narco-analysis and BEOS: underlying principles, scientific basis, and regulatory and ethical implications.	**8**

Course Outcomes

1. Define and explain scope and role of forensic psychology.
2. Conduct psychological assessments relevant to legal investigations.
3. Analyze criminal behavior through psychological theories and disorders.
4. Evaluate factors influencing eyewitness memory and courtroom behavior.
5. Apply ethical principles and professional standards in forensic practice.

Textbooks:

1. ***Curt R. Bartol & Anne M. Bartol*** – Introduction to Forensic Psychology, *Sage Publications*
2. ***Graham M. Davies & Anthony R. Beech*** – Forensic Psychology: Crime, Justice, Law, and Interventions, *Wiley*
3. ***David Canter*** – Criminal Psychology: Topics in Applied Psychology, *Routledge*

Reference Books:

1. ***Jennifer Brown & Elizabeth Campbell*** – The Cambridge Handbook of Forensic Psychology, *Cambridge University Press*
2. ***Matthew T. Huss*** – Forensic Psychology: Research and Application, *Wiley*
3. ***Adrian Needs & Graham J. Towl*** – Applying Psychology to Forensic Practice, *BPS Blackwell*

Assessment method: (Continuous Internal Assessment = nth%, Final Examination = nth%)

Forensic Dermatoglyphics

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-2nd**
Course Name-Forensic Dermatoglyphics			
A.Y-2025-2026	**Course Code-B100224202**	**Batch-2025-2029**	**CIE Marks- 50 (MM)**
Total Teaching Hours-45	**Total Credits-3-0-0**		**ESE Marks- 50 (MM)**
Type of Course- Theory			**Total Marks- 100 (MM)**

Course Objective :

To develop an in-depth understanding of dermatoglyphic patterns and their forensic significance, enabling students to analyze, classify, and interpret fingerprint, palm, and sole prints for personal identification and crime investigation purposes effectively.

Course Description:

This course covers the fundamental principles of dermatoglyphics, including the formation, types, and classification of fingerprints, palm prints, and footprints. It emphasizes practical methods of collection, preservation, and examination, focusing on forensic applications in criminal identification and analysis.

UNIT-1	Topics	No. of Teaching hours/ (Lecture)
1	**Unit 1: Foundations of Fingerprinting**: Overview and historical development of fingerprinting, emphasizing Indian contributions, Biological origin and development of ridge patterns on the skin, Core principles guiding fingerprint science, Classification of fingerprint types and pattern configurations, Key fingerprint features (minutiae),	**10**

	and techniques for recording plain and rolled prints.	
2	**Unit 2: Fingerprint Classification & Advanced Features**: Systems for categorizing and organizing fingerprint records, Introduction to the Automated Fingerprint Identification System (AFIS), Importance and application of poroscopy (pore analysis) and edgeoscopy (ridge edge examination) in forensic identification.	**8**
3	**Unit 3: Techniques for Fingerprint Development**: Study of latent (invisible) fingerprints and the composition of sweat residues, Detection of latent prints using various physical and chemical reagents, Mechanisms behind different development techniques for enhancing fingerprint visibility.	**9**
4	**Unit 4: Enhancement & Preservation Techniques**: Use of advanced light sources in detecting latent prints, Procedures for preserving developed fingerprints, Utilization of digital imaging to enhance print clarity, Techniques for obtaining fingerprints from deceased individuals and from gloves.	**9**
5	**Unit 5: Impression Evidence Beyond Fingerprints**: Forensic relevance of footprint evidence, including casting and electrostatic lifting methods, Examination of palm prints and their historical use in identification, Lip prints – their nature, location, collection methods, and analysis, Introduction to ear prints and their role in forensic investigations.	**9**

Course Outcomes

1. Understand fundamentals and significance of forensic dermatoglyphics science.
2. Classify and interpret fingerprint patterns systematically and accurately.
3. Analyze palm and sole prints for forensic identification purposes.
4. Apply various techniques to develop and preserve latent prints.
5. Utilize automated systems and digital technologies for fingerprint identification.

Textbooks:

1. **Ashbaugh, David R.** – *Quantitative-Qualitative Friction Ridge Analysis*, CRC Press
2. **Maltoni, Davide et al.** – *Handbook of Fingerprint Recognition*, Springer
3. **Cowger, James F.** – *Friction Ridge Skin: Comparison and Identification of Fingerprints*, CRC Press

Reference Books:

1. **Champod, Christophe et al.** – *Fingerprint Identification*, CRC Press
2. **Reddy, K. Narayan** – *The Essentials of Forensic Medicine and Toxicology*, Jaypee Brothers
3. **Singh, G.P.** – *Textbook of Forensic Medicine and Toxicology*, Satyam Book International

Assessment method: (Continuous Internal Assessment = nth%, Final Examination = nth%)

Technological Methods in Forensic Science

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester- 2nd**
Course Name- Technological Methods in Forensic Science			
A.Y-2025-2026	**Course Code-B100224203**	**Batch-2025-2026**	**CIE Marks- 50 (MM)**
Total Teaching Hours-45	**Total Credits-3-0-0**		**ESE Marks- 50 (MM)**
Type of Course- Theory			**Total Marks- 100 (MM)**

Course Objective:

To introduce students to advanced technological methods used in forensic investigations, focusing on scientific tools, modern instrumentation, analytical techniques, and digital forensics for accurate evidence analysis, enhancing problem-solving skills and precision in forensic casework.

Course Description:

This course explores the application of modern technologies in forensic science, including spectrometry, chromatography, imaging, DNA analysis, and cyber forensics. Emphasis is placed on practical application, interpretation of results, and the integration of technology in criminal investigations.

UNIT-1	Topics	No. of Teaching hours/ (Lecture)
1	**Unit 1: Chromatographic Techniques**: Preparation of samples for chromatographic and spectroscopic analysis, Overview of chromatographic methods., Fundamental principles and forensic applications of:{ Thin Layer Chromatography (TLC), Gas Chromatography (GC), Liquid Chromatography (LC).	9

2	**Unit 2: Spectroscopic Techniques**: Core concepts and forensic relevance of: Ultraviolet–Visible Spectroscopy (UV-Vis), Infrared Spectroscopy (IR), Atomic Absorption Spectroscopy (AAS), Atomic Emission Spectroscopy (AES), Mass Spectrometry (MS), Introduction to X-ray spectrometry and its forensic applications.	**9**
3	**Unit 3: Additional Analytical Techniques**: Fundamentals and forensic applications of: Colorimetric analysis with reference to the Lambert-Beer Law, Electrophoresis for biological evidence examination, Neutron Activation Analysis for trace elemental detection.	**9**
4	**Unit 4: Microscopy in Forensic Science**: Basic principles and types of microscopes used in forensic analysis: Light microscop, Electron microscope, Comparison microscope, Practical forensic applications of microscopy in analyzing trace and minute evidence.	**9**
5	**Unit 5: Forensic Photography and Videography**: Introduction to the foundational principles and uses of photography in forensic investigations, Use of advanced imaging techniques, including: 3D photography, Infrared and ultraviolet imaging, Digital photography, Techniques for documenting crime scenes and forensic laboratories using still photography and videography.	**9**

Course Outcomes

1. Understand the pivotal role of chromatographic and spectroscopic techniques in analyzing and interpreting crime scene evidence.
2. Explore the applications of analytical tools like colorimetry, electrophoresis, and neutron activation analysis for identifying chemical and biological substances.
3. Recognize the value of microscopic techniques in detecting and comparing trace evidence.
4. Appreciate the relevance of photography and videography in documenting crime scenes and forensic exhibits.
5. Analyze, preserve, and interpret digital evidence in cybercrime cases.

Textbooks (3):

1. **Houck, M.M. & Siegel, J.A.** – *Fundamentals of Forensic Science*, Academic Press
2. **Saferstein, Richard** – *Forensic Science: From the Crime Scene to the Crime Lab*, Pearson

3. **Nick Tilley & Aiden Sidebottom** – *Handbook of Crime Prevention and Community Safety*, Routledge

Reference Books (3):

1. **Skoog, Douglas A., et al.** – *Principles of Instrumental Analysis*, Cengage Learning
2. **Gandhi, R.K.** – *Digital Evidence: Representation and Authentication*, LexisNexis
3. **Jackson, G. & Jackson, J.M.** – *Forensic Science*, Pearson Education

Assessment method: (Continuous Internal Assessment = 50nth%, Final Examination =50 nth%)

Practicals

Forensic Psychology Practical

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-2nd**
Course Name- Forensic Psychology Practical			
A.Y-2025-2026	**Course Code-B100224251P**	**Batch-2025-2026**	**CIE Marks- 60 (MM)**
Total Teaching Hours-30	**Total Credits-0-0-1**		**ESE Marks- 40 (MM)**
Type of Course- Practical			**Total Marks- 100 (MM)**

S.No.	Topics
1	Present a case study where legal procedures involved assessment of psychological behavior.
2	Create a report exploring the link between mental illness and forensic investigation.
3	Analyze a serial murder case, focusing on the psychological characteristics of the offender.
4	Present a juvenile crime case and argue both perspectives on lowering the juvenile age threshold.
5	Study a case where hypnosis was employed to detect falsehoods.
6	Draft a detailed report using the Thematic Apperception Test (TAT).

7	Prepare a psychological profile using the Minnesota Multiphasic Personality Inventory (MMPI).
8	Submit a second case report employing the TAT for comparative analysis.
9	Compile a report on psychological interpretations from the Word Association Test.

Forensic Dermatoglyphics Practical

School Name- School of sciences			
Program- B.Sc. (H) Forensic Sciences			**Semester-2nd**
Course Name- Forensic Dermatoglyphics Practical			
A.Y-2025-2026	**Course Code-B100224252P**	**Batch-2025-2026**	**CIE Marks- 60 (MM)**
Total Teaching Hours-30	**Total Credits-0-0-1**		**ESE Marks- 40 (MM)**
Type of Course- Practical			**Total Marks- 100 (MM)**

S.No.	Topics
1	Record both plain and rolled fingerprint impressions.
2	Perform ten-digit fingerprint classification.
3	Analyze and distinguish between various fingerprint patterns.
4	Identify fingerprint core and delta features.
5	Conduct ridge counting and ridge tracing exercises.
6	Apply physical methods to detect latent fingerprints.
7	Explore chemical techniques for fingerprint development.

8	Utilize alternate light sources for enhancing fingerprint visibility.
9	Make casts of footprint impressions.
10	Measure the concentration of colored compounds using colorimetry.