



Gyanmanjari
Innovative University

Course Syllabus
Gyanmanjari Science college
Semester-1 (Forensic science)

Subject: Forensic Science and Criminology-BSC1FS11302

Type of course: Major (Core)

Prerequisite: Basic understanding of Crime and crime scene.

Rationale: After studying this paper, the students will get basic concept and characteristic of forensic science and crime.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks		Total Marks
CI	T	P		SEE	CCE	
2	0	4	4	100	100	200

Legends: CI-Class Room Instructions; T – Tutorial; P - Practical; C – Credit; SEE - Semester End Evaluation; MSE- Mid Semester Examination; LWA - Lab Work Assessment; V – Viva voce; CCE-Continuous and Comprehensive Evaluation; ALA- Active Learning Activities.

Course Content:

Sr. No	Course Content	Hrs.	% Weightage
1	Introduction of forensic science and its branches- - Definition, scope of forensic science and duties of forensic scientist. - Historical perspective - Growth of forensic science laboratories, Existing facilities - Facilities offered by various divisions- Ballistics, biology, chemistry, document, lie-detector division, physics, serology, toxicology, Facilities offered by other expert institutions. Practical –	T: P 6:12	20%



- Exploring the historical aspects of criminal cases (Any 2) through the lens of forensic science.
- To study the set-up of different forensic science organizations in India
- To study and understand the working of the divisions and listing the evidences under them.

Evaluation Methods

Sr. No	Evaluation Methods	SEE	CCE
1	Report making- Famous cases will be given to students they have to document everything related to the case.	10	
2	MCQ	10	
3	Chart making to evolution of forensic science from historical times to digital forensic .		10
4	ALA: Country Comparison: Students have to compare the structure and functions of FSLs in different countries. They can present their findings using visuals such as charts or graphs to highlight similarities and differences and upload it on GMIU Web portal.		10
	Total	20	20

2

Crime scene Occurrence :

- Introduction to Crime scene.
- People and things, Fundamental principles of forensic science and Limitations
- Preservation of the crime scene, Recording of crime scene
- Methodical search for evidence, Value of trace evidence

Practical:

- Preservation of the crime scene
- Recording of crime scene
 - Recording of notes
 - Sketching the crime scene

T:P
6:12

20%



- Photography of the crime scene
- Searching methods of crime scene
- Learning about sketching of crime scene

Evaluation Methods

Sr. No	Evaluation Methods	SEE	CCE
1	Photography- 2.5%(Take various types of photographs of the scene like overall, midrange and close-up)		10
2	Crime scene sketching- 10%(Sketching the crime scene provided to the students-“Rough and final”)	10	
3	SOC-collection and packaging- 10%(collection and packaging of the evidence)	10	
4	ALA: Scene of crime : Each Student will be given a type of crime (suicidal, accidental, murder etc), they have to prepare a model of that scene of crime and present in the class and upload the photos on the GMIU portal.		10
	Total	20	20

Physical Evidence -

- Physical evidences- definition, sources, crime scene, victim, suspect.
- Utility of physical evidence, Types of physical evidence
- Location of physical evidence at the crime scene
- Search and collection of Physical evidences
- Control sample
- Handling of PE, Packing and labelling of evidence, Sealing, forwarding, chain of custody.
- Special instruction for specific type of exhibits.

Practical:

3

T:P
6:12

20%



- Location of physical evidence at the crime scene
- Packing and labelling of evidence
 - Glass.
 - Documents.
- Sealing, forwarding, chain of custody of physical evidences.

Evaluation Methods

Sr. No	Evaluation Methods	SEE	CCE
1	Understand the types of physical evidences –list the collection and Packing of physical evidence from different crime scene(indoor, outdoor, mobile)		10
2	Sealing, forwarding, chain of custody of given physical evidences.	10	
3	Viva voice	10	
4	Case Study: The Silent Witness Here's a case study designed for forensic students, covering various aspects of a crime scene investigation. It provides information in Report investigation unfolds, allowing students to consider their actions and conclusions at each step. Notify it in report with evidence.		10
	Total	20	20

Judiciary forensic :

- Law relating to experts and scientific evidence:
- Who is an expert?
- Value of expert evidence
- Special provisions on experts
- Inherent powers of high court
- Apex court and high court's ruling on expert opinion
- Introduction to BNS (Bharatiya Nyaya Sanhita)
- Introduction to BNSS (BharatiyaNagarik Suraksha Sanhita)
- Introduction to BSA (BharatiyaSakshyaAdhiniyam)

Practical :

- Differentiating between cognizable and non cognizable offences according to the sections given in Cr.P.C

4

T:P
6:12

20%



- Explaining expert witness according to Indian evidence Act.
- List out the sections related to:
 1. Crime against women
 2. Injury
 3. Homicide and murder
 4. Robbery and theft
 5. Property
 6. Dowry

Evaluation Methods

Sr. No	Evaluation Methods	ESE	CCE
1	Mock trial- 5%(A mock trial will be executed by the students related to criminal and civil case)	10	
2	Viva voce	10	
3	Journal		10
4	Minor Project		10
	Total	20	20

Fundamentals of Criminology –

Concept of Crimes, Historical Perspective, Explanations of Crime, Schools of Criminology, Typology of Crime, Criminal Behaviour, Other Forms of Crimes.

Practical:

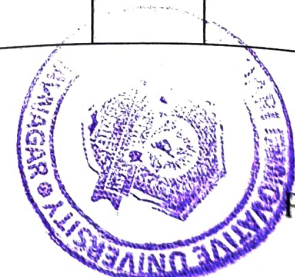
- Comparative Analysis of Historical Crime Cases.
- Classification and Typology of Crimes Using Real Case Files.

Evaluation Methods

Sr. No	Evaluation Methods	SEE	CCE
1	Integrated Crime Case Analysis- Students are provided with a detailed case study and must: Classify the crime, Explain the criminal behaviour. Apply appropriate criminological theories.	10	

**T: P
6:12**

20%



		Submit analytical report and defend it during viva.				
	2	Victimology Case Study- Analyze victim-related factors, victim-offender relationship, vulnerability, and possible prevention strategies.	10			
	3	Community Crime Prevention Project- Identify common crime risks, Assess environmental and social factors contributing to crime, Propose crime prevention strategies based on criminological principles, Present findings through a report and seminar.		10		
	4	Crime Newspaper Forensics - Collect newspaper reports for one month and create a database categorizing reported crimes according to crime type, location, victim, offender, and modus operandi.		10		
		Total	20	20		
					90	100%

Distribution of Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage %	30%	20%	20%	20%	10%	00



Course Outcome:

After learning the course the students should be able to:	
CO1	Understand the fundamental concepts and scope of forensic science.
CO2	Evaluate the evidentiary value of trace and physical evidence in crime scene analysis.
CO3	Understand ,classify, collection and packaging the different types of physical evidence encountered in forensic investigations..
CO4	Define the role and qualifications of an expert under Indian law.
CO5	Analyze the concepts, schools, theories, typology, and behavioural aspects of crime.

Instructional Method:

The course delivery method will depend upon the requirement of content and needs of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc.

From the content 10% topics are suggested for flipped mode instruction.

Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses, Virtual Laboratory.

The internal evaluation will be done on the basis of the Active Learning Assignment.

Practical/Viva examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

Reference Books:

- [1] B. S Nabar, forensic science in crime investigation, Asia law house.
- [2] The Bharatiya Nyaya Sanhita, 2023 (No. 45 of 2023), Ministry of Law and Justice, Government of India.
- [3] The Bharatiya Nagarik Suraksha Sanhita, 2023 (No. 46 of 2023), Ministry of Law and Justice, Government of India.



- [4] The Bharatiya Sakshya Adhiniyam, 2023 (No. 47 of 2023), Ministry of Law and Justice, Government of India.
- [5] Richard Saferstein, Criminalistics- An Introduction to forensic science, Pearson.
- [6] B.R.Sharma : Forensic science in criminal Investigation & Trails.
- [7] S.H. James and J.J. Nordby, Forensic Science: An Introduction to Scientific and Investigative Techniques, 2nd Edition, CRC Press, Boca Raton
- [8] B.B. Nanda and R.K. Tiwari, *Forensic Science in India: A Vision for the Twenty First Century*, Select Publishers, New Delhi.

