Gyanmanjari Innovative University

Course Syllabus
Gyanmanjari Science College
Semester-1(M.Sc.)

Subject: Crime Scene Investigation and Management – MSCFS11503

Type of course: Major

Prerequisite: Students should have a basic knowledge of Forensic crime scene investigation

Rationale: The Prerequisite provides the foundation for understanding the concepts of crime scene and how it should be managed.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks					Total Marks
				Theory Marks		Practical Marks		CA	
CI	T	P	C	ESE	MSE	V	P	ALA	
4	0	0	4	60	30	10	00	50	150

Legends: CI-Class Room Instructions; T – Tutorial; P - Practical; C – Credit; ESE - End Semester Examination; MSE- Mid Semester Examination; V – Viva; CA - Continuous Assessment; ALA- Active Learning Activities.

Course Content:

Unit No.	Course content	Hrs	% Weightage
1	**Introduction to Crime scene investigation:** Definition and Types of Crime scene, Principles of Forensic science, Experts team Composition, Role of First responding officer, Physical Evidences Crime scene investigations, protecting and isolating the crime scene; Documentation, sketching, field notes and photography. Searching, handling and collection, preservation and transportation of physical evidences. Chain of custody and Reconstruction of scene of crime.	15	25
2	**Forensic Evidences:** Basic types of evidence- visible, plastic, latent, micro & macro, trace and ultra-trace, pattern, fragile and digital evidence. Method for Search ,Collection (preservation), Handling packaging , Important evidence such as Impression evidence (Fingerprints, Palm prints, lip prints, bare foot, ear prints) Casting evidences (Shoe prints, bite marks, tire marks, tools marks, striation marks) pattern evidence (Blood spatter, Gait, glass fracture, skid, Injury, burning) Biological evidence (blood, hair, nail, skin, saliva, urine, semen, teeth, bone, mucus, milk, Vaginal secretion, vitreous, fecal matter, DNA(n&m) Other Biological Evidence plant material (leaves, wood, flowers, pollen, roots, seeds) animas material (feather, Diatom) Ballistic (Firearm, Projectiles (Bullets, shots, pellets) cartridges, wads, GSR) Viscera (vomit, stomach wash, stomach, intestine, kidney, liver, spleen, brain, heart, blood, bones, teeth ,hair, skin, sweat) physical evidence (glass, paint fiber, plastic, tungsten filament, broken pieces (wood, metal, bangle) button, keys, cable wires , rope ligature, coins, stamps, hardware tools. Other evidence (soil, dust, ash, smoke, cloth, cigarette buds, Cyber evidence (Data card, SIM, storage drives, mobile devices, computer systems) Miscellaneous (Odour, burnt document, hand written note, Id cards, Random objects).	20	25
3	**Crime Scene Photography:** Crime Scene Documentation, Crime Scene Photography, Videography, sketching and mapping. chain of custody, interpreting a crime scene, Reconstruction of a crime scene.	10	25
4.	**Reconstruction:** Understanding the concept of CSR, Nature and scope of CSR, Importance and Significance of CSR, End product in reconstruction, Importance of analysis in reconstruction, scientific approach to reconstruction, Concept of Consilience, Consilient Approach to reconstruction, Concepts and techniques of logical reasoning and systematic methodology, Concepts from other disciplines, The Ryerson Method {Conceptual Adaptation from available documentation} Event Analysis { Pre-Event, Approach, Entry, Pre-Contact, Contact, Post-Contact, Exit, Post-Exit, Post-Contact} The Bevel Model, Integrated Bevel	15	25

	method, method for evidence, collection, documentation, analysis and synthesis, The Henry Lee Model, The Robert Ogle Model, The Consilient Method		

Continuous Assessment:

Sr. No	Active Learning Activities	Marks
1.	**Imaginary Crime Scene:** Write an essay on imaginary crime scene where a dead body of 20 year boy is found nearby Bortalav Lake. Use proper forensic wording to describe the scene and upload it on GMIU Web Portal.	10
2.	**List of Evidences:** For the above crime scene, enlist evidences found and describe why it is important as an evidence to solve a crime. Prepare report and upload it on GMIU Web portal.	10
3.	**Photography & Sketching:** Collect 5 photographs of different evidences found from archive. Draw one sketch which can lead to find a criminal.	10
4.	**Significance of Crime Scene Reconstruction:** List out the significance of crime scene reconstruction and upload it on GMIU	10
5.	**Solve the crime:** From the above enlisted ALA, found the criminal and why that person was a criminal through evidence based forensic techniques. Upload the report on GMIU Web portal.	10
Total		**50**

Suggested Specification table with Marks (Theory):60

Distribution of Theory Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	35%	35%	30%	00	00	00

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcome:

After learning the course the students should be able to:	
CO1	Analyze and manage the crime scene
CO2	Observe the possibilities of evidences
CO3	Strike the importance of photograph and how it can be helpful
CO4	Aware about the significance of CSR

Instructional Method:

The course delivery method will depend upon the requirement of content and need 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 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] Crime scene management within Forensic Science, Jaskaran Singh, Neeta Raj Sharma, Springer

[2] W.J. Tilstone, M.L. Hastrup and C. Hald, Fisher's, Techniques of Crime Scene Investigation, CRC Press, Boca Raton

[3] S.H. James and J.J. Nordby, Forensic Science: An Introduction to Scientific and Investigative Techniques, 2nd Edition, CRC Press, Boca Raton