

SHRI VAISHNAV INSTITUTE OF FORENSIC SCIENCE

GENERIC ELECTIVE

UNDER GRADUATE

COURSE CODE	CATEGO RY	COURSE NAME	TEACHING &EVALUATION SCHEME								
			THEORY			PRACTICAL					
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*	L	Т	Р	CREDITS
GUFS101	GE	Elementary Forensic Science	60	20	20	00	00	3	0	0	3

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

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

Course Objectives: The course aims to provide the students with

1. This course is design give basic knowledge of forensic science their history, physical evidence, recent trends in forensic science and inculcate the students with the Indian judiciary system

Course Outcomes: After studying this course, the students will

- 1. Be able to know about the basics and history of forensic science in India and worldwide.
- 2. Be able to describe mandate, set-up of and report writing of Forensic Science in accordance with Indian justice system.
- 3. Be able to explain the relationship between forensic science and police system.
- 4. Know about recent trends like geo-forensics, biometric and bioterrorism in relation to Forensic Science.

UNIT-I

Forensic Science: Definition of Forensic Science, The Role of the Forensic Laboratory, History and Development of Forensic Science in India & Abroad, Pioneers in Forensic Science, Multidisciplinary nature, Forensic Technology solving crimes with advanced technology, Forensic intelligence, and Interviews.

Chairperson Board of Studies Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore **Chairperson** Faculty of Studies Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore Controller of Examination Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore Joint Registrar Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore SHRI VAISHNAV VIDHYAPEETH VISHVAVIDHYALAYA, INDORE



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UNIT-II

Forensic Evidence: Concise of Forensic Physical, Biological, Chemical and Psychological evidences, Medico-Legal Cases. Laws and Principles of Forensic Science: Law of Exchange (Locard), Law of Individuality, Law of Comparison, Law of Progressive Changes and Law of Probability, Branches of Forensic Science.

UNIT-III

Administration and Organizational Setup: DFSS, CFSL, GEQD, SFSL, RFSL, MFSL, FPB, NICFS, CDTS, NCRB, BPR&D, Qualifications, and duties of Forensic Scientists Academic centres of education and research: Indian and Academy of Forensic Science, American Board of Forensic Odontology, Interpol and FBI, Australian Academy of Forensic Sciences. Education and Employment systems of Forensic Science in India: Teaching Courses and Research fields in Forensic Science, Scope and jobs in Forensic Science.

UNIT-IV

Police and Forensic Science: Relationship between police and forensic expert, Role of Police at the Crime scene, scientific help at crime scene, handling of various types of crime scenes by police, forensic teaching of police personals, forensic case documentation by Police, Technological Advance and Police. Admissibility of Forensic Evidence in Court: Admissibility of Expert Testimony and Evidence in Court, Frye and Daubert standards. Forensic Report: Forensic Expert, Forensic Report, Formats of Forensic Report, Court Testimony, PreCourt Preparations & Court appearance, Examination in chief, Cross Examination and Re-examination, Ethics in Forensic Science.

UNIT-V

Recent Trends in Forensic Science- Environmental Forensics: Definition, Legal processes involving environmental forensic science. Geo-forensics Global Positioning System; Basic principles and applications. Biometrics in Personal Identification: Introduction, Concepts of Biometric Authentication, Role in person Identification, Techniques and Technologies (Finger Print Technology, Face Recognition, IRIS, Retina Geometry, Hand Geometry, Speaker Recognition, Signature Verification and other forensic related techniques). Bioterrorism: Definition, Concepts of Biosecurity and microbial forensics, Weapons of mass destruction (WMD), mass-casualty weapons (MCW), NBC and CBRNE, Dirty Bombs.

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Suggested Readings:

- 1. Nanda, B.B. and Tewari, R.K. (2001) Forensic Science in India: A vision for the twenty first century SelectPublisher, New Delhi.
- 2. James, S.H and Nordby, J.J. (2003) Forensic Science: An introduction to scientific and investigative techniquesCRC Press,
- 3. Saferstein : Criminalistics (1976) Prentice Hall Inc., USA.
- 4. Deforest, Gansellen&Lee : Introduction to Criminalistics.
- 5. Sharma, B.R. (1974) Forensic Science in Criminal Investigation and Trials, Central Law Agency, Allahabad,1974.
- 6. Hess, A.K. and Weiner, I.B. (1999) Handbook of Forensic Psychology 2nd Ed. John wiley& sons.
- 7. Bruce A. Arrigo (2000) Introduction to Forensic Psychology Academic Press, London
- 8. J A Siegel, P.J Saukko (2000) Encyclopedia of Forensic Sciences Vol. I, II and III, Acad. Press
- 9. Hand Book of Forensic Psychology O' Donohue Levensky
- 10. Brain Experience C.R.Mukundan
- 11. Criminal Profilling B. Turvey
- 12. Investigative Forensic Hypnosis J. Niehans
- 13. Art & Science of the Polygraph Techniques J.A.Matte
- 14. Hand Book of Polygraph Testing M.Kloinen
- 15. Detecting Lies & Deceit A.Vrij
- 16. Virginia A. Lynch (2011) and Janet Barber Duval: Forensic Nursing Science

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