

L313 F: Forensic Science, Law and Crime Detection Methods

OBJECTIVES OF THE COURSE:

The main object of including this course is to make the law students familiarize about the Forensic Science Technologies as well as role and functions Forensic Science Laboratories and how they are useful in detecting the crime and criminals. In the era of computer technology and internet, we can effectively solve the complicated cases of cybercrimes, forgery, rape, fire-arm used in the crime, identification of trace elements, identifying paternity of child or about various toxic materials. In the incidents of bomb-blast or terrorist attack, forensic science helps us to reach to the root of crime and catching the criminals. It is also possible to find out truth by application of various Forensic Psychology Techniques like lie detection test, brain mapping or narco test. While understanding various methods of Forensic Science in detection of crimes, law students are expected to understand the constitutionality of all the methods as well as the evidential value thereof.

Syllabus:

1. History, Scope, Need and application of Forensic Science in Crime Detection:

- 1.1 History and scope of Forensic Science
- 1.2 Need of Forensic Science in understanding modus operandi of criminals as well as Crime Investigation and Detection
- 1.3 Basic Principle of Criminal Jurisprudence relied in Forensic Science:” Man may lie, but circumstances cannot.”
- 1.4 Evidence collected through Forensic Science Techniques and Report of Forensic Expert: Evidential value thereof
- 1.5 Various general techniques of Forensic Science used in detection of crimes:
 - 1.5.1 Blood-Alcohol Analysis
 - 1.5.2 Toxicology Reports
 - 1.5.3 Ballistic Expert Report regarding use of fire-arm or residues of firearm Parts at the scene of offence
 - 1.5.4 Analysis of Body Fluids: Blood, Serum, saliva etc.
 - 1.5.5 Reports of Handwriting Experts (in crimes of forgery) & Finger-print Experts and identification of Handwriting in questioned documents
 - 1.5.6 Identification of Narcotic and Psychotropic Substances like Opium, Brown Sugar, Heroin etc.
 - 1.5.7 Crime detection/investigation through Track marks: Foot Prints, Naked Footprints etc.

2. Forensic Psychology Techniques, Crime Detection/Investigation and Law:

- 2.1 Forensic Psychology Techniques and importance thereof
- 2.2 Various types of Forensic Psychology Techniques used in Crime Detection:
 - 2.2.1 Lie Detection Test and its procedure
 - 2.2.2 Polygraph Test and its techniques
 - 2.2.3 Brain Mapping Test and procedure thereof
 - 2.2.4 Narco Analysis Test (Truth Serum Test)
 - 2.2.5 Hypnotism

- 2.3 Constitutional validity of Forensic Psychology Techniques in context with Fundamental Right of Self Incrimination under Article 20(3) and 22 of the Constitution
- 2.4 Drawbacks and Hazards of Forensic Psychology Techniques
- 2.5 Evidential Value of confession of the accused made through or evidences Gathered through Forensic Psychology Techniques
- 2.6 Judicial approach about acceptance of evidence gathered by Forensic Psychology Techniques

3. Recent Forensic Science Techniques for Crime Detection and Future Challenges:

- 3.1 Cyber Crime detection through forensic science
 - 3.1.1 Retrieving the data from Computer Hard-disk
 - 3.1.2 Retrieving SMS/MMS from mobile after having deleted
 - 3.1.3 Detecting E-mail Hackers, Website Hackers and Computer Hackers
 - 3.1.4 Tracking of E-mails in locating the criminals
 - 3.1.5 Tracking offences of Electronic Fund Transfer and related crimes
 - 3.1.6 Tracking offences related to Digital Signature, Software Piracy and Other related crimes
- 3.2 Use of Facial Reconstruction and Skull Superimposition Techniques in crime detection
- 3.3 Voice Identification Technique
- 3.4 DNA Profiling: meaning
 - 3.4.1 Importance and Nature of DNA Profiling
 - 3.4.2 Evidentiary clue materials of DNA Profiling: Hair, Body Tissues etc.
 - 3.4.3 Parental Identification and its Constitutional validity - Fundamental Right under Article 20(3) not available in Civil Proceedings
 - 3.4.4 Judicial Pronouncements
- 3.5 Future Challenges to Forensic Sciences in countering the Global Terrorism, Cyber Terrorism and other technical offences

Suggested Readings:

1. Sharma B. R., Forensic Science in Criminal Investigation & Trials, Universal Law Publishing Co.
2. Sharma B. R., Law Relating to Handwriting Forensics, Universal Law Publishing Co.
3. Nanda B.B. & Tewari R. K., Forensic Science in India : A Vision for 21st Century, Select Publisher, New Delhi
4. Tewari R. K., Shashtri P. K. & Ravikumar K. V.. Computer Crime & Computer Forensics, Select Publications
5. Dr. Veerraghavan, Handbook of Forensic Psychology
6. Dr. Rukmani Krishnamurthy Crime Scene Management with Special Emphasis on National Level Crime Cases
7. Parikh, Text Book of Medical Jurisprudence, Forensic Medicine and Toxicology
8. Abhijeet Sharma, Guide to DNA Test in Paternity Determination and Criminal Investigation (A Lawyer's Handbook), Butterworths
9. Modi's Medical Jurisprudence and Toxicology, Butterworths Publication