

SHRI JAGDISHPRASAD JHABARMAL TIBREWALA UNIVERSITY

Title of the program: P.G. Diploma in Forensic sciences and Related Law

Syllabus and Evaluation scheme

Syllabus:

Paper I: Basics of forensic science and crime scene management (100hrs)

Unit 1 Introduction to forensic science

- Basic principles and significance
- History and development of forensic science
- Organizational structure of forensic science laboratories in centre and state

Unit 2 Crime and criminal behavior

- Definition of crime
- Various types of crime
- Criminal behavior cause and theories
- Modus operandi
- Criminal profiling
- Corpus delicti

Unit 3 Criminal justice system

- Importance of the criminal justice system.
- Role of police officers, prosecution and judicial officers.
- Role of forensic scientist, medico-legal doctors.
- Expert testimony.

Unit 4 Crime scene management

- Defining the scene of crime
- Role of first reporting officers.
- Search patterns of a crime scene
- Crime scene documentation
- Collection, packaging, labeling and forwarding of exhibits of forensic laboratories.
- Preservation of evidence
- Health and safety protocols

Paper II: Forensic science and its applications in crime investigation (100hrs)

Unit 1: Nature, need and scope of forensic science

- Crime scene evidences
- Blood, semen and other biological fluids
- Viscera
- Footprints, tool marks , tyre marks
- Bite marks
- Hair : animal and human, fibers
- Glass, soil and paint
- Establishment of identity of individual
- DNA
- Fingerprints
- Anthropology : skeletal remains
- Odontology

Unit 2: Questioned documents (100hrs)

- Definition and significance
- Handwriting and signature: identification and examination
- Types of forgery
- Anonymous letter
- Charred documents
- Indented writing
- Counterfeit currency

Unit 3: Forensic ballistics (100hrs)

- Firearms and their classification
- Ammunition, projectiles, mechanism of firing
- Bullet, weapon and cartridge case identification
- GSR: Detection and analysis
- Nature of injuries: entry and exit points
- Range of fire and factors affecting it

Unit 4: Explosives and fire scene investigation:

- Definition of explosives and detonation
- Chemistry of explosives
- Analysis and interpretation of fire scenes
- Fire dynamics

Paper III: Forensic medicine and the laws (100hrs)

Unit 1: Medical Jurisprudence

- Definition and current scenario at National and International level
- Forwarding of Biological samples to Forensic Laboratories

Unit 2: Medico-legal aspects of death

- Types of death
- Time and cause of death
- Injuries: classification and their significance
- Medico-legal aspects : PM report, dying declaration and expert testimony

Unit 3: Sexual offences

- Sexual offences: Rape, DFSA{drug facilitated sexual assault}, examination of victim and accused, collection of evidence
- Infanticide and abortion

Paper IV: Recent advances in forensic sciences and the law (100hrs)

UNIT 1: Cyber forensics and speaker identification

- Cyber crime: definition, hacking, virus, obscenity, pornography, software piracy, IT Act 2000
- Forensic speaker identification: Introduction inter speaker and intra-speaker variation, speaker recognition, identification and verification

Unit 2: forensic psychology

- Polygraph: Introduction, principle, forensic significance, limitations, court admissibility and case study
- Narco analysis: Introduction, principle, forensic significance, limitations, court admissibility and case study
- Brain mapping: Introduction, EEG, Principle, forensic significance, court admissibility, limitations and case study

Paper V: Practical and report on field visit (100hrs)

- Fingerprint development from various surfaces
- Crime scene investigation and management
- Handwriting identification based on class and individual characteristics
- Microscopic examination of hair and fibre
- Examination of biological samples: blood, semen, saliva
- Visit to forensic science laboratory.

Evaluation:

- Conduct of Examination: Continuous assessment after every module: Quiz and Practical base. Presentation and viva at the end of program.
- Standard of passing: Candidate who secures a minimum 40% in each module will be declared to have passed the examination
- A candidate who fails to secure 40% in any paper allowed to reappear in that paper.

