**CURRICULUM PLAN (EVEN SEMESTER 2023-24)**

**Teacher Name: Dr. Anjali Sehrawat**

**Course: SEC, II year (Semester IV)**

**Paper Name: Forensic Chemistry (NEP) (1 period per week)**

**UPC: 2176000008**

| **Contents** | **Allocation of lectures** | **Month wise schedule to be followed** | **Tutorial/Assignments/**  **Presentations etc.** |
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| **Unit 1: History of Development of Forensic Science in India**  Definitions, Scope and Need of forensic science, Ethics in forensic science, History of forensic science, Basic principles of forensic science, Organizational structure of forensic science laboratories, Different branches in forensic science | 2 | 3rd week of January- 4th week of January | * **Syllabus Overview** * **Reference material** * **Lectures** * **General discussion** |
| **Unit 2: Fingerprints**  Definition, History of fingerprint identification, Fingerprint as forensic evidence, Visible Finger marks, Latent Finger marks, ten - digit classification, Methods of Development of latent fingerprints using conventional methods – Powdering (Black and grey, fluorescent and magnetic), Methods of development of latent fingerprint using chemical method, AFIS, Poroscopy and Edgescopy | 5 | 1st week of February- 1st week of March | * **Lectures** * **Class discussion** |
| **Unit 3: Forensic Chemistry**  Scope & significance of Forensic Chemistry, Types of cases/exhibits received for analysis.  **Trap Cases:** Collection, and Preliminary analysis of evidence in trap cases.  **Alcoholic Beverages:** Types of alcohols,, Indian made foreign alcoholic and non -alcoholic beverages.  **Dyes:** Scope & Significance of dyes in crime investigation, analysis of ink by TLC and UV visible  spectrophotometry. **Petroleum products and their adulterations:** Chemical composition of various fractions of Petroleum products, Analysis of petrol, kerosene, diesel.  **Fire/Arson and Explosives** Fire: Introduction to Fire & Arson, origin of fire, Chemistry of Fire, Fire  Tetrahedron, Firefighting operations, preservation of fire scene, collection of evidences, Case studies related to fire and Arson.  **Explosive and Explosion:** Scope & significance of explosive analysis, Types of explosives, deflagration and detonation, explosive trains, preliminary analysis of explosives. Case studies related to explosives.  **Drugs of abuse:** Classification, including designer drugs. Ill effects of drugs of abuse, Preliminary and confirmatory tests. | 8 | 2nd week of March - 1st week of May | * **Lectures** * **Class Discussion** * **Presentations** * **Discussion of previous year university question paper** |

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