

**DEPARTMENT OF FORENSIC MEDICINE**  
**Rural Medical College, Pravara Institute of Medical Sciences,**  
**Loni, Rahata, Ahmednagar**

**ENRICHMENT COURSES**

**ORIENTATION COURSE IN ANALYTICAL  
TOXICOLOGY**

**1. PREAMBLE ANALYTICAL TOXICOLOGY**

The Rural Medical College and its affiliated Pravara Rural Hospital of Pravara Institute of Medical sciences (DU), Loni, is a tertiary care medical institution catering to the requirements of rural population residing in the area of jurisdiction of Taluka- Rahata. Being an agricultural region with ready availability of agricultural insecticides and chemicles, there is a high incidence of occurrence of poisoning, accidental, in the population. These cases invariably end up at the door-steps of peripheral clinics and nursing homes, which are neither properly equipped and trained to diagnose the poisons ingested, nor are they in a position to provide proper treatment.

To address the above issues a need is felt to start a training curricula which would cater to the requirement of providing structured training to the doctors about basic analytical toxicology.

**2. OBJECTIVES**

- (i) To orient the doctors about general toxicology.
- (ii) To impart knowledge about common poisons encountered in day to day practice.
- (iii) To orient the doctors about common procedure to be followed for initial management and collection of various samples.
- (iv) To provide them detail knowledge about extraction of poisons from various specimens.
- (v) To provide training of various methods used for detection of poisons in the samples.
- (vi) To impress upon them the importance of initiation of MLC report, maintenance of various documents and records.

### 3. ELIGIBILITY FOR ADMISSION

A candidate who has completed his graduation from any medical college in any of the recognized streams of medicine (Allopathy, Ayurvedic, Homeopathy, Unani) from any recognized University.

### 4. DURATION OF COURSE

The duration of course will be 6 months.

### 5. MEDIUM OF INSTRUCTION

Medium of instruction shall be in English.

### 6. ATTENDANCE

75% attendance is compulsory.

### 7. COURSE CONTENT

As per recommended Modules

[Total Teaching Hours: 36]

MODULES	TOPICS	TEACHING HOURS
MODULE I	Brief Overview of the Course & Introduction to the Principles of Analytical Toxicology	4 Hours
MODULE II	Reagent Preparation for Common Bedside Tests in Toxicology	4 Hours
MODULE III	Demonstration & Hands-on Practice of Bedside Toxicology Tests	4 Hours
MODULE IV	Thin Layer Chromatography – TLC plate preparation Sample preparation Application, visualization, and evaluation	8 Hours
MODULE V	Extraction of Pesticides from Blood, Urine, Gastric Aspirate	8 Hours
MODULE VI	Extraction of Drugs from Blood and Urine	8 Hours
EXAM-Theory	Two papers with objective questions. 40 Questions of 1 marks each. Duration 1.30 hours	
Exam-Practical	Viva voce pertaining to the syllabus prescribed.	

\* Candidates are also supposed to submit a mini project on Analytical Toxicology. The same would be submitted for internal assessment.

**8. TEACHING HOURS** : 36 hrs (Saturday & Sunday of each month)

**9. SCHEME OF EXAMINATION FOR EACH SUBJECT (Maximum 100 Marks)**

- a) Internal Assessment : 20 marks
- b) University Examination
  - i. Theory : 40 marks
  - ii. Practical : 40 Marks

## **10. RECOMMENDED BOOKS**

### **Books :**

- 1. Toxicology – Dr. V.V. Pillai.
- 2. Analytical toxicology and other laboratory services. WHO Manual

## **11. DECLARATION OF RESULTS**

**a. Criteria for passing – Main subject:** Min. 50 marks to be scored by a candidate to pass the exam.

**b. Declaration of Class :** Declaration of class is based on following grade system :

- 1. above 80 - A++ grade
- 2. 76 – 80 - A+ grade
- 3. 71-75 - A grade
- 4. 66-70 - B+ grade
- 5. 61-65 - B grade
- 6. 50-60 - C grade
- 7. Less than 50 – Fail

### **c. Carry-over benefit :**

A candidate who has failed to satisfy the examiners in a course of instruction may be permitted:

- (i) to attend a supplementary examination; or
- (ii) to re-take the prescribed examination or examinations in the following academic year without repeating the course or courses of instruction.