

## Course details

**Goals:** To provide foundational and advanced knowledge in pediatric anesthesia to ensure safe perioperative management of neonates, infants, and children.

**Equipments & Facilities available:** Yes

**Duration and schedule of The Course:**

**Duration:** 6 Months

**Academic Contact:** 2 classes per week (Lecture + Case-based / Simulation)

**Eligibility:** MD/DNB/DA Anesthesia postgraduates and practitioners

**Attendance and leave rules:** Minimum 80%

**Duties and Responsibilities of fellows:** As per University Norms

**Evaluation Process:**

### Assessment System

#### Formative

- Monthly test / skill assessment

#### Summative

- Theory Exam (MCQ + Short Notes)
- Viva & OSCE
- Logbook Evaluation

### Logbook Requirements

Minimum exposures required:

- 30 Pediatric GA cases (age-stratified)
- 10 Difficult airway management observations
- 10 Regional blocks assisted/performed
- 5 Neonatal surgeries observed/assisted

**2 Emergency resuscitation drills**

## Course Content (Curriculum):

## Course Structure & Weekly Plan

Month	Module	Key Topics	Clinical / Skills Focus
Month 1	Pediatric Basics	Growth & development, physiology & pathophysiology, fluid & electrolyte balance, airway anatomy	Pediatric assessment, IV access in children
Month 2	Pediatric Pharmacology & Airway	Age-related pharmacokinetics/dynamics, premedication, induction techniques, difficult airway, LMA, video laryngoscopy	Simulation airway workshop, mask ventilation, rapid sequence induction
Month 3	Anesthesia for Common Pediatric Surgeries	ENT, general surgery, orthopedics, urology	Conduct of anesthesia in OT & postoperative care
Month 4	Neonatal Anesthesia	Prematurity, congenital anomalies, NICU care, neonatal emergencies	CPAP/ventilation basics, neonatal warming & monitoring
Month 5	Pediatric Regional & Pain Management	Caudal, TAP, ilioinguinal, epidural techniques, acute pain service	Hands-on regional block workshop, ultrasound guidance
Month 6	Critically Ill Child & Special Situations	Pediatric trauma, non-OR anesthesia (MRI/CT), congenital heart disease, ICU principles	Emergency drills: laryngospasm, cardiac arrest, anaphylaxis

## Competencies to be Achieved

- Preoperative assessment and risk stratification in children
- Mastery of pediatric airway management
- Understanding of pediatric physiology & pharmacology
- Conduct of anesthesia for neonatal and pediatric surgeries, including emergencies
- Pain management and regional anesthesia skills
- Perioperative critical care and postoperative complications management
- Communication and consent in pediatric practice

## Teaching & Learning Methods

- Didactic Lectures
- Case-based Discussions
- Simulation-based Training
- Hands-on Operation Theatre Exposure
- Skill Workshops (airway, IV access, regional blocks)
- Journal Club / Seminars