

SUMANDEEP VIDYAPEETH

(Declared as Deemed to be University under Section 3 of the UGC Act 1956)
jeered/ed dy NAAC with a CGPA of 3.53 out of four-point scale at 'A' Grade

Category — I deomod to be university under UGC Act - 2018

Al & Post Piparia, Tal: Waghodia 391760 (Gujarat) India.

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CURRICULUM

Doctor of Medicine
(M.D.)

ANESTHESIOLOGY

Atte V C-C

Charaney
15/2/2021

Vice-Chancellor

Sumandeep Vidyapeeth

An Institution Deemed to be University

VIII. Piparia, Taluka: Waghodia.

Dist. Vadodara-391 760. (Gujarat)



Chandrasekhar

Chandrasekhar



AMENDED UP TO DECEMBER -2021

Programme outcome : MD

The purpose of MD education is to create specialists who would provide high quality health care and advance the cause of science through research & training. The goal of postgraduate medical education shall be to produce competent specialists and/or Medical teachers.

Programme specific outcome : MD

POS 1. Scholars shall recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy.

POS 2. Scholars shall have acquired the basic skills in teaching of the medical and paramedical professionals.

POS 3. Practice the specialty concerned ethically and in step with the principles of primary health care.

POS 4. Demonstrate sufficient knowledge of the basic sciences relevant to the concerned specialty.

POS 5. Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.

COURSE OUTCOME (CO): At the end of the course, students should have fair knowledge of

1. Basic sciences (Anatomy, Physiology, Biochemistry, Microbiology, Pathology, Pharmacology, Statistics and Physics) as applied to Anaesthesia.
2. The student should acquire in-depth knowledge including recent advances.
3. The student shall acquire basic skill with the bedside procedures (diagnostic and therapeutic) and have knowledge of all latest diagnostics and therapeutics procedures available including radiological methods.
4. The student should learn the basic methodology of teaching and develop skill in teaching medical/paramedical students.
5. The student should be familiar with the latest teaching (computer and power point presentation) modes including simulators training and evidence based medical education.
6. The student should develop attitude that leads to appropriate communication with colleagues to function in a group in Operating Room /Intensive Care Unit, and develop the ability to function as a leader in the operating room.



Curriculum

DEPARTMENT OF ANAESTHESIOLOGY

S.B.K.S. Medical College & Dhiraj General Hospital
Pipariya, Waghodia

Clinical Posting for P.G. Students

First year first term for three months in repeated teacher O.T.

1. Pre-operative Examination
2. Preparation of Trolley
3. Preparation of Drugs

Second term :- To give Spinal Anaesthesia & General Anaesthesia –
3 months Surgery, Ortho & Obst & Gynaec

Third term :- Rotation in specialized Anaesthesia O.T., ENT, Eye,
Neuro, ICU in rotation

Rotation in teachers O.T.

To introduce Basic life support (BLS) and Advanced Cardiac Life Support (ACLS) training for all the First year Postgraduate Resident Doctors from academic year 2017-18.

- *To introduce New chapter / topic 'Intellectual Property Rights (IPR) for all the First year Postgraduate Resident Doctors from academic year 2020-2021 of duration of 4hrs (Board of Studies letter no.: SBKS/DEAN/742/2021, dated 05/06/2021 and Vide Notification of Board of Management Resolution Ref no.:SVDU/R/3051-1/2020-21, dated - 29" July 2021)*

- *List of topics :*

- 1. Introduction - Concept of Intellectual Property, Historical view of Intellectual Property system in India and International Scenario, Evolution of Intellectual Property Laws in India, Legal basis of Intellectual Property Protection, Need for Protecting Intellectual Property, Theories on concept of property - Major IP Laws in India.*
- 2. Types of IPR: Patents, Copyright, Trademark Industrial Designs, Trade Secrets.*
- 3. Patents: Concept of Patent, Criteria of Patentability, Inventions NOT patentable, Process of Obtaining a Patent, Duration of Patents, Rights of Patentee, Limitation of rights, Infringement and Enforcement.*
- 4. Copyrights: Meaning of Copyright, Copyright Vs. Moral rights, Copyright eligibility, Term of Copyright, Registration of Copyright, Infringement and Remedies*

5. *Trademark: Meaning of Trademark, Criteria for trademark, Procedure for Trademark Registration, Term of protection, Infringement and Remedies.*

6. *Industrial Designs: Meaning of Industrial Designs, Rights in Industrial Designs: Nature, Acquisition and duration of rights.*

7. *Trade Secrets: Meaning of Trade Secrets, Need to protect Trade secrets, Criteria of Protection, Procedure for registration, Infringement.*

8. *Commercialization of IPR: Traditional IP and Evolving IP, Assignment, Licensing, Cross License, Patent Pool, Negotiations, Defensive Publications, Technical Disclosures, Patent Pooling, Patent Trolling, Brand Management, Brand and Pricing Strategies.*

- *With reference to the Notification vide no. MC/-18(1)12020-Med.1121415, dated 16.09.2020, related to 'Postgraduate Medical Education (Amendment) Regulations 2020'; all the postgraduate students pursuing MD / MS in broad specialties in Sumandeep Vidyapeeth Deemed to be University, as a part of course curriculum, shall undergo a compulsory Residential rotational posting in the 3rd or 4th or 5th semester of the Postgraduate programme, for a duration of three months, in the District Hospitals / District Health System, is confirmed and approved for execution.*

- *(Board of Studies letter no.:SBKS/DEAN/1576/2020,dated 0/10/2021 and Vide Notification of Board of Management Resolution : Ref no. SVDU/R/1271-1/2020-21, dated - 30th December 2020)*

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- **ANAESTHESIOLOGY**

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- **Objectives :-**

- **At the end of the course, the learners shall be able to :**

- 1. Have familiarity with different types of anaesthesia, drugs, indications,
 - administration, side effects & contraindications.
- 2. To perform Cardiopulmonary resuscitation (Adult & Pediatric)
- 3. Set up I.V. infusion and Peripheral cannulation (Adult & Pediatric)
- 4. Airway Management in the unconscious patient
- 5. To perform endotracheal intubation (Adult & Pediatric)
- 6. To perform simple nerve blocks.

Knowledge

Subject	Must Know	Desirable to Know
Anatomy of upper airway – Normal & Abnormal (Endotracheal Intubation) Physiology of Respiration – O ₂ & CO ₂ transport (Oxygen therapy) Premedication Pre operative evaluation Muscle relaxants Stages of Anaesthesia and general anaesthetic agents Administration of GA, Balanced anaesthesia and IPPV Regional anaesthetics : Infiltration, Digital, Ankle Block, Peripheral nerve block . Spinal Anaesthesia & Epidural Anaesthesia Monitoring the post operative patient Post operative complications & recovery room CPCR and use of simple ventilators ICU, Role of Anesthesia Shock Blood transfusion, fluid and electrolyte balance (basics) Management of unconscious patient including airway Basic principles of management of poisoning Acute pain relief Chronic pain relief & palliative care principles Patient as a person Autonomy of decision – Do not resuscitate + Organ harvesting Propagation of life Euthanasia Cancer & terminal care Consent for surgery & anaesthesia Safety measures in operation theatre Use of Nerve locator, use of PNS...		

Examination Skills

Skills	Perform independently	Perform under supervision	Assist the expert	Observe
Head and neck positioning Bag and mask using self inflating bag Selection & use of oxygen delivery devices Recognition & management of respiratory obstruction Insertion of oral Airway Insertion of nasopharyngeal airway Suctioning Use of laryngoscope Use of orotracheal tube, use of LMA, use of DLT ETT Suctioning Peripheral venous cannulation, Central venous cannulation, Local anaesthetic infiltration (for cannulation) Setting up an intravenous medicines Recognize common complication Use of defibrillator Surface anaesthesia Digital Block Infiltration Anaesthesia Interpretation of ABG, CVP, Pulse oximeter and Capnograph, IABP..... Consent for procedures Motivation for blood & organ donation Interpersonal Relationship History taking & Preanaesthetic evaluation Documentation & maintenance of records Medical Team / Mass Casualty Management Hemorrhage & Shock Anaphylaxis Status asthmatics First aid Use of LMA Use of DLT (Double Lumen Tubes) Central Venous Cannulation				

Skills to be learnt initially on the models and later on performed under supervision before performing independently, provision of skills laboratories in the Medical Colleges will facilitate this process.

Record of Training & Assessment

- Timetable of attendance, logbook of topics & skills teaching
- Feedback from trainers
- Formal end of module presentation
- Appraisal of module by student

Assessment

Formative at the end of capsule course and clinical postings

Summative at the end of the course

Tools

Theory

Problem solving MCQs,
Structured Long questions
Problem solving long questions
Short answer questions

Practical

Long case
Short case
OSCE

Summative examination to be included along with surgery

Teaching learning methods

Structured interactive sessions

Small group discussions

Self – learning tools like :

- (a) Assignment
- (b) Problem based learning
- (c) Written case scenarios
- (d) Simulated patient management problems
- (e) Tutorials, workshops
- (f) One to one teaching in theatre
- (g) Attendance at Departmental Morbidity, Audit & Journal Club Meeting.

Learning resource materials

Textbooks

Internet

CDs

Videos

Skill Laboratories

Method of Examination for DA/M.D

List of seminar

1. CVS

1. Anaesthetic Management of closed mitral valvotomy.
2. Anaesthetic Management of patient with open heart surgery.
3. Anaesthetic Management of ASD.
4. Anaesthetic Management of VSD.
5. Anaesthetic Management of PDA.
6. Anaesthetic Management of patient of valve replacement.
7. Anaesthetic Management of cardiac patient posted for non cardiac surgery.
8. Anaesthetic Management of patient with aortic aneurysm.

2. RS

1. Anaesthetic Management of bronchial asthma.
2. Anaesthetic Management of patient with bronchiectasis posted for lobectomy.
3. Anaesthetic Management of patient of carcinoma lung posted for pneumectomy.
4. Anaesthetic Management of thoracic injury

3. CNS

1. Anaesthetic Management of shunt surgery
2. Anaesthetic Management of head injury
3. Anaesthetic Management of patient posted for craniotomy
4. Anaesthetic Management of patient with trigeminal neuralgia
5. Anaesthetic Management of posterior fossa surgery

4. GIT

1. Anaesthetic Management of patient with jaundice
2. Anaesthetic Management of patient with cirrhosis of liver

5. GUT

1. Anaesthetic Management of TURP
2. Anaesthetic Management of renal transplantation
3. Anaesthetic Management of patient with pheochromocytoma

6. OBSTETRICS & GYNAEC

1. Anaesthetic Management of patient with PIH posted for LSCS
2. Anaesthetic Management of obstetric emergency
3. Anaesthetic Management of patient with IHD & HT with DM posted for Hysterectomy

7. OPHTHALMOLOGY

1. Anaesthetic Management of cataract surgery
2. Anaesthetic Management of squint surgery
3. Anaesthetic Management of perforated eye injury

8. ENT

1. Anaesthetic Management of patient for tonsillectomy
2. Anaesthetic Management of carcinoma larynx
3. Anaesthetic Management of patient with foreign body in oesophagus
4. Anaesthetic Management of foreign body in bronchus

9. HAEMATOPOIETIC SYSTEM

1. Anaesthetic Management of patient with anaemia
2. Anaesthetic Management of patient with hemophilia
3. Anaesthetic Management of patient with thalassemia.

10. ORTHOPAEDIC

1. Anaesthetic Management of patient with ankylosis spondylitis.
2. Anaesthetic Management of cervical spine surgery
3. Anaesthetic Management of THR & TKR

11. SHORT CASES

1. Anaesthetic Management of patient with abscess.
2. Anaesthetic Management of patient with piles/fissure
3. Anaesthetic Management of patient with hernia
4. Anaesthetic Management of patient with hydrocele
5. Anaesthetic Management of patient with burns- dressing & debridement
6. Anaesthetic Management of patient with ICD tube
7. Anaesthetic Management of patient with D&C or D&E

12. PROCEDURE(STANDBY)

1. IVP
2. Bronchography

S.B.K.S Medical Institute & Research Center

Pipariya T.A. Waghodia

Dist : Vadodara(India-391760)

Dept Of Anaesthesiology

LECTURES:

1. History of Anaesthesia:-
 - Physiology & pathophysiology
2. C.V.S. -cardiac physiology & pathophysiology & its clinical Implements.
 - control of circulation
3. Respiratory System:-
 - physiology of respiration
 - pulmonary physiology & pathophysiology
 - physiology of oxygen transport in blood
 - Oxygen therapy
4. Nervous System:-
 - physiology of autonomic nervous system
 - physiology of Neuro muscular transmission & nerve conduction
 - anatomy of Neuro muscular junction
 - physiology of pain & pain pathway
5. Blood:-
 - Pathophysiology of anemia & its clinical implements.
6. Obs & Gyn:-
 - physiological changes during pregnancy
7. G.I. Tract: - motor physiological of GI tract
 - Physiology of liver
8. GUT: -
 - renal physiology, fluids & Electrolytes.
 - Acid based Balance
9. Anatomy of Spinal & Epidural Space.
10. Anatomy of larynx

BASIC PHARMACOLOGY

1. Pre-medication
2. i.v induction anaesthetic agents
3. inhalational anaesthetic agents
4. local anaesthetic agents
5. muscle relaxant & antagonist
6. Pharmacology of emergency drugs.

ANAESTHETIC CONSIDERATION & TECHNIQUES

1. Principle of Airway Management & Tracheal Intubation
2. Artificial respiration & ventilation
3. Emergency resuscitation
4. Hypothermia technique
5. Hypotensive technique
6. Essential monitoring
7. Measurement of depth of anaesthesia
8. Regional anaesthesia & analgesia
 - spinal anaesthesia
 - caudal anaesthesia
 - epidural anaesthesia
 - blocks

SUB-SPECIALITY ORIENTED MANAGEMENT OF ANAESTHESIA.

1. Trauma anaesthesia
2. Anaesthesia for orthopedics surgery
3. Anaesthesia for Neuro surgery
4. Anaesthesia for cardio-thoracic surgery
5. Anaesthesia for Vascular surgery
6. Anaesthesia for plastic surgery
7. Anaesthesia for dental & oro-facial surgery
8. Anaesthesia for ENT & laser surgery.
9. Anaesthesia for ophthalmic surgery
10. Neonatal anaesthesia
11. Obstetrics anaesthesia
12. Anaesthesia for laparoscopic procedures & Surgery
13. Geriatric anaesthesia
14. Anaesthesia for patient with renal disease
15. Anaesthesia for patient with liver disease
16. Anaesthesia for organ transplantation

PERI- OPERATIVE & INTENSIVE CARE

1. Metabolism & metabolic response to trauma
2. Nutritional support
3. Ventilator Management
4. Critical care
5. Head injury
6. Transmission of infection
7. Management & complication of commonly ingested & inhaled poisons.
8. Management of cardio respiratory arrest
9. Acute post operative pain
10. Chronic pain management
11. Management of postoperative patient in recovery room

INSTRUMENTS IN ANAESTHESIA

ANAESTHESIA & SOCIETY

1. Medico legal aspect of anaesthesia
2. Inform Consent
3. Medical Ethics & anaesthesia
4. Clinical trials & statistics
5. Journal reading
6. Article writing.

PAIN CLINIC