

Anaesthesia Equipments and drugs

COURSE CODE BOTT 301

UNIT 1

- ❖ Various laryngoscopes- Types & sizes e.g. Macintosh, Miller
- ❖ Face Masks- Types & sizes
- ❖ Airway Adjuncts- Oral & Nasal
- ❖ Various Endo- Tracheal Tubes- Types & Sizes
- ❖ Supra-glottic Airway Devices e.g. LMAs, I-Gel
- ❖ Stylet, Bougie, NG tube

UNIT 2

- ❖ Anaesthesia Machine
- ❖ Systems and components
- ❖ Safety features

UNIT 3

Breathing circuits

- ❖ Classification
- ❖ Closed circle system & CO₂ absorber
- ❖ Semi-closed systems e.g. Bain circuit, JR circuit

UNIT 4

- ❖ Classification of anesthesia drugs
- ❖ Premedication drugs



- ❖ Induction agents and sedatives
- ❖ Muscle relaxants
- ❖ Opioids and non-opioids
- ❖ Inhalation agents
- ❖ Various IV Fluids
- ❖ Local anaesthetics
- ❖ Other drugs used in anaesthesia e.g. diuretics etc.

UNIT 5

- ❖ Diathermy
- ❖ Suction machine –Foot suction machine
- ❖ OT Table

UNIT 6

- ❖ Defibrillator-components, types
- ❖ Ventilator, types
- ❖ Monitoring

Practical

- ❖ Various laryngoscopes- Types & sizes e.g. Macintosh, Miller
- ❖ Face Masks- Types & sizes
- ❖ Airway Adjuncts- Oral & Nasal
- ❖ Various Endo- Tracheal Tubes- Types & Sizes
- ❖ Supra-glottis Airway Devices e.g. LMAs, I-Gel
- ❖ Stylet, Bougie
- ❖ Anaesthesia Machine
- ❖ Breathing circuits
- ❖ Diathermy
- ❖ Suction machine –Foot suction machine
- ❖ OT Table



SURGICAL EQUIPMENTS AND MACHINERY

COURSE CODE BOTT 303

UNIT1

- ❖ Care, washing, sterilization and maintenance of Endoscopic Instruments Orthopedic Power instruments and other instruments used during surgery
- ❖ Advanced OT tables & their attachment.
- ❖ Types setting & Use of : Image intensifier Portable X-ray Machine
- ❖ Cautery Machine
- ❖ Suction machine
- ❖ Positioning of Patient
- ❖ OT Environmental, control of infection ,Scrubbing, Gloving suture material

UNIT 2

Surgical Instruments

- ❖ Instruments for General Surgery
- ❖ Instruments of nose ,throat & ear

UNIT 3

THORACIC TRAYS

- ❖ Thoractomy tray
- ❖ Pacemaker tray
- ❖ Cardio vascular tray

UNIT4

Vascular procedure tray



- ❖ Vascular shunt tray
- ❖ Cardiac procedure tray

UNIT5

ORTHOPAEDIC TRAY

- ❖ Basic orthopedic procedure tray
- ❖ Hip replacement tray
- ❖ Knee and ankle arthroscopy tray

UNIT6

ENT

- ❖ Basic ear procedure tray
- ❖ Nasal procedure tray
- ❖ Tonsillectomy tray
- ❖ Tracheotomy tray

Practical

- ❖ Care, washing, sterilization
- ❖ OT tables & their attachment
- ❖ Cautery Machine
- ❖ Suction machine
- ❖ Instruments



Advanced- Operation Theatre Technology

COURSE CODE BOTT 302

UNIT 1

- ❖ Layout of Operation theatre Room(OR)
- ❖ Gowning, Gowning technique
- ❖ Scrubbing

UNIT 2

- ❖ Operation Theatre Techniques for Specialty Surgery:-
- ❖ Preparation, nursing requirement, equipments including instruments, Sutures & etc
- ❖ Anesthesia techniques, patient positioning & recovery
- ❖ Standards for PACU, transportation, Admission of PACU, Discharge from PACU

UNIT 3

Procedures

- ❖ Gynecological/obstetric surgery
- ❖ General surgeries Procedures
- ❖ Urological surgery
- ❖ Orthopedic surgery
- ❖ Neurosurgery
- ❖ Ophthalmic surgery
- ❖ Plastic and reconstructive surgery
- ❖ Otorhinolaryngologic and head and neck surgery (ENT)
- ❖ Cardiac surgery



- ❖ Organ procurement and transplantation

UNIT 4

- ❖ Blood grouping
- ❖ Blood transfusion
- ❖ Complications of blood transfusion
- ❖ Bed sore

UNIT5

- ❖ Drains –Types
- ❖ Homeostasis During Surgery
- ❖ Iv catheterization various types of iv canula
- ❖ Surgical instrumentation
- ❖ Powered surgical instruments
- ❖ Handling instruments
- ❖ Specialized surgical equipment
- ❖ Nebulizer
- ❖ Aerosol therapy

Practical:-

- ❖ Operation Theatre Techniques for Specialty Surgery:-
- ❖ Preparation, nursing requirement, equipments including instruments, Sutures & etc
- ❖ Anesthesia techniques, patient positioning & recovery
- ❖ Gynecological/obstetric surgery
- ❖ Urological surgery
- ❖ Orthopedic surgery
- ❖ Neurosurgery
- ❖ Ophthalmic surgery
- ❖ Plastic and reconstructive surgery
- ❖ Otorhinolaryngologic and head and neck surgery
- ❖ Cardiac surgery
- ❖ Organ procurement and transplantation
- ❖ Blood grouping
- ❖ Various types of spinal and epidural needles



Biostatics & Research Methodology

COURSE CODE BOTT 304

Unit-1

Introduction I: Biostatistics – Definition, Role of statistics in health science and health care delivery system, Mean, Mode, Standard Deviation, Data, p value

Introduction II: Research Methodology - Research process, Steps involved in research process, Research methods and methodology

Unit-1I

Accessing research literature: Use of databases and other sources

Unit-1II

Understanding research design: Qualitative and quantitative methodologies – their differences and potential integration. Evaluating research and its potential for informing practice. Developing research questions and devising methods for their investigation. Ethical issues in research

Unit-1V

Analysis: Analysis of qualitative and quantitative data. Utilization of appropriate software to assist in the retrieval of information and data analysis

Unit-V

Clinical audit: Distinctiveness of research and audit processes and their function

Research Skills and Management: The role of evidence based practice within health and welfare.

Suggested Books:



1. Mahajan BK: Methods in Biostatistics for medical students and research workers, 6th edition Jaypee, 1997
2. Kothari CR. Research Methodology (Methods & Techniques) Wiley Eastern Limited. New Delhi.
3. Rao, PSS Sundar, and J. Richard. *Introduction to biostatistics and research methods*. PHI Learning Pvt. Ltd., 2012.
4. Pagano M, Gauvreau K, Pagano M. Principles of biostatistics. Pacific Grove, CA: Duxbury; 2000 Mar.
5. Norman, Geoffrey R., and David L. Streiner. *Biostatistics: the bare essentials*. PMPHUSA, 2008.
6. Neuman, W. Lawrence, and Karen Robson. *Basics of social research*. Pearson Canada.
7. Strauss, A., and J. Corbin. *Basics of qualitative research techniques*. Sage publications.
8. Corbin, Juliet, Anselm Strauss, and Anselm L. Strauss. *Basics of qualitative research*. Sage, 2014.
9. Mackey, Alison, and Susan M. Gass. *Second language research: Methodology and design*. Routledge, 2015



Hospital Posting(Practical)

Course Code: BOTT351

Course Content:

Course Contents:

Students shall be deputed to various labs anesthesia department wherein they shall undergo practical training of handling patients, collection and processing of investigation and equipment. Identification of patient's particulars based on UHID number, Lab Number and transfer of samples from collection to different labs. Process of performing various tests in different labs Each student is required to maintain a logbook of the various posting. Student's performance shall be evaluated on continuous basis by the faculty posted in various sections. The faculty shall submit the assessment records of each student posted in his/her section on monthly basis to the HOD. Marks will be awarded out of 50.

*** Latest editions of all the suggested books are recommended.**