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(System case. Common problems should be given importance)

Assessment to view child along with family, care giver concerns as a whole in discussing management

Second case - **12.5 Marks**

(Assessment of nutrition, Growth, Development and Immunization.

Children without illness may also be kept for assessment).

OSCE **5 Marks**

There should be three stations. Clinical scenario analysis or skill assessment stations are desirable. Out of three stations one newborn scenario is compulsory. Better avoid newborn babies as cases.

Marks	2 mark for newborn scenario 1.5 marks each for other 2 stations making total 5
Time	3 minutes for each station.

New born session may be made performance station e.g. demonstration of use of AMBU bag on a manikin or performance of initial stage of resuscitation.

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SURGERY AND I T S ALLIED SPECIALITIES

(SURGERY including Paediatric Surgery)

A. **GOAL**

The broad goal of teaching the undergraduate medical students in Surgery is to produce graduates capable of delivering efficient first contact surgical care.

B. OBJECTIVES

1. Knowledge

At the end of the course, the student shall be able to:

a. Describe aetiology, Pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adult and children

b. Define indications and methods for fluid and replacement therapy including blood transfusion c. Define asepsis, disinfection and sterilization and recommended judicious use of

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antibiotics

d. Describe common malignancies in the country and their management including prevention
e. Enumerate different types of anaesthetic agents, their indications, mode of administration, contraindications and side effects

2. Skills

At the end of the course, the student should be able to:

a. Diagnose common surgical conditions both acute and chronic, in adult and children;
b. Plan various laboratory tests for surgical conditions and interpret the results;

c. Identify and manage patients of haemorrhagic, septicaemic and other types of shock;

d. Be able to maintain patients air-way and resuscitate; i. a critically injured patient, ii. patient with cardiorespiratory failure, iii.a drowning case.

e. Monitor patient of head, chest, spinal and abdominal injuries, both in adult and children f. Provide primary care for a patient of burns

g. Acquire principles of operative surgery, including pre-operative, operative and post-operative care and monitoring

h. Treat open wounds including preventing measures against tetanus and gas gangrene

i. Diagnose neonatal and paediatric surgical emergencies and provide sound primary care before referring patient to secondary / tertiary centres

j. Identify congenital anomalies and refer them for appropriate management

k.To leran to Commuicate with patients regarding common suirgical problems,investigations and treatment .

l.Learn to address Common ethical issues in surgical ward and OPD .

In addition to the skills referred above in items (a) to (j), he shall have observed / assisted the following:

a. Incision and drainage of abscess

b. Debridement and suturing open wound

c. Venesection

d. Excision of simple cyst and tumours e. Biopsy of surface malignancy

f. Catheterisation and nasogastric intubation

g. Circumcision

h. Meatotomy

i. Vasectomy

J. Pertoneal and pleural aspirations

k. Diagnostic proctoscopy

l. Hydrocele operation

m. Endotracheal intubation n. Tracheostomy

o. Chest tube insertion

C. DETAILED SYLLABUS

Duration of the course: semesters -III, V, VI, VIII & IX Total

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number of hours: 300

Lectures: 100.

Innovative sessions: 200

Practicals: Clinical posting as shown in the table

(Project work, Seminars, Structured discussion, integrated teaching, Formative evaluation, Revision)

DETAILS OF LECTURES

Principles of Surgery; Genetics, History of Surgery, Surgical ethics

Trauma:

a. Metabolic Response to Trauma,

b. Wound healing and complications,

c. Critically injured patient including Triage

d. ATLS, Poly Trauma, Disaster Management,

e. Different types of wounds and their management.

Shock: Types, pathogenesis and management, Haemorrhage, Haemostasis, Blood transfusion, Burns

Fluid and Electrolyte Balance, Nutritional Support Pre-operative and post-operative care - Emphasis on Intensive care & high dependency Sterilization

Surgical sepsis -Specific infection, Nososcomial infection, Antibiotic policy

Immunology and organ transplantation, HIV and Surgeon, Hepatitis B

Principles of imaging techniques

Suture materials and Anastomosis

Skin and Soft tissues

Normal structure -Ulcers, sinus and fistula, Cysts and Benign tumours Pre malignant conditions, Malignanat Tumours, Skin cover Arteries

Applied Anatomy and physiology, Investigation, Trauma, Acute ischaemia, chronic ischaemia,

Arterial aneurysms and A. V. fistula, Amputations Veins

Applied Anatomy and physiology, Varicose veins and venous ulcers, DVT and superficial thrombphlebitis

Lymphatics and Lymph nodes

Applied Anatomy and Physiology, Lymphodema-primary, Secondary, Lymph cyst -Cystic Hygroma

Inflammations - Lymphangitis, lymphadentis, Malignant Neoplasms –lymphomas

Head and Neck

Head injuries, Facio maxillary injuries, Salivary glands, Mouth and Face ,-Cleft lip, Cleft

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palate, Oral cancers and premalignant conditions, Jaw tumors, ranula, Misc -Branchial cysts and fistula, Carotid body turnours.

Thyroid and Parathyroid Thyroglossal cyst and fistula Breast

Applied Anatomy and physiology, Investigation, Fibrocystic Diseases, Inflammation, Tumours

Chest

Diaphragm, Mediastinum, Chest Injuries; Thoracic outlet compression syndrome Heart and pericardium, Plerura and Lungs

Gastro Intestinal Tract

Oesophagus

Anatomy and physiology, Congenital anomalies, Dysphagia, Achalasia and other motility disorders,

Oesophageal perforation, Gastro oesophageal Reflux Diseases, Tumours Stomach and

Duodenum

Anatomy, physiology, embryology, Congenital, Peptic ulcer Disease(APD), Upper GI Haemorrhage,

Tumours, pyloric stenosis

Liver

Applied Anatomy and Physiology, Trauma, Liver Abscess, Cysts of the Liver, Portal Hypertension,

Tumours, principles and management of obstructive jaundice

Biliary system

Congenital disorders, Gall stone, Cholecystitis, Cholango carcinoma

Spleen

Anatomy and physiology, Trauma -Splenic conservation, Indication for splenectomy

Pancreas

Anatomy, Development and Physiology, Congenital Anomalies, Acute pancreatitis, Chronic pancreatitis includiRg calcific pancreatitis, Tumours, Surgical jaundice

Vermiform Appendix

Anatomy, Appendicitis, Neoplasm

Small and Large Intestine

Anatomy, Physiology, Embryology, Congenital disorders, Inflammatory Bowel disease including typhoid, tuberculosis, tumors, intestinal obstruction

conservative management of malignant bowel obstruction without RT aspiration and IV fluids – where surgery is not feasible. Chronic constipation

Rectum and anal canal

Ano-rectal anomalies, Prolapse, Haemorrhoids, Ano-rectal sepsis, fissure, fistula, Tumour

Miscellaneous

Abdominal trauma, Minimally invasive Surgery, Peritoneum and retroperitoneum, Hernia and abdominal wall, Mesentery, surgical audit and day care surgery

Genito urinary System

Congenital conditions, Trauma, Infection, Stones, Hydronephrosis, Tumours of kidney; Tumours

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of Bladder, Retention of urinr, Haematuria, Torsion, Undescended testis, Epididymo-orchitis, Carcinoma penis, Phimosis ,Prostate, testicular tumours. Benign prostatic hypertrophy, carcinoma prostate, adrenal gland surgery pheochromacytoma&conn syndrome.

***DETAILS OF PRACTICALS* – Clinical Postings -Ward work**

Clinical Postings
8.00 -9.00 am &12-1 PM
Theory in clinical subjects
9.00-12 noon
Case demonstration in wards/ out patient department/ Theatre

Separate clinical record book should be kept and at least twenty cases to be included. During the 24 weeks of posting in the surgical wards including OP, casualty and operating theatre during the three and a half years of posting, the students should receive instructions in principles and practice of surgery, study surgical diseases system wise and region wise including surgical anatomy, surgical pathology applied physiology, applied biochemistry, applied pharmacology and microbiology, investigations and management of surgical diseases and operative surgery. They should do physical examination and necessary investigation; maintain a record of their work, the treatment given to the patient and follow up, a minimum of 20 cases should be studied by a student during their posting each year. This should be included as part of the documents to be presented before the examination and should be valued. During their posting in eighth semester, they should attend to casualty work and observe minor operative procedures and emergency surgical procedures, management of the acute abdomen, resuscitation of the critically ill and resuscitative procedures including endotracheal intubation. Clinical teaching should include bed side clinics, demonstrations ctc. of common surgical conditions found in the hospital. At the end of each posting there should be an examination conducted by the unit and these marks should be taken into account for the average examination and final assessment.

Each candidate must have at least three clinical examinations by the time he appears for the final examination.

The student should have seen the common surgical procedures and be able to identify all the commonly used instruments.

How to do an Enema, High up enema in chronic constipation, care of colostomy, rehabilitation for a patient in colostomy – a class by the colostomy care trained nurse
Student should be aware of the rights of the patient , issues like autonomy, consent etc leran to Commuicate with patients regarding common suirgical problems,investigations and treatment.
.Learn to address Common ethical issues in surgical ward and OPD .

Operative Surgery

Tracheostomy, gastrostomy, colostomy, suprapubiccystostomy, nephrostomy, AK amputation, BK amputation, Trendelenburg operation, Lumbar sympathectomy, Laparotomy, GJ and Vagotomy, Mastectomy, thyroidectomy, Eversion TV sac, herniorrhaphy, haemorrhoidectomy, Gastrojejinostemy. vasectomy,
Surgical instruments, suture materials and disposables

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TEXT BOOKS RECOMMENDED

Prescribed Books

l. Short practice of Surgery by Bailey and Love
2. Clinical Methods in Surgery by Das
3. Operative Surgery by Das

Reference Books

1. Physical signs in Clinical Surgery by Hamilton Bailey
2. Pye's Surgical Handicraft
3. Sabiston's Text Book of Surgery
4. Text book of Surgery, Cusheri
5. Synopsis of surgical Anatomy by Le Mc Gregre

SURGICAL SPECIALITIES

Lecture demonstration in surgical specialities should include Orthopaedics, Radiotherapy, Aneasthesiology, Thoracic Surgery, Plastic Surgery, Neurosurgery, Urology and Casualty.

1 -Physical medicine and rehabilitation by Randall L.bRADDOM

2 ,2 De Lisa,s Physical Medicine and Rehabilitation Principles and Practice.

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ORTHOPAEDICS

A. GOAL

The broad goal of teaching the undergraduate medical students in the field of Orthopaedics is to make the students understand the basics of fractures and dislocations commonly encountered and the essential treatment needed for emergency management. The common congenital, inflammatory, metabolic, developmental, degenerative and neoplastic diseases occurring in the bones and joints should also be familiarised.

B. OBJECTIVES

1. Knowledge

a. Explain the principles of diagnosis, first aid, management and complications of recognised bone and joint injuries.

b. Apply suitable methods to detect and manage common infections of bones and joint

c. Identify congenital skeletal anomalies and their referral for appropriate correction and rehabilitation

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d. Recognize metabolic bone diseases as seen in this country

e. Explain aetiopathogenesis, manifestations, diagnosis and principles of management of neoplasms affecting bones

2. Skills

At the end of the course, each student shall be able to:

a. Detect sprains and deliver first aid measures for common fractures and sprains and manage uncomplicated fractures of clavicle, Colle's fracture, phalanges etc

b. Master techniques of splinting, plastering, immobilization etc

c. Manage common bone infections, learn indications for amputations and corrective measures for bone deformities

d. Advise aspects of rehabilitation for amputation, polio and Cerebral palsy

3. Application:

Be able to perform certain orthopaedic skills, provide sound advice for skeletal and related conditions at primary or secondary health care level

4. Integration

Integration with anatomy, surgery, pathology, radiology and Forensic Medicine is done.

5. Student should be aware of the rights of the patient , issues like autonomy, consent etc

6 To learn to Commuicate with patients regarding common Ortopaedic problems, investigations and treatment .

7.Learn to address Common ethical issues in orthopedic ward and OPD .

C. DETAILED SYLLABUS DETAILS OF THE COURSE

Duration of the course		:	3semesters –IV, , VI, & IX
Total number of hours of theory		:	100
Lectures	:	35	

Innovative sessions	:	Part of clinical work
Practicals	:	Clinical postings as per schedule

(Project work, Seminars, Structured discussion, Formative evaluation, Revision)

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DETAILS OF LECTURES

Traumatology

Definition of a fracture, types of fractures and general Principles of management of fractures
Complications of fractures
Open fractures and pathological fracture
Fracture clavicle
Fracture neck of humerus and shoulder dislocations
Fracture humerus (shaft) and Supracondylar fracture
Intercondylar fracture and Olecranon racture
Elbow dislocation and forearm fracture
Monteggia fracture and Galeazzi's fracture
Colle's fracture and fracture scaphoid
Fracture spine and traumatic Paraplegia
Fracture pelvis and Hip fractures
Fracture of femur Hip dislocation and fracture shaft of femur
Meniscus tear and fracture patella
Leg fractures
Ankle injuries, (types, classification, management, complication, named fractures) Hand injuries
Extensor mechanism injuries of knee
Fracture of tarsal bones

Cold Orthopaedics

C.T.E.V and flat foot
D.D.H
Torticollis,
Congenital Pseudoarthrosis of Tibia and Arthrgryphosis multiplex congenita, Osteomyelitis, Septic arthritis
Tuberculosis –Spine, Hip, Knee, Elbow, Wrist and other sites
Perthe's disease and slipped upper femoral epiphysis Rickets and Osteomalacia
Rheumatoid arthritis and Ankylosing spondylitis
Intervertebral disc prolapse.
Scoliosis and Spondylolisthesis

Bone Tumours

Osteochondroma, Simple bone cyst, Aneurysmal bone cyst, Enchondroma, Gaint cell tumour, Osteosarcoma, chondrosarcoma, Ewing's sarcoma,
Multiple myeloma, Metastatic bone diseases,
Osteogenesis Imperfecta, Nerve injuries –Radial nerve, ulnar nerve, sciatic nerve,

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Amputations, Osteoarthrosis Hip, Knee, Cerebral palsy.

Seminars/symposia

Symposia with clinical cases –Trauma

Fat embolism, compartment syndrome VIC

Physical Medicine and Rehabilitation,

Ankylosis,

Back pain,Commonest complaint for which patient seeks medical help

Deserves a detailed seminar – etiology, approach, management – nonpharmacological, pharmacological, restraint to order further investigations e.g. MRI scan.

Unindicated / or Investigating just for curioisity, records etc. as
an important contributor to healthcare related poverty

Bone tumours (benign), Bone tumours (malignant)

DETAILS OF PRACTICALS –Clinical Posting

Nerve injuries, Deformities, Malunions, Nonunions, CTEV, Bone tumours, Traction, Splints and POP

Neuropathic pain, central and peripheral pains, phantom limb pain

Care and Management

TEXT BOOKS OF RECOMMENDED

Prescribed Books

1. Graham Apley –System of Orthopaedics
2. Fracture and Joint injuries· -Watson Jones
3. TextbookofOrthopaedics-John Ebnezer
4. NataRajan's Text Book of Orthopaedics and Traumatology
5. Outline of orthpaedics –Adam's
6. Clinical Surgery –Das· -Chapter on Orthopaedics
7. Crawford Adam's–Operative techniques (Orthopaedics)

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Reference Books

1. Campbell's operative orthopaedics
2. Rockwood and Green's Fractures in adult and children
3. Turek's Orthopaedics – Principles and applications
5 Mercer's Orthopaedic Surgery

PHYSICAL MEDICINE AND REHABILITATION

One week's posting of MBBS students to Physical Medicine and Rehabilitation had been suggested during Orthopaedics / Radiology posting

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1. Introduction to Physical medicine and Rehabilitation disability process and progression of disabilities concept of Imapairment / Disability and handicap.
2. Principles of Physical therapy –various modalities and therapeutic exercises
3. Principles of occupational therapy its application in the rehabilitation of various disabilities
4. Principles of prosthesis, orthosis and rehabilitation aids
5. Pain management principle

6 To get oriented to basic principles of community based rehabilitation of people with disabilities

7 Learning to respect and work with paramedical professionals

8 Principles of electrodiagnosis,

9 PRINCIPLES OF REHABILITATION IN COMMON CONDITIONS LIKE PARAPLEGIA,STROKE, ARTHRITIS,PRESSURE SORE MANAGEMENT.

Text books Recommended

Text book of Rehabilitation Medicine by Howard

1 -Physical medicine and rehabilitation by Randall L.bRADDOM

2 ,2 De Lisa,s Physical Medicine and Rehabilitation Principles and Practice.

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RADIOTHERAPY

A.GOAL

The broad goal of teaching undergraduate medical students in the field of Radiotherapy is to make the students understand the magnitude of the ever-increasing cancer problem in the country. The students must be made aware about steps required for the prevention and possible cure of this dreaded condition

B. OBJECTIVES

1. Knowledge

The student shall be able to:

a. Identity symptoms and signs of various cancers and their steps of investigations and management

b. Explain the effect of radiation therapy on humaTi beings and the basic principles involved in it

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c. Know about radio-active isotopes and their physical properties

d. Be aware of the advances made in radiotherapy in eancer management and knowledge of various radio therapeutic equipment while treating a patient

2. Skills

At the completion of the training programme, the student shall be able to:

a. Take a detailed clinical history of the case suspected of having a malignant disease

b. Assist various specialists in administration of anticancer drugs and in application and use (If various radiotherapeutic equipment, while creating a patient)

C. DETAILED SYLLABUS

Duration of the course: 2 semesters -1V
Total number of hours: 20
Lectures: 7
Innovative sessions: 13
Practicals: As per schedule
(Project work, Seminars, Structured discussion, integrated teaching, Formative evaluation, Revision)

DETAILS OF LECTURES - **7 hrs**
Cancer epidemiology and possible etiological factors, screening for cancer
Principles of cancer chemotherapy and chemotherapeutic agents used in the management of cancer
Hormone treatment in cancer
Principles of Radiation oncology, Radioactive Sources –Teletherapy, Brach) 1herapy and
Nuclear
Medicine
Methods of Radiotherapy and Recent Advances
Common malignancies, Diagnosis and
Treatment
Impact of radiotherapy
Understanding Symptoms and their efficient management during and after radiotherapy as prerequisite to improved compliance to complete the course

TEXT BOOKS RECOMMENDED
Prescribed Books
1. Text book of Radiotherapy by Walter and Miller
2. Flecher's Text book of Radiotherapy
Reference Books Cancer –Text book of Oncology by Devitta

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ANAESTHESIOLOGY

SYLLABUS

DET AILS OF THE COURSE

Duration of the course: semester III–VIII
Total number of hours, theory: 20

Lectures: 7
Practicals: As per schedule attached
Innovative sessions: 13 Part of clinical posting
(Project work, Seminars, Structured discussion, Formative evaluation, Revision)

DETAILS OF LECTURES 20 hrs

Introduction – Scope of Anaesthesiology
Pre-anaesthetic check-up premedication
General anaesthesia –Basal Anaesthesia triads of anaesthesia Inhalational agents Intravenous Anaesthetic agents
Regional analgesia –Subarachnoid and Epidural analgesia, other techniques of regional analgesia and agents used
Equipments in anaesthesia and Methods of oxygen therapy
Intravenous fluid therapy, Intra operative monitoring
Complication in anaesthesia and post-operative period
Cardio-pulmonary & cerebral resuscitation, basic cardiac life support (BCLS), Advanced cardia life support (ACLS)
Methods of Pain Relief
Critical care
Acute & Chronic pain therapy
Trauma care
Palliative care

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DETAILS OF PRACTICALS

Practical Demonstrations: inside the theatre

1. Premedication,
2. Anaesthetic equipments,
3. IV cannulation,
4. Nonivasie & Invasive monitoring,
5. Different anaesthetic techniques,
6. Laryngoscopy, intubation,

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7. Spinal and Epidural anaesthesia,
8. Regional anaesthesia,
9. Management of patient in the recovery room,
10. Resuscitation techniques,

BLS, ACLS along with when to reconsider CPR in a patient with multisystem failure
Pronging life Vs. Prolonging Death

End of Life Care Law in the country

11. Equipments –Monitoring equipments, Ventilators,

Knowing how to use an Oxygen cylinder – calculating duration of oxygen therapy based on size of the cylinder and the flow per minute Hazards of oxygen cylinder

12. Anaesthesia Machines & Workstations
13. Care of patients on ventilator,
14. Intra venous fluid therapy,

A seminar on Pain – acute, chronic, classification, management, concept of total pain
Controlled substances – essential analgesics Pain relief as Human Right

Pharmacological, non-pharmacological management
Brief introduction to choosing invasive interventions

15. Acute & Chronic Pain management
16. Trauma care
17. Palliative care
18. Critical care

TEXT BOOK RECOMMENDED

Synopsis of Anaesthesia by Alfred Lee
Basics of Anaesthesia: Stoelting & Miller
Morgan's Textbook of Anaesthesia
Indian Primer on Palliative Care

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EVALUATION –SURGERY AND SPECIALITIES

General Surgery

Two papers of three hours duration with 60 marks each
Surgery paper I
Topics included
GIT, Orthopedics

Section A(General Surgery)

* Structured questions : 1+1+1+2= 5 marks

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