**STUDY GUIDE FOR SURGERY AND ALLIED FOR MBBS STUDENTS**



**LIST OF FACULTY MEMBERS OF GENERAL SURGERY**

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**INTRODUCTION**

Medical education is a life-long process and MBBS curriculum is a part of the continuum of education from pre-medical education, MBBS, proceeding to house job, and post-graduation. PM&DC outlines the guiding principles for undergraduate medical curriculum and has defined the generic competencies and desired outcomes for a medical graduate to provide optimal health care, leading to better health outcomes for patients and societies. These generic competencies set the standards of care for all physicians and form a part of the identity of a doctor. Each competency describes a core ability of a competent physician. This study guide will give an insight to the students about all these competencies and how to plan their educational activities in the subject of surgery for the three years period.

**TARGET AUDIENCE**

1st , 2nd year 3rd , 4th and 5th year MBBS students

**STUDY HOURS OF SURGERY AND ALLIED**

Total **950 hours** for General Surgery

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**Total hours in 3rd year MBBS = 54+13.5= 67.5**

**70 % clinical**

(Morning Hours) 6 hours and 45 minutes per week for unit-1 batch , 6 hours and 45 minutes per week for unit-2 batch , total 8 weeks for both units = 54 hours

**30 % Lectures (22-07-22 to end term)**

Total lectures (45 min)/week =0.75 \*18 weeks = 13.5 hours

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**Total hours in 4th year MBBS= 90+54= 144**

**70 % clinical**

(Morning hours) 10 hours clinical session per week for 4 days in one week for unit-1, 10 hours per week for 4 days in unit-2, Total hours for 9 weeks for both units= 90

**30% Lectures**

36 lectures by Surgical unit-1 and 36 lectures by surgical unit-2, Total duration for both unit’s Lectures =72, total 54 hours

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**Total hours in 5th year MBBS= 240+336+108+27+27= 738**

**70 % clinical**

(Morning) 20 hours per week for 5 days in 12 weeks in surgical unit -1 and surgical unit -2 = 20 hours\*12 weeks = 240 hours

(Evening rotation hours) clinical classes for both units 4 hours per day for 7 days for 12 weeks= 336 hours

**30% Lectures**

72 lectures by Surgical unit-1 and 72 lectures by surgical unit-2, Total 144 Lectures for both units = 108 hours

**Orthopeadics**:

Total lectures = 1 lecture (45 min) /week = 0.75\*36weeks = 27 hours

Clinical Ward: Surgical unit -1 (Alt week, every Friday) = 4 hours per week for 6 weeks= 24 hours\*

Total hours = 27+24 = 51 hours.

**Urology**

Total lectures = 1 lecture (45 min) /week = 0.75\*36weeks = 27 hours

Clinical Ward: Surgical unit -2 (Alt week, every Friday) = 4 hours per week for 6 weeks= 24 hours\*

Total hours = 27+24 = 51 hours.

**Anaesthesia**

Total Lectures= 8 lectures (45 min) / 36 weeks = 6 hours\*\*

Clinical Ward: Surgical unit -1 (Alt week, every Friday) = 4 hours per week for 6 weeks= 24 hours\*

Total hours = 6+24 = 30 hours

**Radiology:** Surgical unit -2 = Total Lectures= 8 lectures (45 min) / 36 weeks = 6 hours\*\*

\* Ward timing of Orthopeadics, Urology, and Anaesthesia are included in clinical wards of general surgery.

\*\*Lecture timing of Anaesthesia and Radiology are included in general surgery.

\*\*\*Time for Skills lab for General Surgery, Anaesthesia, Urology and Orthopeadics is taken from the clinical ward rotation time.

**LEARNING OBJECTIVES *(knowledge, skills, attitude)***

***By the end of this academic session the students should be able ,***

1. to acquire specific knowledge, essential skills and appropriate attitude of the human body
2. to become problem solvers, dealing effectively with familiar and unfamiliar situations
3. to become lifelong learners
4. to direct their own learning and evaluate this activity
5. to be able to reason critically and make justifiable decisions regarding patient management
6. to practice evidence-based medicine
7. to always ensure patient safety
8. to ensure compliance with the legal system in accordance with the PM&DC regulations
9. to adopt a multidisciplinary approach for health promoting interventions
10. Medical graduates should be able to demonstrate professional values of self and professional accountability, honesty, and ethics
11. Medical graduates are expected to demonstrate exemplary professional conduct
12. to be able to understand the pathogenesis of specific diseases
13. to be able to take a focused history and identify the patient’s risk factors related to the disease process
14. to be able to perform a physical examination on a patient, to diagnose specific surgical diseases and differentiate from other systems
15. to formulate a provisional diagnosis with justification, and the likely differential diagnoses
16. to be able to select appropriate biochemical investigations and interpret their reports to confirm the diagnosis
17. to be able to select specific radiological investigations for specific diseases
18. to be able to apply evidence-based medicine concepts for the medical treatment of different diseases
19. to be able to describe the required surgical procedures for different diseases

**TEACHING METHODOLOGIES FOR SURGERY AND ALLIED**

1. Interactive Lectures
2. Bedside teaching (case based learning)
3. Essential Skills to be learned in the skills lab
4. Teaching of surgical procedures in Operation theatres
5. Clinical ward rotations
6. CPC’s – using modern audio-visual techniques, distant learning using electronic devices and current Information technology facilities

**ATTENDANCE REQUIREMENT FOR SURGERY AND ALLIED**

1. Students are expected to attend all scheduled teaching sessions and examinations
2. Attendance in lectures, tutorials, and wards is mandatory. Absence from these sessions will make the students ineligible to sit the final summative assessment.
3. A minimum of 75 % attendance in the lectures, wards is mandatory to appear in the summative UHS examination
4. Attendance will be recorded through a log-in/log-out biometrics system
5. Absence due to illness must be certified appropriately by the General Physician

**SYLLABUS**

The course outline is as follows :

**GENERAL SURGERY**

***Principles of Surgery***

* Metabolic response to Surgical trauma and homeostasis
* Pathophysiology and Management of Shock
* Fluid, electrolyte and acid base balance
* Haemorrhage, Coagulapathy and Blood/products Transfusion and its complications
* Nutrition of surgical patients
* Wounds, wound repair and its complications
* Investigation and treatment of common Infections and Parasitic Infestations of Surgical Importance including clinical therapeutics
* Gas Gangrene and Tetanus
* Special Infections related to surgery
* Tuberculosis
* Principles in the Management of common Skin and Soft Tissue Problems: Ulcers, abscesses, inflammations, cysts, sinuses & fistulae, swellings, embedded foreign Bodies, minor Injuries and benign and malignant conditions
* Principles of oncologic therapy and palliation
* Principles of organ transplantation and its ethics and implications
* Surgical Audit
* Surgical ethics

***Trauma***

* Pre-hospital care
* Triage
* Primary survey, ABCDE
* Primary Survey of Polytrauma patients with airway difficulty and circulatory instability
* External Haemorrhage
* Airway management
* Tension Pneumothorax
* Cardiac Tamponade

***Head injuries***

* Resuscitation
* Management of the Patient with Head Injury
* Management of an Unconscious patient due to Head Injury and Glasgow Coma Scale
* Skull fractures
* Intracranial pressure
* Intracranial hemorrhage
* Cervical spine injury
* Spinal cord trauma
* Blunt and Penetrating Injuries of chest and their Complications including haemothorax, pneumothorax, resuscitation, chest drains
* Principles of management of (blunt and penetrating), liver/spleen, pelvic and urogenital trauma
* Principles of management of fractures / dislocation
* Focused Abdominal Sonographic Assessment for trauma (FAST)
* Peripheral nerve Injuries
* Amputations

***Lump/swelling***

* Congenital
* Traumatic
* Inflammatory
* Neoplastic

***Neck swelling***

* Lymphadenapathy (Inflammatory), acute and chronic
* Chronic granulomatous
* Neoplastic benign/malignant
* Lymphatic leukemia
* Autoimmune disorders
* Lipoma
* Neurofibroma
* Sebaceous cyst
* Sublingual dermoid
* Thyroglossal cyst
* Salivary Glands: calculi, enlargement (benign/malignant)
* Thyroid gland enlargement
* Branchial cysts, sinus or fistula
* Cystic hygroma
* Carotid artery tumor

***Plastic and reconstructive surgery***

* Principles of skin coverage (Grafts and Flaps)
* Common benign and malignant skin lesions
* Burns, principles of management
* Cleft lip and palate
* Epispadius
* Hypospadius

***Principles of Anaesthesia***

* Pre-operative assessment of patients and pre-medication
* Local Anaesthesia
* Local Anaesthetic agents (Pharmacology)
* Regional Anaesthesia (Spinal and Epidural)
* Intravenous Anaesthetic agents
* Muscle Relaxants
* Inhalational Anaesthetic agents
* Complications of Anaesthesia
* Perioperative Management
* Recovery from Anaesthesia
* Pain Management and postoperative care
* ICU Monitoring

***Neurosurgery***

* Raised intracranial pressure/ hydrocephalus
* Introduction to intracranial infections
* Introduction to intracranial tumors
* Peripheral nerve Injuries

***Paediatric surgery***

* Paediatric Tumours
* Neonatal surgical problems
* Tracheoesophageal malformations
* Pyloric stenosis
* Hirschprung’s disease
* Imperforate anus
* Intestinal obstruction
* Intussusception
* Foreign body (Aspirated or Ingested)

**SYSTEMIC SURGERY**

***Head, face and neck***

* Developmental abnormalities of face, palate, lips.
* Principles of management of head injuries and its complications.
* Oral cavity including tongue.
* Diseases of salivary glands (Inflammation, Calculus, Tumours)
* Neck lumps including lymph nodes, thyroid and parathyroid

***Breast***

* Diseases of the breast, nipple and areola
* Benign diseases of the breast
* Malignant diseases of the breast

***Chest wall & thorax***

* Blunt & penetrating injuries and their complications
* Lung abscess and empyema thoracis
* Tumors and cysts in the lungs

***Gastro Intestinal Tract***

* Diseases causing oesophageal obstruction.
* Peptic ulcer disease & its complications.
* Tumours of stomach.
* conditions causing acute abdomen
* Conditions causing chronic abdomen including malignant lesions of small and large bowel
* Ano-rectal and peri-anal conditions requiring surgery.

***Abdominal, Pelvic and Genital Trauma and Hernia***

* Principles in management of abdominal pelvic and urogenital trauma
* Inguinal/ Inguinoscrotal and femoral hernia
* Epigastric hernia/umbilical/ para-umbilical hernia
* Incisional hernia

***Liver***

* Trauma
* Obstructive jaundice
* Liver abscess
* Hydatid cyst
* Malignancy (Hepatoma & secondaries)

***Gall Bladder***

* Acute and chronic cholecystitis
* Cholelithiasis and its complications
* Tumours

***Pancreas***

* Acute, relapsing and chronic pancreatitis
* Pancreatic masses including cysts
* Benign and malignant neoplasia

***Spleen***

* Trauma
* Surgical aspects of spleen

***Urinary Tract***

* Common congenital anomalies
* Infection & its sequelae
* Calculus disease and its sequelae
* Bladder lesions
* Enlarged prostate
* Urogenital trauma
* Neoplasms of kidney and urinary tract

***External Genitalia, Male and Female***

* Developmental abnormalities
* Common pelvic conditions
* Scrotal and testicular lesions
* Scrotal swelling
* Testicular swelling

***Skin & Soft Tissues***

* Common benign and malignant skin lesions
* Wounds/ulcers/abscesses/sinuses/fistulae
* Soft tissue lumps

***Vascular and Nerve Disorders***

* Vascular afflictions and limb ischaemia
* Varicosities
* Deep venous thrombosis
* Peripheral nerve injuries

***Essential Skills to be acquired***

* Provide First Aid: Resuscitation (ABC) of polytrauma, CPR.
* Collect samples of blood, urine, stool, sputum, pus swab etc.
* Insert Naso-gastric tube have observed chest intubation and paracentesis.
* Do Intravenous cannulation have observed CV-line insertion and cut- down of veins.
* Catheterize male and female patients.
* Prepare the patient for and know the procedure of doing X-Ray chest, abdomen, KUB, bones, IVU, barium studies, ultrasound and other imaging investigations.
* Principles of pre-operative preparations, sterilization/disinfection techniques.
* Principles of wound care, skin suturing and suture removal, incision, tissue lumps, needle biopsies, aspiration of localized fluids, etc.
* Have observed common surgical procedures, treatment of fracture/ dislocation and methods of general / local anaesthesia.
* Apply bandage and splint/pop cast to the patient’s limbs.
* Have observed instillation of chemotherapy and principles of radiotherapy.

**ORTHOPAEDIC SURGERY & TRAUMATOLOGY**

***Necessary Applied Basic Sciences With Reference To Orthopaedics:***

• Pathophysiology of trauma and shock.

• Mechanical properties of bone & soft tissue.

• Biomechanics of fracture.

• Healing & repair (bone & soft tissues).

• Healing principles of fracture.

• Principles of physiotherapy

• Orthotics – orthopaedic appliances to support and

correct deformities

• Prosthesis – artificial substitute for missing body parts.

***Systems and Diseases***

**1:** Congenital & Development Diseases; Congenital talipes equino varus (CTEV) and talipes valgus; congenital dislocation of hip

(CDH); flat foot; Perth’s disease; Slipped Capital Femoral Epiphysis.

Specific required skills

• Clinical examination and x-ray interpretation of above mentioned diseases

• Observe the manipulation/application of POP cast for CTEV, pelvic harness, Von Rosen splint, hip spica.

**2:** Bone dysplasia (defect intrinsic to bone)

• Dwarf- Achondroplasia

**3:** Bone and joint infections

• Acute osteomyelitis and septic arthritis.

• Chronic osteomyelitis.

• Tuberculous arthritis/Caries spine.

• Osteolysis/bone cyst, sequestrum, periosteal reaction

Specific required skills

• Clinical examination for above mentioned diseases

• Interpretation of related x-ray and laboratory reports

• Observe or assist in joint aspiration, curettage and sequestrectomy,

drainage of abscess etc.

**4:** Metabolic Bone diseases

• Rickets; osteomalacia; osteoporosis; hyperparathyroidism; diabetes.

Specific required skills

• Interpretation of related X-rays

• Interpretation of laboratory reports of serum Ca, PO4, Alk. phosphatase, parathormone.

• Management of diabetes with relation to injury /surgical procedure and infections.

**5:** Neuromuscular disorders

• Muscular dystrophies e.g. Duchenne type and Becker’s type; spina bifida; cerebral palsy.

• Post-polio paralysis (PPP); neurofibromatosis

Specific required skills

• Clinical examination of sensations, deep tendon jerks, muscle power and tone clonus.

• Management suggesting and explaining of orthosis, walking aids (walking stick, crutches, walkers), wheel chairs.

**6:** Bone Tumours

a. Benign

Exostosis/multiple hereditary exostosis/enchondroma, fibroma, lipoma, neuroma, osteoid osteoma, giant cell tumour.

b. Malignant

Osteogenic sarcoma, Ewings sarcoma, chondrosarcoma,

multiple myeloma, metastatic bone tumors from thyroid, lungs,

kidney, breast and prostate.

c. Principles, indications, techniques and orthotics related to

amputation.

Specific Required Skills

• Observe biopsy – needle and open.

• Observe amputation/limb salvage surgery –

**7:** Neck Pain, Low Back Pain and Sciatica

• Deformities of scoliosis, kyphosis.

• Spinal injury, soft tissue injuries (sprains, strains etc.)

• Fractures (stable, unstable), neurological damage

Specific Required Skills

• Examination and basic management.

• Application of cervical collar, cervical traction, lumbosacral corset.

• Observe internal fixation of spinal fracture

• Log rolling, prevention of bed sores, bladder care/catheter care

and rehabilitation.

**8:** Arthritis and Musculoskeletal Painful Disorders

• Rheumatoid arthritis, ankylosing spondylitis, osteoarthritis.

• Gout; frozen shoulder; tennis elbow, plantar fasciitis, trigger

finger, de Quervains disease.

Specific Required Skills

• Clinical examination of patients with arthritis (differentiate on x-ray)

• Interpretation of related investigations; x-rays and laboratory.

• Management; prescription writing for arthritis and painful muscle disorders.

**9:** Soft Tissue Injuries

• Sprains/ruptures of muscles, ligaments, tendons; nerve injuries.

• Arterial injuries clean/contaminated wounds.

**10:** Fractures

• Basic and advanced trauma life support

• Triage of injured patients in emergency room

• Principles of fracture classification

• Principals of fracture treatment in children

• Principals of fracture fixation

• Management of common orthopaedic emergencies

• Mal-united fractures; non-unions.

Specific Required Skills

• Examination; clinical examination of injured patient; record BP,pulse rate, respiratory rate peripheral pulses and capillary filling; recognition of associated injuries/complications e.g. Vascular, neurological, vascular compartment syndrome etc.

• Investigations; request and interpret urine and blood examination in trauma patient (CBC, ESR, blood urea and sugar etc; interpret x-ray of limbs with fractures and dislocations;

• Catheterize male and female patients.

• Shifting of patient from bed to trolley

• Serving patients with bed pan and urine bottle.

• Prepare patients for surgeries and post-operative care.

• Dressing of surgical wounds post operatively.

• Pass nasogastric tube.

• Injections I/V and I/M.

• Interpret and explain the urine, stool and blood findings with relevance to orthopaedic diseases.

• Request and interpret x-rays, ultrasound, CT, MRI scans

• Management; provide first aid to a person with bone injury like common sprains, fractures and dislocations (immobilization of body part, resuscitation of injured patient.

• Apply dressings, splints, plasters and other immobilization techniques in fracture patients in emergency; maintain clear airway of patient; reductions and observation of surgical fixations; internal and external fixation of fractures (plates, nails others); manipulation and application of plaster of paris cast/back slab; use of external fixators in treatment of open fractures; application of traction skin/skeletal.

**RADIOLOGY**

* + - 1. ***Plain Radiography***
  1. Normal anatomy and projections
  2. Pneumothorax
  3. Pneumonia
  4. Effusion
  5. Cardiomegaly
  6. Plumonary oedema
  7. Fractures
  8. Surgical emphysema
  9. Neoplastic Diseases
  10. Chronic inflammatory disease
* **Skull**
* Normal anatomy and projections
* Fracture
* Lytic and sclerotic lesion
* Calcifications
* Pituitary fossa
* Paranasal sinuses
* ***Abdomen***
* Normal anatomy and projections
* Renal & urinary tract stones, gall stones and other calcifications
* Free gas under diaphragm, (perforation)
* Enlarged liver and spleen
* ***Spine***
* Normal anatomy and projections.
* Disc space reduction
* Vertebral collapse
* ***Barium Meal & with double contrast (where applicable)***
* Normal anatomy and various projections
* Gastric outlet obstruction
* Stomach mass/filling defect
* Oesophageal outline/varices/strictures
* Intussusception
* Colonic defects
* Malabsorption pattern
* Stricture
* Any filling defect
* Ulcerative colitis
* ***Intravenous Urogram***
* Hydronephrosis & renal masses
* ***Micturating Cystourethrogram***
* Reflux
* ***Cholecystogram***
* Gall bladder diseases and stones
* ***CT Scanning***
* Be able to interpret the report
* **MRI**
* Basic Principle

**THIRD YEAR MBBS ACADEMIC PLANNER**

**GENERAL SURGERY**

**SESSION 2022-2023**

|  |  |
| --- | --- |
| Subject: | General Surgery |
| Session | 2022-2023 |
| Total Hours | **28 hours** |
| Total no. of lectures | **36** |
| Total duration of each lecture | 45 minutes |
| Course duration: | Mar 2022 to Dec 2022 |

**FACILITATORS:**

Prof. Dr Abdul Majeed Chaudhry

Prof. Hasnat Ahmad Butt

Prof. Imran Hussain Andrabi

Dr. Sidra Shoaib

|  |  |  |  |
| --- | --- | --- | --- |
| **LECT. NO.** | **PROPOSED TIME LINE** | **CHAPTER** | **TOPICS** |
| 1 | Week 1 | Introduction to Surgery | * Brief history of surgery |
| 2 | Week 2 | Metabolic Response to Trauma | * Classical concepts of homeostasis * Mediators of the metabolic response to injury * Physiological and biochemical changes that occur during injury and recovery |
| 3 | Week 3 | Metabolic Response to Trauma | * Changes in body composition that accompany surgical injury * Avoidable factors that compound the metabolic response to injury * Concepts behind optimal perioperative care |
| 4 | Week 4 | Shock | * The pathophysiology of shock and ischaemia– reperfusion injury * The different patterns of shock and the principles and priorities of resuscitation * • Appropriate monitoring and end points of resuscitation |
| 5 | Week 5 | Haemorrhage & Blood transfusion | * Use of blood and blood products, the benefits and risks of blood transfusion * Types of haemorrhage |
| 6 | Week 6 | Wound & Tissue Repair | * Normal healing and how it can be adversely affected |
| 7 | Week 7 | Wound & Tissue Repair | * How to manage wounds of different types, of different structures and at different sites * Aspects of disordered healing that lead to chronic wounds |
| 8 | Week 8 | Wound Infection | * The characteristics of the common surgical pathogens and their sensitivities * The factors that determine whether a wound will become infected * The classification of sources of infection and their severity * The clinical presentation of surgical infections |
| 9 | Week 9 | Antibiotic Prophylaxis | * The indications for and choice of prophylactic antibiotics * The spectrum of commonly used antibiotics in surgery and the principles of therapy |
| 10 | Week 10 | SURGICAL SITE INFECTIONS | * The definitions of infection, particularly at surgical sites * basic precautions to avoid surgically relevant hospital acquired infections |
| 11 | Week 11 | SURGICAL SITE INFECTIONS | * Management of surgical site infections |
| 12 | Week 12 | Surgical ethics |  |
| 13 | Week 13 | Principles of Oncology | * The biological nature of cancer * The principles of cancer aetiology and the major known causative factors * The principles of cancer prevention and early detection |
| 14 | Week 14 | Principles of Oncology | * The multidisciplinary management of cancer * The principles underlying non-surgical treatments for cancer * The principles underlying non-surgical treatments for cancer * The principles of palliative care |
| 15 | Week 15 | Preoperative care | * to organize the preoperative care and the operating list * preoperative preparation for surgery: * Surgical, medical and anaesthetic aspects of assessment * optimization of the patient’s condition identification and optimization of the patient at higher risk • * Importance of critical care in management * How to take consent * How to organise an operating list |
| 16 | Week 16 | Fluid electrolytes | * The causes and consequences of malnutrition in the surgical patient * Fluid and electrolyte requirements in the pre- and postoperative patient |
| 17 | Week 17 | nutrition | * The nutritional requirements of surgical patients and the nutritional consequences of intestinal resection * The different methods of providing nutritional support and their complications |
| 18 | Week 18 | Acid base balance | * Basic physiology * Acid base disorders * Management of acid base disorders |
| 19 | Week 19 | Post-operative care | * Immediate postoperative care * Common postoperative problems in the immediate postoperative period * Prediction and prevention of common postoperative complications * Recognition and treatment of common postoperative complications * The principles of enhanced recovery * A system for discharging patients |
| 20 | Week 20 | General Trauma | * timeline concept in trauma management * assessment of a trauma problem * how to respond to a trauma problem |
| 21 | Week 21 | General Trauma | * Early total care and damage control surgical strategies |
| 22 | Week 22 | Disaster Management | * The common features of various disasters * The principles behind the organisation of the relief effort and of triage in treatment and evacuation * The role and limitations of field hospitals in disaster * The features of conditions peculiar to disaster situations |
| 23 | Week 23 | Cysts, Lumps, Sinus & Ulcer | * Lumps and bumps * Interpretation * diagnosis |
| 24 | Week 24 | Common leg Ulcers | * To identification of Causes and risk factors of leg ulcers * Diagnosis and management |
| 25 | Week 25 | Burns | * different types of burns * The pathophysiology of burns * assessment of The area and depth of burns * immediate management of burn patient * Methods for calculating the rate and quantity of fluids to be given * Techniques for treating burns and the patient |
| 26 | Week 26 | Burns | * The pathophysiology of electrical and chemical burns * Techniques for treating burns and the patient |
| 27 | Week 27 | SCARS | * The variety of scars and their treatment * Hypertrophic Scar, Keloids * How to differentiate between acute and chronic wounds |
| 28 | Week 28 | Different Types of Abscesses | * The management of abscesses * The importance of aseptic and antiseptic techniques * Delayed primary or secondary closure in contaminated wounds |
| 29 | Week 29 | Tuberculosis | * Introduction * Types of Tuberculosis * Diagnosis and general management * Tuberculous cervical lymphadenitis |
| 30 | Week 30 | Typhoid | * Introduction * Pathology * Diagnosis * Treatment |
| 31 | Week 31 | Gangrene Types & Diagnosis | * Types of gangrene * Pathophysiology of gangrene * Diagnosis and management of gangrene * Specific varieties of gangrene |
| 32 | Week 32 | Amputations | * Different types of amputations * Indications of amputations * Complications of amputations |
| 33 | Week 33 | Arterial Disorders | * The nature and associated features of occlusive peripheral arterial disease * The investigation and treatment options for occlusive peripheral arterial disease * The principles of management of the severely ischaemic limb |
| 34 | Week 34 | Acute Limb Ischemia  Chronic Limb Ischemia | * Signs and symptoms of acute limb ischemia * Management options for Acute limb ischemia * Follow up Signs and symptoms of chronic limb ischemia * Management options for chronic limb ischemia * Follow up |
| 35 | Week 35 | Transplantation  Surgery in the tropics:   1. Intestinal worm infestations and its complications 2. Amoebic liver Abscess 3. Hydatid Disease | * Immunological basis of allograft * rejection * Principles of immunosuppressive therapy * Side effects of non-specific * immunosuppression * Major issues concerning organ donation * Main indications for organ transplantation * Surgical principles of organ implantation |
|  |  | * The common surgical infections and infestations that occur in the tropics * The emergency presentations of the various conditions, * Diagnosis and treatment of these conditions, particularly as emergencies. * ideal management involves a multidisciplinary approach between the surgeon, physician, radiologist, pathologist and microbiologist |

**FOURTH YEAR MBBS ACADEMIC PLANNER**

**GENERAL SURGERY**

**SESSION 2022-2023**

|  |  |
| --- | --- |
| Subject: | General Surgery |
| Session | 2022-2023 |
| Total Hours | 54 |
| Total no. of lectures | 72 |
| Lecture by S1 and S2 | 36 by S-1 and 36 by S-2 |
| Course duration: | Mar 2022 to Dec 2023 |

**FACILITATORS:**

Prof. Abdul Majeed Chaudhry

Prof. Hasnat Ahmad Butt

Prof Saquib Zahoor

Prof Zahid Mahmood

Prof. Imran Hussain Andrabi

Dr. Shaukat Rabbani

Dr. Wasif Majeed Chaudhry

Dr. Sidra Shoaib Qureshi

Dr. Maryam Jamil

Dr. Zeeshan Hashmi

**SYLLABUS: Surgical unit-1**

|  |  |  |  |
| --- | --- | --- | --- |
| TOTAL NO.OF Lect. No. | **Proposed timeline** | **Topic** | **Learning Objectives** |
| 3 | Week 1-3 | Thoracic Trauma | * Introduction * Investigations for thoracic trauma * Immediate life-threatening injuries * Potentially life-threatening injuries * Treatment of Thoracic injuries * Emergency thoracotomy * Elective thoracotomy |
| 3 | Week 4-6 | Empyema Thoracis  Lung abscess | * Etiology * Pathophysiology * Classification * Investigation * Treatment |
| 4 | Week 7-10 | Thyroid and Parathyroid glands | * Surgical anatomy * Physiology * Investigations * Diseases * Diagnosis * Treatment |
| 4 | Week 11- 14 | Breast | * Surgical anatomy * Physiology * Investigations * Benign breast diseases * Malignant breast diseases * Treatment of benign and malignant diseases |
| 4 | Week 15 - 18 | Esophagus & Stomach | * Surgical anatomy * Physiology * Investigations * Benign diseases * Malignant diseases * Treatment |
| 3 | Week 19-21 | Liver | * The anatomy of the liver * The signs of acute and chronic liver disease * The investigation of liver disease * The management of liver trauma * The management of liver infections * The management of colorectal liver metastases * The management of hepatocellular carcinoma |
| 1 | Week 22 | Nutrition, Enteral and Parenteral | * The nutritional requirements of surgical patients and the nutritional consequences of intestinal resection * The different methods of providing nutritional support and their complications |
| 3 | Week 23-25 | Introduction to Laparoscopic Surgery | * The principles of laparoscopic and robotic surgery. * The safety issues and indications for laparoscopic and robotic surgery * The advantages and disadvantages of such surgery robotic surgery * The principles of postoperative care |
| 4 | Week 26-29 | Testis and scrotum | * Embryology, anatomy, physiology, functions of Testis * Incompletely descended testis * Testicular injury * Testicular torsion * Varicocoele * Spermatocoele * Hydrocoele * Epididymal cysts * Epididymoorchitis * Testicular tumours and their management * Fournier’s gangrene of the scrotum |
| 5 | Week 30-34 | Cleft Lip and Palate, Oral Cavity & Oropharyngeal Cancer | * The aetiology and classification of developmental abnormalities of the face, mouth and jaws * Perinatal and early childhood management * The principles of reconstruction of cleft lip and palate * The key features of perioperative care * The management of complications associated with cleft lip and palate |
| 3 | Week 35-37 | Faciomaxillary Trauma |  |

**SYLLABUS: Surgical unit-2**

|  |  |  |  |
| --- | --- | --- | --- |
| **TOTAL NO.OF Lect. No.** | **PROPOSED TIME LINE** | **UNIT** | **Learning Objectives** |
| 3 | Week 1-3 | Arterial Disorders | **To understand**   * The nature and associated features of occlusive peripheral arterial disease * The investigation and treatment options for occlusive peripheral arterial disease * The principles of management of the severely ischaemic limb * The nature and presentation of peripheral aneurysmal disease, particularly of the abdominal aorta * The investigation and treatment options for peripheral aneurysmal disease * The arteritides and vasospastic disorders |
| 3 | Week 4-6 | Venous Disorders | **To understand:**   * Venous anatomy and the physiology of venous return * The pathophysiology of venous hypertension * The clinical significance and management of superficial venous reflux * The management of venous ulceration * Venous thromboembolism |
| 3 | Week 7-9 | Lung Cancer & Thymoma | **To understand**   * The anatomy of the lung * Primary lung cancer * Pathological types * Histological classification of lung cancer * Clinical features * Diagnosis and staging * Non-invasive investigations * Treatment of lung cancer * Invasive investigations * Surgical diagnosis and staging * Surgical approach to lung cancer resection * Complications of lung resection * Postoperative care * Lung metastases * Benign lung tumours * Thymoma |
| 3 | Week 10 – 12 | Adrenal Gland | **To understand**   * The anatomy and function of the adrenal and other abdominal endocrine glands * Disorders of the adrenal cortex * Primary hyperaldosteronism – conn’s syndrome * Cushing’s syndrome * Disorders of the adrenal medulla and neural crest- derived tissue * Pheochromocytoma * The diagnosis and management of these endocrine disorders * The role of surgery in the management of adrenal disorders * The role of surgery in the management of other endocrine disorders |
| 2 | Week 13 – 14 | Carcinoma Breast | **To understand**   * Surgical anatomy of breast * Different Presentations of carcinoma breast * Triple assessment of breast lump * Investigations of carcinoma breast * Signs and symptoms * Staging * prognosis * Management options for breast cancer * Breast reconstructions * The Male carcinoma breast |
| 1 | Week 15 | Fluid & Electrolytes | **To understand**   * Fluid and electrolyte requirements in the pre- and postoperative patient |
| 1 | Week 16 | Acid Base Balance | **To understand**   * Basic physiology * Acid base disorders * Management of acid base disorders |
| 3 | Week 17 – 19 | Small & Large Intestine & Intestinal Obstruction | **To understand:**   * The pathophysiology of dynamic intestinal obstruction * The pathophysiology of adynamic intestinal obstruction * The cardinal features on history and examination * The causes of small and large bowel obstruction * Investigations for diagnosis of intestinal obstruction * Conservative management for intestinal obstruction * The indications for surgery * Surgical management options in bowel obstruction |
|
| 3 | Week 20 – 22 | Peritoneum & Retroperitonium | **To Understand**   * The causes and complications of localized and generalised peritonitis * The clinical features of peritonitis and intraperitoneal abscess * The principles of surgical management in patients with peritonitis and intraperitoneal abscess * The causes and pathophysiology of ascites * The pathophysiology and complications of adhesion formation * The spectrum of mesenteric and retroperitoneal conditions |
| 3 | Week 23 – 25 | Plastic and Reconstruction Surgery | **To Understand**   * The spectrum of plastic surgical techniques used to restore bodily form and function * The relevant anatomy and physiology of tissues used in reconstruction * The various skin grafts and how to use them appropriately * The principles and use of flaps * How to use plastic surgery to manage difficult and complex tissue loss |
| 2 | Week 26 – 27 | Appendix | **To understand:**   * The etiology and surgical anatomy of acute appendicitis * The clinical signs and differential diagnoses of appendicitis * The investigation of suspected appendicitis * Evolving concepts in management of acute appendicitis * Basic surgical techniques, both open and laparoscopic * The management of postoperative problems * Tumours of the appendix and pseudomyxoma peritonei |
| 3 | Week 28 – 30 | **Liver Abscess & Cyst / Hydatid Disease** | **To Understand**   * Spectrum of simple cystic disease * Liver infections * Ascending cholangitis * The Pathology, classification, Clinical features & investigations of liver abscess * The management options for liver abscess * The indications for surgery * Surgical management options for liver abscess * The Pathology, classification, Clinical features & investigations for hydatid disease * The management options for hydatid disease * The indications for surgery for hydatid disease * Surgical management options for hydatid disease |
| 4 | Week 31 – 34 | **Neurosurgery** | **To understand:**   * The features of raised intracranial pressure, hydrocephalus and infection typical to acute neurosurgical presentations. * The aneurysmal subarachnoid haemorrhage and other causes of intracranial haemorrhage. * The common brain tumours, their presentation, investigation and treatment. * The common developmental and other pathologies encountered in paediatric neurosurgical practice. * The indications and approaches available for the management of epilepsy, pain syndromes and movement disorders. * The key practical and ethical issues relating to consent and risks * Brainstem death. |
| 3 | Week 35 – 37 | **Plastic and reconstructive surgery** | **To understand:**   * The spectrum of plastic surgical techniques used to restore bodily form and function * The relevant anatomy and physiology of tissues used in reconstruction * The various skin grafts and how to use them appropriately * The principles and use of flaps * How to use plastic surgery to manage difficult and complex tissue loss |

**FINAL YEAR MBBS ACADEMIC PLANNER**

**GENERAL SURGERY**

**SESSION 2022-2023**

|  |  |
| --- | --- |
| Subject: | General Surgery |
| Session | 2022-2023 |
| Total Hours | 108 |
| Total no. of lectures | 142 (72, Surgical Unit-1 ) ( 72, Lecture S2) |
| Duration of each Lecture | 45 min. |
| Course duration: | Feb 2022 to Dec 2022 |

**FACILITATORS:**

Prof. Abdul Majeed Chaudhry

Prof. Hasnat Ahmad Butt

Prof Saquib Zahoor

Prof Zahid Mahmood

Prof. Imran Hussain Andrabi

Dr. Shaukat Rabbani

Dr. Wasif Majeed Chaudhry

Dr. Sidra Shoaib Qureshi

Dr. Maryam Jamil

Dr. Zeeshan Hashmi

**Surgical Unit-1**

|  |  |  |  |
| --- | --- | --- | --- |
| **TOTAL NO.OF Lect. No.** | **PROPOSED TIME LINE** | **Topic** | **Sub topics** |
| 8  (1 -8) | WEEK 1-4 | Hernias, Umbilicus & Abdominal wall | **To understand**   * Basic anatomy and function related to pathology * Pathophysiology of hernia formation * Common principles in abdominal hernia * Clinical history and diagnosis in hernia cases * Examination for hernia * Investigations for hernia * Management principles * Surgical approaches to hernia * Inguinal hernia * Femoral hernia * Ventral hernias * Parastomal hernia * Traumatic hernias * Abdominal compartment syndrome   TEST |
| 8  (9 -16) | Week 5 to 8 | The peritoneum, omentum, mesentery & Retroperitonium | **To understand**   * Anatomy and physiology of the peritoneum, omentum, mesentery & Retroperitonium * Peritonitis * Investigations * Management of peritonitis * Prognosis and complications * Special forms of peritonitis * Intraperitoneal abscess * Ascites * Tumours of the peritoneum * Adhesions * Torsion of the omentum * Mesenteric injury * Mesenteric ischaemia * Mesenteric adenitis * Mesenteric cysts * Retroperitoneal fibrosis * Retroperitoneal (psoas) abscess * Retroperitoneal tumours   Test |
| 8  (17 -24) | Week 9 to 12 | The Small Intestines | **To understand**   * Anatomy of the small intestine * Physiology of the small intestine * Inflammatory bowel disease * Tuberculosis of the intestine * Tumours of the small intestine * Intestinal diverticulae * Mesenteric ischaemia * Stomas and their complications * Enterocutaneous fistula * Short bowel syndrome   Test |
| 6  (25 -30) | Week 13 to 15 | The Large intestine | **To understand**   * Anatomy of the large intestine * Physiology of the large intestine * Tumours of the large intestine * Ulcerative colitis * Diverticular disease of the colon * Angiodysplasia * Ischaemic colitis * Irritable bowel syndrome   Test |
| 8  (31 -38) | Week 16-19 | Intestinal Obstruction | **To understand**   * Classification * Pathophysiology * Special types of mechanical intestinal obstruction * Clinical features of intestinal obstruction * Clinical features of strangulation * Investigations for intestinal obstruction * Treatment of acute intestinal obstruction * Paralytic ileus * Pseudoobstruction   Test |
| 10  (39 -48) | Week 20- 24 | Stomach and duodenum | **To understand**   * Anatomy and physiology of the stomach and duodenum * Gastric mucus and the gastric mucosal barrier * Helicobacter pylori infection * Gastritis * Peptic ulcer (Duodenal & Gastric) * Haematemesis and melaena * Stress ulceration * Gastric erosions * Mallory–Weiss tear * Gastric outlet obstruction * Acute gastric dilatation * Trichobezoar and phytobezoar * Gastric volvulus * Gastric cancer * Gastrointestinal stromal tumours * Gastric Lymphomas * Benign duodenal tumours * Neuroendocrine tumours * Zollinger–Ellison syndrome * Duodenal adenocarcinoma * Duodenal obstruction   Test |
| 6  (49 -54) | Week 25 -27 | The Rectum | **To understand**   * Surgical anatomy * clinical features of rectal disease * Injuries of the rectum and their management * Rectal prolapse and its management * Rectal evacuation disorder * Rectal intussusception * Solitary rectal ulcer syndrome (srus) * Proctitis and its types and management * Rectal polyps * Rectal cancer and its management   Test |
| 2  (55 -56) | Week 28 | Anal Canal | **To understand**   * Surgical anatomy of anal canal * Digital examination with the index finger * Proctoscopy and its indications * Sigmoidoscopy and its indications * Congenital anomalies of anal canal * Pilonidal sinus disease and its management * Anal fissure and its management * Haemorhoids and their management * Perianal fistula and its management * Malignant tumours of the anal canal and its management   Test |
|
| 2  (57-58) | Week 29 | The spleen | **To Understand the**   * Embryology, anatomy, physiology, functions of spleen * Investigations of spleen * Congenital anomalies of spleen * Splenic artery aneurysm * Splenic infarction * Splenic rupture * Splenic abscess * Splenomegaly and hypersplenism * Causes of splenic enlargement * Haemolytic anaemias * Neoplasms of spleen * Spleenectomy and its steps   Tests |
| 2  (59 -60) | Week 30 | Parathyroid glands | **To understand:**   * Embryology, anatomy, physiology, functions of parathyroid glands * Primary hyperparathyroidism * Secondary hyperparathyroidism * Tertiary hyperparathyroidism * Investigations for parathyroid gland * Hypoparathyroidism * Men syndrome * Parathyroid carcinoma and its management(Test) |
| 1  (61) | Week 31 | Adrenal gland | **To understand:**   * Embryology, anatomy, physiology, functions of adrenal glands * Disorders of the adrenal cortex (Incidentaloma, Primary hyperaldosteronism – Conn’s syndrome, Cushing’s syndrome, Adrenocortical carcinoma, Congenital adrenal hyperplasia, Adrenal insufficiency) * Disorders of the adrenal medulla and neural crest derived tissue (Pheochromocytoma and paraganglioma, Neuroblastoma, Ganglioneuroma) * Surgery of the adrenal glands(Test) |
| 2  (62-63) | Week 32 | Testis and scrotum | **To Understand the**   * Embryology, anatomy, physiology, functions of Testis * Incompletely descended testis * Testicular injury * Testicular torsion * Varicocoele * Spermatocoele * Hydrocoele * Epididymal cysts * Epididymoorchitis * Testicular tumours and their management * Fournier’s gangrene of the scrotum (Test) |
| 2  (64-65) | Week 33 | The thorax and chest trauma | **To understand:**   * Introduction * Investigations for thoracic trauma * Immediate life-threatening injuries * Potentially life-threatening injuries * Treatment of Thoracic injuries * Emergency thoracotomy * Elective thoracotomy * Etiology, Pathophysiology, Classification, investigations and treatment of Empyema thoracis (Test) |
| 3  (66 -68) | Week 34 | Neurosurgery | **To understand:**   * Primary and secondary brain injury * Skull fractures * Extradural haematoma * Subdural haematoma * Subarachanoid haemorrhage * Brain tumours * Hydrocephalus * Brain infections * Neck and spine (Test) |
| 4  (69-72) | Week 35-36 | Cardiac surgery | **To Understand the steps of**   * Introduction to cardiac surgery * Congenital heart diseases (Test) |

**SYLLABUS: Surgical unit-2**

|  |  |  |  |
| --- | --- | --- | --- |
| **TOTAL NO.OF Lect. No.** | **PROPOSED TIME LINE** | **UNIT** | **SUB TOPIC** |
| 8  (1 -8) | WEEK 1-4 | Breast | **To understand**   * Surgical anatomy of breast * Presentations of breast lump * Investigations of breast lump * Triple assessment of breast lump * Diseases of nipple and their management * Benign breast disease * Acute and subacute inflammations of the breast * Carcinoma of the breast * Signs and symptoms * Staging * prognosis * Management options for breast cancer * Breast reconstructions * The Male breast   Test |
| 8  (9 -16) | Week 5 to 8 | The Thyroid gland Thyroglossal Tract | **To understand**   * Embryology & surgical anatomy * Physiology of thyroid functions * Thyroid imaging * Thyroid enlargement * Thyroid procedures * Hyperthyroidism * Hypothyroidism * Neoplasms of the thyroid * Thyroiditis   Test |
| 8  (17 -24) | Week 9 to 12 | The Liver | **To understand**   * The anatomy of the liver * The signs of acute and chronic liver disease * The investigation of liver disease * The management of liver trauma The management of liver infections The management of colorectal liver metastases * The management of hepatocellular carcinoma (Test) |
| 6  (25 -30) | Week 13 to 15 | The Gall Bladder and Bile Ducts | **To understand**   * Anatomy and physiology of the gallbladder and bile ducts * Pathophysiology and management of gallstones * Unusual disorders of the biliary tree * Management of bile duct injuries Malignant disease of the gallbladder and bile ducts (Test) |
| 8  (31 -38) | Week 16-19 | The Pancreas | **To understand**   * The anatomy and physiology of the pancreas * Investigations of the pancreas * Congenital abnormalities of the pancreas Assessment and management of acute pancreatitis * Assessment and management of chronic pancreatitis * The management of liver trauma * Diagnosis and treatment of pancreatic cancer (Test) |
| 10  (39 -48) | Week 20- 24 | The esophagus | **To understand**   * The anatomy and physiology of the esophagus and their relationship to diseases * Symptoms of esophageal diseases * Investigations for oesophageal disorders * Oesophageal motility disorders * Premalignant conditions of esophagus * Oesophageal perforations and their treatment * Paraoesophageal hernias * The clinical features, investigations and treatment of benign diseases * The clinical features, investigations and treatment of malignant diseases   Test |
| 6  (49 -54) | Week 25 -27 | Salivary Glands | **To understand**   * The surgical anatomy of the salivary glands * The presentation, pathology and investigation of salivary gland disease * The medical and surgical treatment of stones and infections of salivary glands * The surgical treatment of malignant conditions of salivary glands * Parotidectomy   Test |
| 2  (55 -56) | Week 28 | Oral and Oropharyngeal cancer | **To understand**   * The relationship between oral (pre)malignancy and the use of alcohol and tobacco * The cardinal features of premalignant and malignant lesions of the oral cavity * The investigation and treatment of oropharyngeal cancers   **To understand**   * The assessment of an ulcer on the tongue * The investigations for chronic tongue ulcers * The Principles of Surgery for Carcinoma Tongue |
|
| 2  (57-58) | Week 29 | Mandible & Maxillofacial injuries | **To Understand the**   * To be able to identify and understand the significance of potentially life-threatening injuries to the face, head and neck * To have: A systematic methodology for examining facial injuries * To know the classification of facial fractures * To understand the diagnosis and management of fractures of the middle third of the facial skeleton and the mandible * The principles of the diagnosis and management of facial soft tissue injuries * To appreciate the management of dental injuries |
| 2  (59 -60) | Week 30 | Cleft lip, cleft palate & Oro dental surgery | **To understand:**   * The aetiology and classification of developmental abnormalities of the face, mouth and jaws * Perinatal and early childhood management * The principles of reconstruction of cleft lip and palate * The key features of perioperative care * The management of complications associated with cleft lip and palate |
| 1  (61) | Week 31 | Pharynx, larynx and neck | **To understand:**   * The relevant anatomy, physiology, disease processes and investigations of the pharyngolarynx and neck * The diagnosis and emergency treatment of airway obstruction * The aetiology, natural history, management and prevention of squamous cell carcinoma of the upper aerodigestive tract |
| 2  (62-63) | Week 32 | Neck Dissections | **To Understand the**   * Indication for neck dissections * Steps of different types of radical and selective neck dissections * Management of complications of neck dissections |
| 2  (64-65) | Week 33 | Principles of laparoscopic surgery | **To understand:**   * The principles of laparoscopic and robotic surgery. * The safety issues and indications for laparoscopic and robotic surgery * The advantages and disadvantages of such surgery robotic surgery * The principles of postoperative care |
| 3  (66 -68) | Week 34 | Plastic and reconstructive surgery | **To understand:**   * The spectrum of plastic surgical techniques used to restore bodily form and function * The relevant anatomy and physiology of tissues used in reconstruction * The various skin grafts and how to use them appropriately * The principles and use of flaps * How to use plastic surgery to manage difficult and complex tissue loss |
| 4  (69-72) | Week 35-36 | Operative Surgery | **To Understand the steps of**   * Thyroid Surgery * Gall bladder Surgery * Hernia * Appendicitis |

**Topics for clinical Exam for General Surgery**

|  |  |
| --- | --- |
| **Long cases for General surgery Clinical exam** | **Short cases for General surgery clinical exam** |
| Goiter (Mng, diffuse, solitary nodule) | Examination of a lump/ swelling ( Lipoma etc) |
| Thyroid Carcinoma | Examination of a parotid swelling, submandibular swelling |
| Inguinal hernia | Examination of Branchial cyst Branchial fistula, cystic hygroma |
| Femoral hernia | Examination of Ulcer |
| Paraumbilical hernia | Examination of neck/ thyroid |
| Umbilical hernia | Examination of oral cavity |
| Epigastric hernia | Examination of inguinal hernia |
| Breast Carcinoma | Examination of Femoral hernia |
| Abdominal pain | Examination of umbilical hernia |
| Right iliac fossa mass (Appendicular/ Ceacal carcinoma) | Examination of Paraumbilical hernia |
| Peptic ulcer disease | Examination of Epigastric hernia |
| Acute and chronic pancreatitis | Examination of incisional hernia |
| Gallstone disease | Examination of Breast |
| Abdominal mass Epigastric | Examination of varicose veins |
| Dysphagia | Examination of ischeamic limb |
| Carcinoma of the large bowel | Examination of basal cell carcinoma, squamous cell carcinoma, Melanoma |
| Obstructive jaundice | Examination of hydrocoele |
| Peripheral vascular disease | Examination of varicocele |
| Varicose veins of lower limb | Examination of Diabetic foot |
| Lymphoma |  |

# List of faculty list of Orthopedics



# Prof. Amer Aziz

FRCS (Ed), FRCS (Glas),FCPS (Orth),M.Sc. (Orth) London, MCPS HPE.

Head of the Department / Professor of Orthopaedics

# Dr. Chiragh Muhammad Khan

MBBS,MS

Visiting Consultant Paediatric Orthopaedics

Department Of Orthopaedic & Spine Surgery GTTH

# Dr. Shahzad Javed

MBBS, FCPS (orth)

Professor of Orthopaedic Department of Orthopaedic & Spine Surgery

GTTH / LMDC

# Dr. Naeem Ahmed

MBBS, FCPS (orth)

Professor of Orthopaedic Department of Orthopaedic & Spine Surgery

GTTH / LMDC

# Dr. Ijaz Ahmad

MBBS, FCPS (orth),MME

Professor of Orthopaedic Department of Orthopaedic & Spine Surgery

GTTH / LMDC

# Dr. Rizwan Akram

MBBS, FCPS (orth),MME

Professor of Orthopaedic Department of Orthopaedic & Spine Surgery

GTTH / LMDC

# Dr. Atiq Uz Zaman

MBBS, FCPS (orth),MME

Professor of Orthopaedic Department of Orthopaedic & Spine Surgery

GTTH / LMDC

# Dr. Abdullah Shah

MBBS, FCPS (orth),

Assistant Professor of Orthopaedic Department of Orthopaedic & Spine Surgery GTTH / LMDC

**Final year MBBS Academic Planner**

**Orthopaedic Surgery**

**Session 2022-2023**

|  |  |
| --- | --- |
| **Subject** | **Orthopedic Surgery** |
| Session | 2022-2023 |
| Total hours | 27 |
| Total number of lectures | 36 |
| Total duration of each lecture | 45min. |
| Course duration | Feb 2022 – Dec 2022 |

**Facilitators:**

Prof. Dr. Amir Aziz

Prof. Dr. Shahzad Javed

Prof. Dr. Naeem Ahmed

**SYLLABUS**

|  |  |  |
| --- | --- | --- |
| **Proposed time line** | **Topic** | **Sub- topic** |
| Week 1--3 | Applied basic orthopaedics | Pathophysiology of trauma and shock |
| Mechanical properties of bone and soft tissue |
| Principles of bone and soft tissue healing |
| WEEK 4-5 | Congenital and developmental diseases | Congenital talipes equino varus and valgus (CTEV),flat foot, perthes disease |
| Bone dysplasias i.e. pseoudarthrosis,achondroplasia |
| WEEK 6-8 | Bone & joint infection | Acute osteomyelitis & septic arthritis |
| Chronic Osteomtyelitis |
| Tuberculous arthritis / caries spine |
| WEEK 9-10 | Metabolic bone disease | Richets, osteomalacia |
| Hyperparathyroidism |
| WEEK 11-13 | Neuro muscular disorders | Muscular dystrothies i.e. duchenne becker |
| Cerebral palsy |
| Post-polio paralysis PPP |
| WEEK 14-16 | Bone Tumors | Benign: Bone Cysts, exostosis |
| Fibroma, lipoma, osteoma, giant cell tumor |
| Malignant: Osteosarcoma, Ewings sarcoma |
| WEEK 17-19 | Neck pain, low back pain | Disc Disease |
| Scoliosis |
| Cervical spondylosis |
| WEEK 20-24 | Arthritis | Rheumatoid Arthritis |
| Osteoarthritis |
| Ankylosing spondylitis |
| Gout |
| Frozen shoulder  Tennis elbow, plantar fasciitis, trigger finger, de quervains disease |
| WEEK 25-28 | Soft Tissue Injury | Common sprains of muscles, ligaments & tendons |
| Nerve injury |
| Arterial injury |
| Brachial plexuses injuries |
| WEEK 29 | Deformity | Genu varum / Genuvalgum |
| WEEK 30-38 | Fractures | Principles of fracture classification |
| Conservative management of fractures |
| Principles of fracture fixation |
| Fractures of upper limb |
| Fracture of lower limb |
| Pelvic trauma |
| Spine trauma |
| Management of common dislocations |
| Complications i.e. mal-union, non-union, AVN, |
| Compartment syndrome |
| Management of Open fractures |
| Management of polytrauma patient |

**Faculty of Urology**



**Dr. Nauman Bashir**

MBBS, FCPS

Assistant Professor of Urology

**MBBS ACADEMIC PLANNER (third year MBBS)**

**Urology**

**SESSION 2022-2023**

|  |  |
| --- | --- |
| Subject: | Urology |
| Session | 2022-2023 |
| Total Hours | 27 |
| Total no. of lectures | 36 |
| Total duration of each lecture | 45 minutes |
| Course duration: | Feb 2022 to Dec 2023 |

**FACILITATORS:**

Prof. Khalid Javed Rabbani

Assistant Prof. Dr. Mohammad Nauman

|  |  |  |  |
| --- | --- | --- | --- |
| **LECT. NO.** | **PROPOSED TIME LINE** | **CHAPTER** | **TOPICS** |
| 1 | Week 1 | Introduction to Urology | * Brief history of Urology |
| 2 | Week 2 | Anatomy of kidney, ureter, bladder, prostate, testis | * Anatomy of kidney * Anatomy of ureter * Anatomy of bladder and function of bladder * Anatomy of testis * Anatomy of prostate |
| 3 | Week 3 | Symptoms in urology | * Symptoms of kidney disorders * S/O Ureter disorders * S/O Bladder disorders * Testicular symptoms * Prostate symptoms |
| 4 | Week 4 | Urolithiasis | * Pathogenesis * Diagnosis * Treatment |
| 5 | Week 5 | Prostate enlargement | * International Prostate Symptoms Score * Diagnosis * Treatment options – medical and surgical * New modalities |
| 6 | Week 6 | CA - Prostate | * Gleason score * Diagnosis * Prostatic biopsy * Treatment * Follow up |
| 7 | Week 7 | CA – Urinary Bladder | * Classical presentation * Diagnosis * Treatment for local tumor in locally advanced metastasis * Follow up |
| 8 | Week 8 | CA - Testis | * Diagnosis * Tumor markers * Treatment * Follow up |
| 9 | Week 9 | Renal tumors | * Benign / malignant * Diagnosis * Treatment * Follow up |
| 10 | Week 10 | Urinary bladder trauma | * Classification * Grading * Management |
| 11 | Week 11 | Renal trauma | * Classification * Grading * Management |
| 12 | Week 12 | Testicular trauma | * Classification * Grading * Management |
| 13 | Week 13 | Testicular torsion | * Symptoms/presentation * Diagnosis * Management * Complications |
| 14 | Week 14 | Varicocele | * Presentation * Diagnosis * Management * Complications |
| 15 | Week 15 | Infertility | * Primary infertility * Workup * Surgical/medical management * Assisted reproductive techniques |
| 16 | Week 16 | Renal failure | * Classification * GFR measurement * management |
| 17 | Week 17 | Renal transplant | * Concept * Donor/Recipient |
| 18 | Week 18 | Hypospadiasis | * Classification * Diagnosis * Treatment |
| 19 | Week 19 | PUJ obstruction | * Classification * Diagnosis * Treatment * Management |
| 20 | Week 20 | VUR | * Grading * Diagnosis * Management * Follow up |
| 21 | Week 21 | ESWL | * Introduction * Indications * Contra indications * Complications |
| 22 | Week 22 | IV contrast | * Definition * Classification * Procedure * Complication |
| 23 | Week 23 | Urethral trauma | * Symptoms/presentation * Diagnosis * Management * Follow up |
| 24 | Week 24 | Polycystic kidney | * Diagnosis * Management |
| 25 | Week 25 | Acute/Chronic urine retention | * Diagnosis * Management |
| 26 | Week 26 | Penile trauma | * Diagnosis * Management |
| 27 | Week 27 | Incontinence | * Classification * Diagnosis * Management |
| 28 | Week 28 | VVF | * Diagnosis * Management |
| 29 | Week 29 | UVF | * Diagnosis * Management |
| 30 | Week 30 | PCN | * Indications * Procedure |
| 31 | Week 31 | Suprapubic cystostomy | * Indications * Procedure |
| 32 | Week 32 | UTI | * Diagnosis * Management |
| 33 | Week 33 | Phimosis | * Diagnosis * Management |
| 34 | Week 34 | Para Phimosis | * Diagnosis * Management |

**FACULTY MEMBERS OF RADIOLOGY**

**Dr. Adeel Asghar Malik**

**MBBS, FCPS**

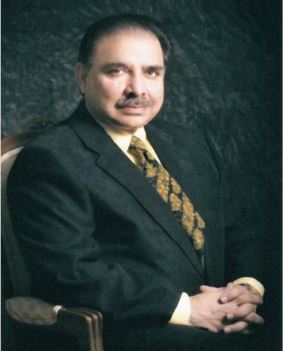
Assistant Professor of Radiology

**Dr. Javed Asghar**

**MBBS, MD, DABR**

Professor of Radiology &

Head of Radiology Department



**Prof. Dr. Khalid Farooq**

**MBBS, FCPS**

Professor of Radiology



**Dr. Wajeeha Imran Andrabi**

**MBBS**

Assistant Professor of Radiology

**FINAL YEAR MBBS ACADEMIC PLANNER**

**Radiology**

**SESSION 2022-2023**

|  |  |
| --- | --- |
| Subject: | Radiology |
| Session | 2018-2019 |
| Total Hours | 8 |
| Total no. of lectures | 10 |
| Duration of each Lecture | 45 min. |

**FACILITATORS:**

Prof. Dr. Javed Asghar

Prof. Khalid Farooq

Dr. Adeel Asghar Malik (Assistant Professor)

Dr. Wajeeha Imran Andrabi (Assistant Professor)

|  |  |  |
| --- | --- | --- |
| ***TOTAL NO.OF Lect. No.*** | ***Topic*** | ***Sub topics*** |
| 1st Lecture | Chest X-ray | **To understand**   * Basic anatomy and interpretation * Understanding different diseases including Pneumothorax, Pneumonia, effusion, Cardiomegaly |
| 2nd Lecture | Chest X-ray | **To understand**   * Different disease including pulmonary edema, fractures, surgical emphysema, neoplastic Diseases & chronic inflammatory disease |
| 3rd lecture | Abdomen x-ray | **To understand**   * Normal anatomy and projections of abdomen, renal & urinary tract stones, gall stones and other calcifications, free gas under diaphragm, (perforation) |
| 4th lecture | Spine X-ray | **To understand**   * Normal anatomy and projections, disc space reduction, vertebral collapse |
| 5th lecture | Barium Meal and with double contrast (where applicable) | **To understand**   * Normal anatomy and various projections, gastric outlet obstruction, stomach mass/filling defect, colonic defects , stricture, Ulcerative colitis |
| 6th lecture | Intravenous Urogram | **To understand**   * Basic interpretation & hydronephrosis and renal masses interpretation. |
| 7th lecture | Micturating Cystourethrogram | **To understand**   * Basic interpretation & reflux pathologies |
| 8th lecture | Cholecystogram | **To understand**   * Basic interpretation & gall bladder diseases and stones |
|
| 9th lecture | CT / MRI | **To Understand the**   * Be able to interpret the report |
| 10th lecture | Test | **Test Session** |

**FACULTY MEMBERS OF ANAESTHESIA**



**Dr. Leena Ayub**

**MBBS, DA, FCPS**

Professor & Head of Anaesthesia



**Dr. Muhammad Aslam**

**MBBS, MCPS, FCPS**

Associate Professor of Anaesthesia



**Dr. Abaid -ur- Rehman**

**MBBS, FCPS**

Associate Professor of Anaesthesia

**Dr. Noman Tariq**

**MBBS, FCPS**

Assistant Professor of Anaesthesia



**MBBS ACADEMIC PLANNER (5th year MBBS)**

**Anaesthesia**

**SESSION 2022-2023**

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| Subject: | Anaesthesia |
| Session | 2022-2023 |
| Total Hours | 08 |
| Total no. of lectures | 10 |
| Total duration of each lecture | 45 minutes |

**FACILITATORS:**

Prof. Syed Taifur -ul- Islam Gillani

Prof. Leena Ayub

Associate Prof. Dr. Muhammad Aslam

Associate Prof. Dr. Abaid –ur- Rehman

Assistant Prof. Dr. Noman Tariq

**Lecture Programme for Final Year MBBS**

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| --- | --- | --- |
|  | **Topic** | **Presenter** |
|  | Introduction to Anaesthesia  - Pre-Anaesthesia Assessment | Dr. Muhammad Aslam |
|  | Management of Airway | Dr. Muhammad Aslam |
|  | Pharmacology - IV Anaesthetics Agents | Dr. Khalid Khalique |
|  | Pharmacology of Inhalational  - Anaesthetic Agents | Dr. Khalid Khalique |
|  | Conduct of General Anaesthesia | Dr. Abaid-ur-Rehman |
|  | Spinal & Epidural Block | Dr. Abaid-ur-Rehman |
|  | Cardio Pulmonary Resuscitation | Dr. Noman Tariq |
|  | Introduction to Intensive Therapy Unit (ITC) | Dr. Leena Aziz |
|  | MCQ Test | Professor. Dr. Syed Taifur-ul-Islam Gilani |

**ASSESSMENT METHODOLOGY**

***Formative***

**Theory,** single best multiple choice question test at the end of each topic finished

**Clinical ward test,** comprising of one long case (70 marks) and two short cases(100 marks) and one OSCE comprising of 11 stations (55 marks), 25 marks contributed by ward attendance

Total marks= 250

**Summative UHS examination (to be held at the end of 5th year MBBS)**

**Theory Paper I:** General Surgery, Surgical Anatomy, Principles of Anaesthesia, Principles of Radiology, Principles of Radiotherapy and Chemotherapy.

**Theory Paper II:** Systematic and Operative Surgery: Musculoskeletal system, GIT, Renal system, Male and female reproductive system, Head and Neck, Thorax, Breast, Nervous system, Cardiovascular System, Orthopaedics and Traumatology

**Summative examination details**

***Total marks of General Surgery= 500***

***Surgery including Orthopaedic & Anaesthesia (Theory)***

Paper-I (65 single best answer multiple choice questions and 10 Short essay questions= 100 marks

Paper II (60 single best answer multiple choice questions and 13 Short essay questions)= 125marks

Internal evaluation= 25 marks

Total= 250 marks

***Surgery including Orthopaedic & Anaesthesia (Clinical/Practical exam)***

Clinical exam comprising of one long case(70 marks) and two short cases(100 marks) = 170 marks

OSCE= 55 Marks

Internal Evaluation= 25 Marks

Total= 250 marks

**LEARNING RESOURCES**

***Recommended books***

1. Bailey and Love’s Short Practice of Surgery, 27th edition published in 2018 by CRC Press Taylor & Francis Group.
2. Browse’s Introduction to symptoms and signs of surgical disease, 5th edition published in 2015 by CRC Press Taylor & Francis Group. Kevin G Burnand John Black, Steven A Corbett and William EG Thomas.
3. Clinical Skills for Undergraduates by Abdul Majeed Ch. and Aamer Zaman Khan
4. Online Journals through LMDC Library

***Technologies to be used for Learning***

1. Textbooks are the most important part of student learning for this subject
2. Hands-on activities and practical sessions to enhance the learning
3. Skills lab will be used for simulated learning of the basic skills related to the gastrointestinal system
4. Videos from different web portals to familiarize the students with the procedures and protocols
5. Computer and Internet resources are essential to gather the latest information about a specific disease.