



**Surgery & Allied
Department**
Rahbar medical and Dental College



RMDC STUDY GUIDE FOR
SURGERY AND ALLIED
DEPARTMENT
AS PER UHS/PMDC
YEAR 2023-2024



Surgery & Allied Department

Rahbar medical and Dental College



CURRICULAR ORGANIZATION	a-Credit hours	Total hours: 1001 (Surg:752 Allied: 249) Theory contents: 30% (300 hours) Practical content: 70% (700 hours) Orthopedic : 100 hours Anesthesia : 50 hours Urology : 50 hours Neurosurgery : 50
	b-Time table c-UHS Syllabus d-Batch distribution	Annexure attached # 1 Annexure attached # 6 Annexure attached # 2
Academic Management	a- Academic Calendar b- Planner of lectures/Tests with facilitator name, topics. c- TOS d- Attendance Register- e- Methods of teaching	Annexure attached # B Annexures attached # 7 Annexure attached # 4 With HOD / IT Department 1. Classroom lectures 2. Small Group Discussions (SGDs) 3. Clinical Teaching in various ways e.g. <ul style="list-style-type: none"> • Bedside teaching • Teaching rounds • Case presentations • CPCs • Short case discussions in OPD • OT: instruments/steps of procedures/patient preparation • Utilizing skill Labs Annexure #6



Surgery & Allied Department

Rahbar medical and Dental College



	<p>f-Assessment</p> <ul style="list-style-type: none"> Formative: ongoing & day to day basis. Summative 	<p><u>Formative Assessment:</u></p> <ul style="list-style-type: none"> - During learning activities Continuous assessment - Assignment in form of Log Books - Ward test at the end of clinical Rotation of individual Batches by long/short cases - Comprehensive revision Tests Class tests OSCE, SEQ, and MCQ <p><u>Summative Assessment:</u></p> <ul style="list-style-type: none"> - End of Clinical rotation of each batch - Send-up Exams - Professional exams by UHS
	<p><u>Learning Objectives:</u></p> <p>At the end of academic session, MBBS students will be able to</p>	<p><u>For 3rd Year:</u></p> <p>Students of 3rd year should be able to have good communication skills with patient.</p> <p>Should be familiar with the curriculum of surgery.</p> <p>Should know the basis of history taking.</p> <p>General Physical examination</p> <p><u>For 4th year Students:</u></p> <ul style="list-style-type: none"> Students of fourth year should have good communication skills.



Surgery & Allied Department

Rahbar medical and Dental College



		<ul style="list-style-type: none"> • Should know about the medical ethics. • Know about the student patient relationship. • Should be good at history taking. • Should be able to do General physical examination. • Should be able to do Systemic examination of patient. • Have a knowledge about emergency drugs. • Should know about the General surgery set. • Should be able to suggest and analyze relevant investigations <p><u>Final Year Students :</u></p> <ul style="list-style-type: none"> • Students should be good at History taking. • Perform General physical examination and systemic examination. • Should be able to suggest investigations. • Provide Provisional, differential diagnosis and the possible investigations to be carried out. • Should be able to pick up radiological findings. • Should be able to suggest treatment options for common clinical cases
4. Program Evaluation	For Evaluation, we remain in direct contact with Medical Education Department, RMDC and Students.	As prescribed by UHS/PMDC. Student assessment, performance and steps for improvement are discussed in academic council meeting to evaluate the ongoing teaching strategies and to modify



**Surgery & Allied
Department**
Rahbar medical and Dental College



		<p>them according to needs for better outcome.</p> <p>Students are evaluated at various level:</p> <ul style="list-style-type: none">• During the lectures• End of the month test.• End of clinical rotation• PEER assessment at the end of each clinical session• Pre-Sendup Test session• Sendups• Professional Examination
--	--	---



Surgery & Allied Department

Rahbar medical and Dental College



Annex:1

TABLE OF SPACING AND HOURS OF SUBJECTS IN MBBS COURSE

SUBJECT	1 st year	2 nd year	3 rd year	4 th year	5 th year	Total Hours
BEHAVIOURAL SCIENCES	5 Hrs.	5 Hrs. 5 Hrs.		5 Hrs.	5 Hrs.	25 Hrs.
ISLAMIC & PAKISTAN STUDIES	15 Hrs.	15 Hrs. 10 Hrs.		10 Hrs.	-	50 Hrs.
ANATOMY	250 Hrs.	250 Hrs.	-	-	-	500 Hrs.
PHYSIOLOGY	250 Hrs.	250 Hrs.	-	-	-	500 Hrs.
BIOCHEMISTRY	100 Hrs.	100 Hrs.	-	-	-	200 Hrs.
PHARMACOLOGY	-	-	300 Hrs.	-	-	300 Hrs.
PATHOLOGY	15 Hrs.	25 Hrs.	260 Hrs	200 Hrs	-	500 Hrs.
* FORENSIC MEDICINE	-	-	100 Hrs	-	-	100 Hrs.
** COMMUNITY MEDICINE	25 Hrs	25 Hrs	50 Hrs	150 Hrs	-	250 Hrs.
MEDICINE & Allied	25 Hrs.	30 Hrs.	120 Hrs	265 Hrs.	360 Hrs	
NUCLEAR MEDICINE	-	10 Hrs.	-	10 Hrs	-	
EMERGENCY MEDICINE, MEDICINE ELECTIVE, *** PSYCHIATRY, DERMATOLOGY AND GENERAL PRACTICE	-	-	-	-	-	
PAEDIATRIC Hrs MEDICINE	5 Hrs.	10 Hrs.	15	50 Hrs	70 Hrs	150 Hrs.
SURGERY & ALLIED Hrs	25 Hrs.	30 Hrs.	120	265 Hrs	360 Hrs	800 Hrs.
**** RADIOLOGY ORTHOPAEDICS, PAED.SURGERY, NEUROSURGERY, SURGERY ELECTIVE, EMERGENCY SURGERY & ANAESTHESIA	5 Hrs.	10 Hrs.	-	10 Hrs	15 Hrs	40 Hrs.
OBSTETRICS & Hrs GYNAECOLOGY	10 Hrs.	10 Hrs.	50	100 Hrs	130 Hrs.	300 Hrs.



Surgery & Allied Department

Rahbar medical and Dental College



OPHTHALMOLOGY	5 Hrs.	10 Hrs.	15 Hrs	70 Hrs	-	100 Hrs.
OTORHINOLARYN- Hrs GOLOGY(E.N.T.)	5 Hrs.	10 Hrs.	15	70 Hrs	-	100 Hrs.
CLINICO- PATHOLOGICAL CONFERENCE	-	-	-	60 Hrs	-	60 Hrs.
Total	740 Hrs	790 Hrs	1060 Hrs	1265Hrs	940Hrs	4795Hrs

- * **Bioethics will be taught in the Forensic Medicine.**
- ** **Biostatistics will be taught in Community Medicine.**
- *** **Behavioural Sciences will be taught in Psychiatry.**
- **** **Biophysics will be taught in Radiology.**

Distribution of subjects Instructional contents into Theory and Practical learning.

Type of subject	Theory Content	Practical Skills Content
All Basic Sciences	50%	50%
Pre-Clinical Sciences (Pharmacology and Therapeutics, Forensic Medicine, Community Medicine, Pathology)	40%	60%
Clinical Sciences	30%	70%
Internship/House Job	0%	100%

Time Allocated to Curriculum Content= 7493 hours

Subject specified competencies	General competencies
80% 5994	20% 1499

Time Allocated To the Study Design (5184)

Instructions	Self Study
80% 4795	20% 1198

Time Allocated to Site of Study (4147)



**Surgery & Allied
Department**
Rahbar medical and Dental College



Institution Based	Community Oriented
80% 3836	20% 959

Distribution of Marks in Evaluation

University Examination	Internal Assessments
90%	10%

Examination of Subject Based MBBS Curriculum

Total 100%

Internal Assessment 20%

University Examination 80%

Internal Assessment Theory	Internal Assessment Practical	University Assessment Theory	University Assessment Practical	Total
10%	10%	40%	40%	100%

Annex: 2 Time tables

Annex:6 UHS Syllabus



A- SURGERY COURSE OUT LINE

Distribution of Subjects:

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

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.

The course outline is as follows:

Systems and the Diseases:

Head, Face and Neck

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

Breast:

1. Diseases of the breast, nipple and areola
2. Benign and malignant tumours.

Chest Wall & Thorax

1. Blunt & penetrating injuries and their complications.
2. Lung abscess and empyema thoracis.
3. Tumors and cysts in the lungs.



**Surgery & Allied
Department**
Rahbar medical and Dental College



Gastro Intestinal Tract

1. Diseases causing oesophageal obstruction.
2. Peptic ulcer disease & its complications.
3. Tumors of stomach.
5. Conditions causing chronic abdomen including malignant lesions of small and large bowel
6. Ano-rectal and peri-anal conditions requiring surgery.

Abdominal, Pelvic and Genital Trauma and Hernia.

1. Principles in management of abdominal pelvic and urogenital trauma.
2. Inguinal/ Inguinoscrotal and femoral hernia.
3. Epigastric hernia/umbilical/ para-umbilical hernia.
4. Incisional hernia.

Liver

- a. Trauma.
- b. Obstructive jaundice.
- c. Liver abscess.
- d. Hydatid cyst.
- e. Malignancy (Hepatoma & secondaries).

Gall Bladder

1. Acute and chronic cholecystitis.
2. Cholelithiasis and its complications.
3. Tumours



Surgery & Allied Department

Rahbar medical and Dental College



Pancreas

1. Acute, relapsing and chronic pancreatitis.
2. Pancreatic masses including cysts
3. Benign and malignant neoplasia.

Spleen

1. Trauma
2. Surgical aspects of spleen

Urinary Tract

1. Common congenital anomalies.
2. Infection & its sequelae.
3. Calculus disease and its sequelae.
4. Bladder lesions.
5. Enlarged prostate.
6. Urogenital trauma.
7. Neoplasms of kidney and urinary tract.

External Genitalia, Male and Female

1. Developmental abnormalities.
2. Common pelvic conditions

Scrotal and testicular lesions

1. Scrotal swelling.
2. Testicular swelling.

Skin & Soft Tissues

1. Common benign and malignant skin lesions.
2. Wounds/ulcers/abscesses/sinuses/fistulae.
3. Soft tissue lumps.



Surgery & Allied Department

Rahbar medical and Dental College



Orthopaedics and Trauma

1. Common congenital malformations of locomotive system.
2. Bone fractures & their complications.
3. Sports injuries and affections of tendons and bursae.
4. Bone and joint infections.
5. Arthritis.
6. Bone and cartilage tumors.
7. Spinal trauma.
8. Spinal tumors.
9. Common spinal deformities and other surgically correctable lesions.

Vascular and Nerve Disorders

1. Vascular affections and limb ischemia.
2. Varicosities
3. Deep venous thrombosis.
4. Peripheral nerve injuries



**Surgery & Allied
Department**
Rahbar medical and Dental College



Essential Skills to be acquired

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



B- ORTHOPAEDIC SURGERY & TRAUMATOLOGY

The course outline is as follows:

a. Necessary Applied Basic Sciences With Reference To Orthopaedics:

- i. Pathophysiology of trauma and shock.
- ii. Mechanical properties of bone & soft tissue.
- iii. Biomechanics of fracture.
- iv. Healing & repair (bone & soft tissues).
- v. Healing principles of fracture.
- vi. Principles of physiotherapy
- vii. Orthotics – orthopaedic appliances to support and correct deformities
- viii. Prosthesis – artificial substitute for missing body parts.

b. 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

- i. Clinical examination and x-ray interpretation of above mentioned diseases
- ii. 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



**Surgery & Allied
Department**
Rahbar medical and Dental College



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.



Surgery & Allied Department

Rahbar medical and Dental College



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.



Surgery & Allied Department

Rahbar medical and Dental College



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
- Principles of fracture treatment in children.
- Principles 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.
- 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.



Surgery & Allied Department

Rahbar medical and Dental College



- 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.

RECOMMENDED BOOKS:

- ❑ **Short Practice Of Surgery** By Bailey And Love's
- ❑ **Text Book Of Surgery** By Ijaz Ahsan
- ❑ **General Surgery (Lecture Notes Series)** by Harold Ellis, Roy Calne, Chris Watson
- ❑ **An Introduction to the Symptoms and Signs of Surgical Disease** by Norman Browse
- ❑ **Current Surgical Practice:** by Norman L. Browse, Alan G. Johnson, and Tom. Vol. 6
- ❑ **Schwartz's Principles of Surgery** by F. Charles Brunnicardi, Dana K. Andersen, Timothy R. Billiar, and David L. Dunn 8th edition. 2004
- ❑ **Online Journals and Reading Materials** through HEC Digital Library Facility.



C- ANAESTHESIOLOGY

The course outline is as follows :

- 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
- Anaesthesia and associated diseases.
- Complications of anaesthesia.
- Perioperative management.
- Cardiopulmonary Resuscitation. CPR.
- Recovery from anaesthesia. Pain management and postoperative care.

LOG BOOK

The submission of a complete logbook duly signed by Head of Department should be compulsory to appear in final professional examination.

PROCEDURES

1. Pre-operative assessment of the patient.
2. I/V cannulation and Intra-operative fluid management.
3. Demonstration of induction of general anaesthesia and tracheal intubation.
4. Demonstration of spinal block.
5. Demonstration of epidural block.
6. Demonstration of local blocks in Eye, ENT and General Surgery.
7. Demonstration of CPR.
8. Post-operative care/pain management.



Surgery & Allied Department

Rahbar medical and Dental College



9. Introduction to the ICU.
10. Demonstration of anaesthesia machine and other instruments
11. Demonstration of sterilization procedures in O.T and ICU.
12. Demonstration of vital sign monitors and their application

RECOMMENDED BOOKS:

1. **Textbook of Anaesthesia** by G. Smith and A.R. Aitkenhead
2. **Short Practice of Anaesthesia** by M. Morgan, G. Hall. Latest edition
3. **A Synopsis of Anaesthesia** by J. Alfred Lee
4. **Online Journals and Reading Materials** through HEC Digital Library Facility.