STUDY GUIDE – 2025-2026

4TH YEAR MBBS

BATCH 07 (2023-2027)

Study Guide is a tool to facilitate and support students' learning, provide guidance and highlight required information to students. It aims to maximize the personal benefit each individual can attain from the academic program.

The Guide Provides:

- Information on organization and management of the academic year. This will help you contact the right individual in case you have any difficulty
- Course objectives which you will be expected to achieve at the end of each course
- Information on learning methods that you will experience during the course
- Learning resources available for the sessions. These include books, computer assisted learning programs, videos and others
- Information on the methods of assessment including formative and summative assessment

Curriculum Framework

- The Fourth-Year MBBS KIMS curriculum follows a discipline-based traditional approach, where teaching and learning are organized according to individual clinical disciplines.
- Each subject is taught independently with emphasis on acquiring in-depth knowledge and skills specific to that specialty.
- Clinical exposure and skill development are structured within the respective departments while ensuring alignment with overall program objectives.
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Discipline-Based Traditional Curriculum

- A discipline-based traditional curriculum is organized around individual clinical subjects, such as Surgery, Medicine, Obstetrics & Gynaecology, Pediatrics, and allied specialties.
- Teaching focuses on systematic coverage of subject-specific knowledge, clinical examination, diagnostic reasoning, and procedural skills relevant to each discipline.
- Basic sciences are applied during clinical teaching through bedside teaching, ward rounds, tutorials, and case presentations, reinforcing previously learned concepts.
- Learning activities include didactic lectures, clinical demonstrations, case discussions, and supervised skills acquisition in skills laboratories, ensuring progressive development of clinical competence.

Academic Calendar for Fourth Year MBBS

Events	From	To
Block-X (12+1 = 13)		
NUMS Starting Date	**13 Oct 2025**	**02 Weeks late**
Duration of Block -X (12/13 weeks)	27 Oct 2025	18 Jan 2026
Block X Exam (01/13 week) *	**19 Jan 2026**	**25 Jan 2026**
Block-XI (12+1=13)		
Duration of Block -XI (06/13 weeks)	26 Jan 2026	06 March 2026
Eid-ul-Fitr* Vacation (17 days)	**07 March 2026**	**23 March 2026**
Duration of Block -XI (02/13 weeks)	24 March 2026	01 April 2026
Sports week (01 Week)	**02 April 2026**	**06 April 2026**
Duration of Block -XI (04/13 weeks)	07 April 2026	03 May 2026
Block XI Exam (01/13 week) *	**04 May 2026**	**10 May 2026**
Block-XII (8+2=10)		
Duration of Block -XII (02/10 weeks)	11 May 2026	22 May 2026
Eid-ul-Azha* and Summer Vacation (16 days)	**23 May 2026**	**07 June 2026**
Duration of Block -XII (6/10 weeks)	08 June 2026	19 Jul 2026
Pre-Annual Exam (02/10 weeks) *	**20 Jul 2026**	**31 July 2026**
Prep Leave for Annual (04/08 weeks)	**01 Aug 2026**	30 Aug 2026
Annual Exam*	**31 Aug 2026**	

*Subject to moon sighting & as per approval from the Principal

*Exams plan will be provided by Examination department

Holiday Calendar
Year 2026

EVENTS	DATE & DAY
Kashmir Solidarity Day	5th February, Wednesday
Jumma-Tul-Vida	20th March, Friday
Eid ul-Fitr	21st March – Saturday 22nd March – Sunday 23rd March – Monday
Pakistan Day	23rd March, Monday
Labor Day	1st May, Thursday
Summer break	23rd May – 7th June
Eid ul-Adha	27th May – Wednesday 28th May – Thursday 29th May – Friday
Ashura	25th June- Thursday 26th June – Friday
Independence Day Of Pakistan	14th August, Friday
12 Rabiul Awal	25th August, Tuesday
Iqbal Day	9th November , Monday
Quaid-E-Azam's Birthday/Christmas Day	25th December, Friday

Departmental Teams

Team of Special Pathology	
Positions	**Name**
Head of the Department	Prof Dr Nazia Qamar
Subject Representative for 4TH Year	Dr Hira Abid

Team of Community Medicine & Public Health	
Positions	**Name**
Head of the Department	Prof. Dr. Seema N. Mumtaz
Subject Representative for 4TH Year	Dr. Farhan Qureshi

Team of Research Methodology & EBM	
Positions	**Name**
Head of the Department	Prof. Dr. Seema N. Mumtaz
Subject Representative for 4TH Year	Dr. Farhan Qureshi

Team of Ophthalmology	
Positions	**Name**
Head of the Department	Dr. Mashhood-uz-Zafar Farooq
Subject Representative for 4TH Year	

Team of Otorhinolaryngology (ENT)	
Positions	**Name**
Head of the Department	Prof. Dr. Ismail Hirani
Subject Representative for 4TH Year	Dr. Aiman Fatima

Team of Medicine & Allied Department	
Positions	**Name**
Head of the Department	Prof Dr. Arshad Ali
Subject Representative for 4TH Year	Dr. Nimra Nabi

Team of Surgery & Allied Department	
Positions	**Name**
Head of the Department	Prof. Dr. Arshad Malik
Subject Representative for 4TH Year	Dr. Nida Ahmed

Team of Obstetrics & Gynecology Department	
Positions	**Name**
Head of the Department	Prof. Dr Sughra Abbasi
Subject Representative for 4TH Year	Dr Nayab Gul Niazi

Team of Paediatrics Department	
Positions	**Name**
Head of the Department	Prof. Arshad Ali
Subject Representative for 4TH Year	Dr. Adeela Ilyas

Team of Medical Education Department	
Positions	**Name**
Head of the Department	Dr. Ruqayyah Q. Hashmi
Subject Representative for 4TH Year	Dr. Tanzeela Shaikh

Study Guide Compiled By:

Dr. Tanzeela Shaikh

Assistant Professor

Department of Medical Education

VISION

To be the best medical university by conducting world-class bio-medical research and creative research activities that develop knowledge and contribute to improving the health care system and social advancement for the people of Pakistan and benefit humanity as a whole with a standard of excellence

MISSION

KIMS aims to produce ethical, knowledgeable, skilled professionals, enhancing community health services, through leadership, evidence-based practice and innovative research.

PROGRAM OUTCOMES

1. Utilize knowledge of basic and clinical sciences for patient care.
2. Take appropriate decisions based on focused history, physical examination, and management plan for common health problems.
3. Demonstrate effective communication with patients, as part of a team and with other healthcare service providers.
4. Demonstrate professional behaviors that embodies lifelong learning by using self-directed learning skills.
5. Identify problems, critically review literature, conduct research and disseminate knowledge
6. Demonstrate leadership and management skills with other team members as per situational needs for quality health service.
7. Apply evidence-based practices for protecting, maintaining and promoting the health of individuals, families and community.

SEVEN STAR PMDC COMPETENCIES

The expected generic competencies in a medical graduate are grouped together under the

umbrella of seven-star doctor and are as follows:

1. Knowledgeable
2. Skillful
3. Professional
4. Scholar & Researcher
5. Critical thinker
6. Leader & Role model
7. Community Health Promotor

A ‘seven-star doctor’

Pakistani medical graduate should be able to demonstrate various attributes as detailed under each competency. These attributes are minimum and not exhaustive by any means.

YEARLY LEARNING OUTCOMES OF MBBS FOURTH YEAR

By the end of fourth year, students should be able to:

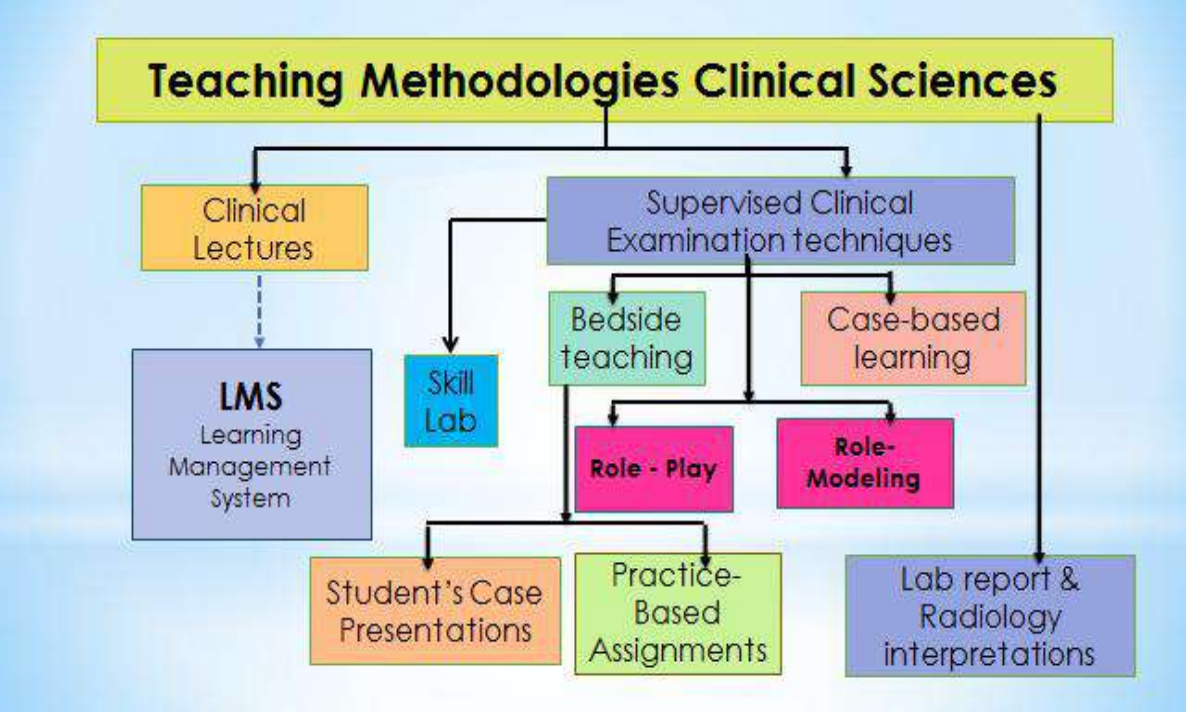
- Correlate system-based pathological processes with clinical presentations to enhance diagnosis, management, and patient care
- Analyze community health data and implement strategies for disease prevention and health promotion in collaboration with other healthcare teams
- Conduct holistic patient assessments and correlate presenting symptoms with relevant medical/ surgical specialties for accurate diagnosis and management
- Formulate and defend a research proposal addressing a relevant health problem
- Identify ophthalmology/ENT conditions, provide primary care, emergency recognition and referral
- Apply evidence-based lifestyle interventions for disease prevention, treatment, and improved quality of life

4TH YEAR CLINICAL ROTATION LEARNING OUTCOMES:

At the end of fourth year clinical rotation, students will be able to:

- Evaluate common symptoms
- Identify common clinical signs
- Communicate effectively with the patients, seniors and colleagues
- Follow the steps of history taking
- Take a focused history and perform clinical examination of organ systems to determine provisional diagnosis
- Formulate differential diagnosis of common clinical conditions of relevant department
- Interpret common investigations and comment whether these are normal or abnormal
- Develop the plans of initial management in clinics
- Discuss common drug interactions
- Enumerate common side effects of drugs
- Make long-term plan for prevention of disease
- Perform minor procedures safely
- Communicate effectively with patients
- and family regarding disease and its relevant issues.
- Exhibit ethical principles specially to maintain patient confidentialit

Teaching and Learning Methods



Learning Methodologies: The following teaching / learning methods are used to encourage self-directed learning of students
• Small Group Discussions (Tutorials/ Case- Based Learning) • Skills session • Bed-Side Teaching • e-Learning through LMS • Teaching Ward Rounds • Case presentations • Case based Discussion • Short cases in OPD • Bedside Discussions

Interactive Lecture

A student-centered teaching method that combines brief presentations with active learner participation through questioning, discussions, polls, or short activities. Unlike traditional lectures, interactive lectures aim to engage students, promote critical thinking, and enhance understanding by encouraging two-way communication between teacher and learners.

Small Group Discussions

Tutorials is a participative teaching learning method which promotes discussion and better understanding of a topic. Tutorial classes for medical students are imparted to develop and test their own ideas, clarify material presented in lectures, apply general concepts to the solution of specific problems, define new problems and seek solutions to them, hone problem-solving skills and encourage students in self-learning

Case based learning (CBL):

Focuses on specific patient cases to identify learning objectives. It is also taught using small groups with a tutor to guide group discussions. Uses real or simulated cases that help students to apply theoretical knowledge to practical situations promoting integration of basic and clinical sciences, CBL encourages critical thinking, problem-solving, and decision-making

Skill Sessions: The aim of these sessions is to support students to develop skills and awareness of skills that have been identified by employers as crucial to the workplace and successful recruitment.

Bed-Side Teaching Bedside teaching is a specialized form of small group teaching that takes place in the presence of the patient. It improves students' history taking, examination skills, and knowledge of clinical ethics, can teach them professionalism, and can foster good communication and role modelling skills.

Journal Club

A journal club is an educational meeting in which a group of individuals discuss published articles, to keep themselves abreast of new knowledge, promoting in them the awareness of current research findings.

Role-Play

Role play is a learning structure that allows students to immediately apply content as they are put in the role of a decision maker who must make a decision regarding a policy, resource allocation, or some other outcome.

Role-Modelling

Role Role modeling is a powerful teaching tool for passing on the knowledge, skills, and values of the medical profession, but its net effect on the behavior of students is often negative rather than positive

Clinicopathological Conference (CPC)
A structured teaching session where clinical cases are presented and discussed, linking clinical findings with pathological evidence to enhance diagnostic reasoning and integrative learning.

Simulations
An interactive learning approach using mannequins, standardized patients, or virtual tools to replicate real-life clinical scenarios, allowing students to practice skills and decision-making in a safe, controlled environment.

Morning Reports
Regular departmental discussions where students and faculty review recent or interesting clinical cases, emphasizing clinical reasoning, diagnostic approach, and patient management.

Self-Directed Learning (SDL)
A process where students take initiative in identifying their learning needs, resources, and strategies, promoting independent and lifelong learning skills essential for medical practice.

Reflective Writings
A learning activity encouraging students to analyze and reflect on their clinical experiences, challenges, and personal growth to foster critical thinking and professional development.

Case Presentations
Structured presentations of patient cases where students demonstrate their ability to collect data, formulate differential diagnoses, discuss management plans, and apply theoretical knowledge to clinical practice.

Case-Based Discussion (CbD)
A method in which a faculty member engages a student in a structured discussion about a real or observed clinical case to evaluate their clinical reasoning, decision-making, and application of knowledge. It focuses on individual reflection and feedback, helping identify strengths and areas for improvement in clinical competence.

E-Learning through LMS
E-learning is web-*based training* delivered *via* the internet or a corporate intranet. A *learning management system (LMS)* is a software application or web-*based* technology used to plan, implement and assess a specific learning process.

Introduction to Learning Management System

A Learning Management System (LMS) is a web-based platform (also available as software application) which is designed to facilitate the delivery of educational content. LMS is used to streamline the learning process and manage educational resources efficiently.

Key features of LMS at KIMS include:

Lectures:

Content include lecture slides, recorded video lectures and YouTube links of related content (for animated videos).

Assessment and Evaluation:

LMS include quizzes, assessments, and assignments.

Automated grading and feedback help in evaluating the learners' progress.

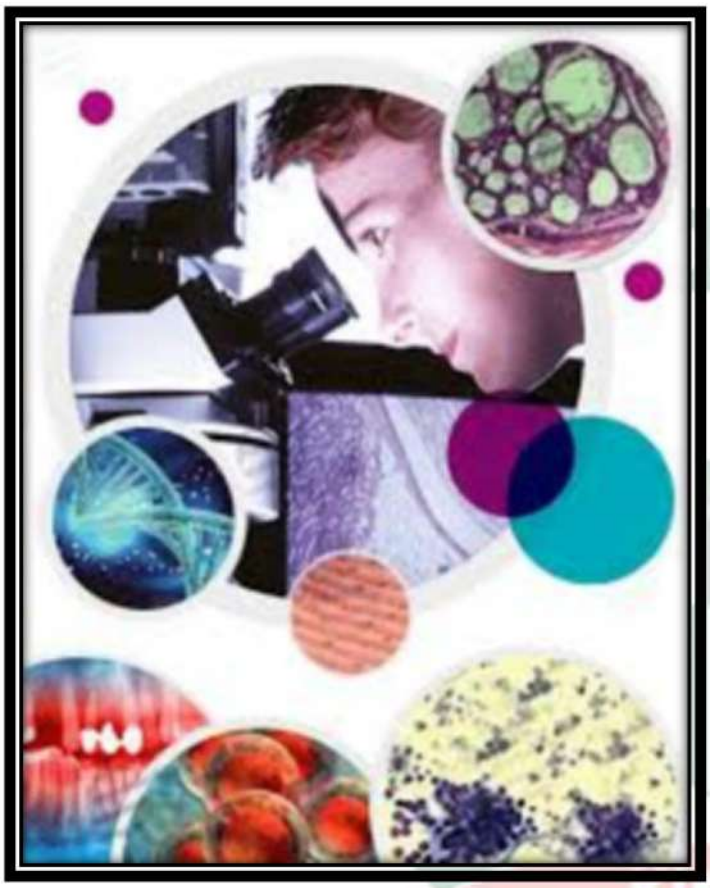
Communication and Collaboration:

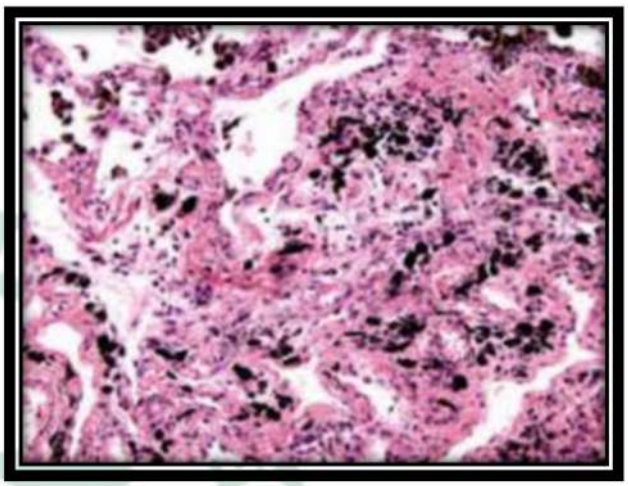
LMS include discussion forums to facilitate interaction between learners and instructors.

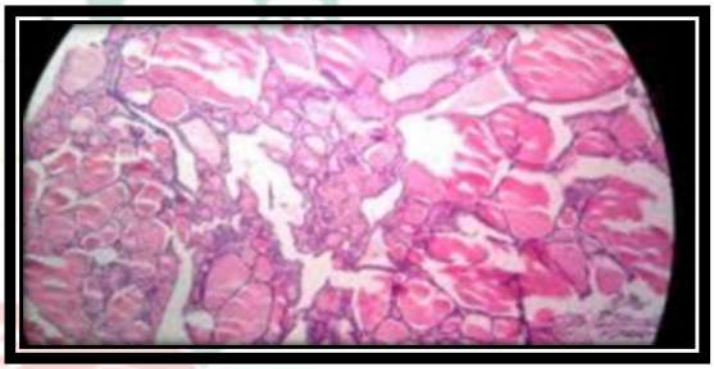
SUBJECTS

1. Special Pathology
2. Community Medicine & Public Health
3. Research Methodology & EBM
4. Ophthalmology
5. Otorhinolaryngology (ENT)
6. Medicine & Allied
7. Surgery & Allied
8. Pediatrics
9. Obstetrics & Gynecology
10. Patient Safety

SPECIAL PATHOLOGY







Introduction:

Special Pathology in Fourth Year MBBS focuses on the study of disease processes in organ systems, their pathogenesis, morphological changes, and clinical correlations. The course bridges basic pathology and clinical medicine, helping students understand disease mechanisms essential for diagnosis and treatment.

Learning Outcomes:

By the end of the course, students will be able to:

- Correlate the morphology and pathogenesis of cardiovascular, respiratory, gastrointestinal, hepatobiliary, urinary, endocrine, and nervous system disorders with their etiology and complications.
- Justify the importance of biochemical markers in the diagnosis of various systemic disorders.
- Identify and interpret non-neoplastic and neoplastic lesions in different organs.
- Establish diagnoses through interpretation of microscopic and macroscopic features of pathological specimens.
- Demonstrate skills in slide identification, specimen recognition, and laboratory investigations.

BLOCK - X		
Topics of the Module	• **Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
	• **CARDIOVASCULAR SYSTEM**	
HTN vascular disease 1(systemic vascular HTN)	Systemic hypertension •Define Systemic Hypertension, types and Causes •Discuss the mechanisms, morphology involved in essential Hypertension Pulmonary Hypertension (Cor Pulmonale) • Discuss the mechanisms, morphology involved in Pulmonary Hypertension	**Interactive Lecture**
HTN vascular disease 2(Atherosclerosis, Arteriosclerosis)	Atherosclerosis • Discuss etiology of Atherosclerosis • Explain the mechanisms & consequences involved in Atherosclerosis Arteriosclerosis • Discuss arteriosclerosis & its types	**Interactive Lecture**
Aneurysm & dissection	1. Define Aneurysm & Dissection 2. Discuss different types of Aneurysm. 3. Describe clinical features of aneurysm & dissection	**Interactive Lecture**
Vasculitic disorder-1 &2	Discuss Vasculitis (Types, Pathogenesis, Morphology Large vessels vasculitis • Giant Cell (temporal Arteritis) • Takayasu Arteritis Medium vessels vasculitis • Polyarteritis Nodosa • Kawasaki Disease • ThromboangitisObiliterans (Burger's Disease) • Raynaud's disease • Raynaud's phenomenon • Wegener's granulomatosis Small vessels vasculitis • Microscopic polyangitis • Churggstrauss syndrome • Henoch schenolin purpura • Infectious vasculitis Venous & Lymphatic system disorders • Phlebothrombosis • Thrombophlebitis • Lymphadenitis	**Interactive Lecture**

Tumors of blood vessels	Explain the etiopathogenesis, morphology of tumors of blood vessels	**Interactive Lecture**
HEART FAILURE (Pathogenesis)	Describe the mechanisms, consequences involved in Heart failure • Left sided heart failure • Right sided heart failure	**Interactive Lecture**
. CONGENITAL HEART DISEASE	Outline the Classification of congenital heart disease with special reference to Fallot's tetralogy and Coarctation of aorta • Left to right shunt • Right to left shunt • Obstructive congenital anomalies	**Interactive Lecture**
ISCHEMIC HEART DISEASE ((Pathogenesis)	Describe etiopathogenesis, clinical outcomes, diagnosis of ischemic heart diseases • Angina pectoris • Myocardial Infarction • Chronic Ischemic Heart disease • Sudden Cardiac arrest .	**Interactive Lecture**
VALVULAR HEART DISEASE (Pathogenesis)	Explain the mechanisms involved in Bacterial Endocarditis, Rheumatic Heart Disease • Rheumatic Fever and Rheumatic heart disease • Infective Endocarditis .	**Interactive Lecture**
. CARDIOMYOPATHIES	Describe pathogenesis,clinical outcome of Cardiomyopathies • Dilated cardiomyopathy • Hypertrophy cardiomyopathy Restrictive cardiomyopathy	**Interactive Lecture**
INFLAMMATORY DISEASE OF MYOCARDIUM & PERICARDIUM	1.Myocarditis: • Name its Causes, Types, describe morphology 2.Pericarditis: • Name its Causes, Types, describe morphology	**Interactive Lecture**
RESPIRATORY SYSTEM		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
LUNG COLLAPSE &ALVEOLAR DAMAGE	Explain types of Atelectasis Describe Etiology, pathogenesis, morphology & clinical features of Acute respiratory Distress Syndrome • Atelectasis	**Interactive Lecture**

	• Respiratory distress syndrome (ARDS)	
OBSTRUCTIVE PULMONARY DISEASE	Describe Etiology, pathogenesis, morphology & clinical features of emphysema, Chronic bronchitis, Asthma, Bronchiectasis • Emphysema • Chronic bronchitis • Asthma • Bronchiectasis	**Interactive Lecture**
RESTRICTIVE LUNG DISEASES	Describe Etiology, pathogenesis, morphology & clinical features of: Idiopathic pulmonary fibrosis & Pneumoconiosis • Idiopathic pulmonary fibrosis • Pneumoconiosis	**Interactive Lecture**
GRANULOMATOUS LUNG DISEASE	Describe, etiology, classification pathogenesis, morphology & clinical features of Sarcoidosis & Hypersensitivity pneumonitis • Sarcoidosis • Hypersensitivity pneumonitis	**Interactive Lecture**
PULMONARY INFECTIONS	Define Pneumonia and explain the pathogenesis, clinical outcomes of various types Enlist etiology and pathogenesis &clinical features of Tuberculosis of lung Enlist various Fungi that cause lung infection • Community acquired acute pneumonia • Community acquired atypical Pneumonia • Hospital Acquired Pneumonia • Aspiration pneumonia • Chronic Pneumonia • Pulmonary Tuberculosis • Fungal infection of Lungs	**Interactive Lecture**
PLEURAL DISEASE	Describe etiopathogenesis, clinical outcomes of various Pleural diseases • Pleural effusion • Hemothorax • Hydrothorax • Pleuritis • Pneumothorax • Chylothorax • Pleural tumors	**Interactive Lecture**
LUNG TUMORS	Explain etiopathogenesis, morphology & clinical features of Malignant tumors • Squamous cell carcinoma	**Interactive Lecture**

	• Adenocarcinoma • Small Cell carcinoma • Large cell carcinoma	

Topics of the Module	Objectives: By the end of the module the students will be able to:	Teaching Strategies
	ORAL CAVITY AND GASTROINTESTINAL TRACT	
Inflammatory, Premalignant and malignant conditions of oral cavity	Oral Cavity and salivary Gland: • Discuss etiopathogenesis, gross and microscopic features of inflammatory, benign and malignant lesion of oral cavity and salivary glands	**Interactive Lecture**
Esophagitis & related disorders Tumors of Esophagus/Barrett Chronic gastritis & its complication Gastropathy/ Gastritis and complication Intestinal polyps/intestinal malignancies	Esophagus: • Discuss etio-pathogenesis, gross and microscopic features of inflammatory, benign and malignant lesion of esophagus Stomach: • Discuss etio-pathogenesis, gross and microscopic features of inflammatory, benign and malignant lesion of stomach Intestine: • Discuss etio-pathogenesis, gross and microscopic features of inflammatory, benign and malignant lesion of small and large intestine	**Interactive Lecture**
	HEPATOBILIARY SYSTEM AND &PANCREAS	
Neonatal jaundice & difference between primary and secondary biliary cirrhosis	• Discuss pathophysiology of hyperbilirubinemia • Describe the etiopathogenesis, morphology and clinical features of primary and secondary biliary cirrhosis	**Interactive Lecture**
Fatty liver diseases (Alcoholic, NASH)	• Describe the pathogenesis of alcoholic and non alcoholic fatty liver with its complications	**Interactive Lecture**
Acute and chronic viral hepatitis	• Describe the classification of viral hepatitis • Discuss the etiopathogenesis of Acute and chronic Hepatitis	**Interactive Lecture**
Inherited liver diseases (Hemochromatosis, Wilson disease, α-1 Antitrypsin deficiency)	• Describe the etiopathogenesis of inherited liver disease	**Interactive Lecture**

Hepatic Tumor Benign/Malignant (HCC)	• Describe etio-pathogenesis, gross and microscopic features of benign and malignant lesion of liver	**Interactive Lecture**
Gall bladder tumors	• Describe etio-pathogenesis, gross and microscopic features of benign and malignant lesion of gall bladder	**Interactive Lecture**
Acute & Chronic Pancreatitis	• Describe etio-pathogenesis, gross and microscopic features of acute and chronic lesion of pancreas	**Interactive Lecture**
Tumors of Pancreas	• Describe etio-pathogenesis, gross and microscopic features of benign and malignant lesion of pancreas	**Interactive Lecture**

BLOCK X Practical	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
	CARDIOVASCULAR SYSTEM
Atherosclerosis	Examining the morphological features of Atherosclerosis
Vascular tumors (Hemangioma, Angiosarcoma)	Examining the morphological features of Vascular tumors
Rheumatic carditis and Myocardial infarction	Examining the morphological features of Rheumatic Carditis, Myocardial Infarction
Cardiac enzymes	Interpret Cardiac enzymes
Lipid & Lipoproteins	Interpret Lipid & Lipoprotein report
	RESPIRATORY SYSTEM
Obstructive lung disease (Bronchiectasis, chronic Bronchitis)	• Examining the morphological features of Obstructive lung disease
Pulmonary infections (Lobar pneumonia, Bronchopneumonia, Pulmonary Tuberculosis)	• Examining the morphological features of pulmonary infections
Acid base disorders	• Interpret Acid base disorders
Lung tumor (Bronchogenic carcinoma)	• **ORAL CAVITY, GIT, LIVER, PANCREAS & GALL BLADDER**
Gross and histology of pleomorphic adenoma.	• Examining the morphological features of Pleomorphic adenoma
Gross and histology of liver abscess (amebic, Echinococcal, bacterial, and fungal).	• Examining the morphological features of Liver abscess
Hepatitis (Gross and histology of hepatitis)	• Examining the morphological features of Hepatitis
Gross and histology	• Differential diagnosis of oral ulcers

of squamous cell carcinoma oral cavity	• Examining the morphological features of squamous cell carcinoma of oral cavity
Chronic gastritis, Peptic ulcer	• Examining the morphological features of chronic gastritis • Examining the morphological features of Peptic ulcer
Cirrhosis, CA liver	• Examining the morphological features of CA Liver
Tubercular and typhoid ulcer & acute appendicitis	• Examining the morphological features of Tubercular &Typhoid Ulcer • Examining the morphological features of Acute appendicitis
Rectal Polyps and Colorectal carcinoma	• Examining the morphological features of Rectal polyp • Examining the morphological features of Colorectal Carcinoma
Chronic cholecystitis and Cholelithiasis	• Examining the morphological features of Chronic cholecystitis and Cholelithiasis
Jaundice & LFTs	• Jaundice & LFTs interpretations
Acute and chronic Hepatitis	• Acute and chronic Hepatitis interpretations
Serum amylase analysis	• Serum amylase analysis in diagnosis and management of pancreatitis and carcinoma of pancreas
	•

CBL (Case Base Learning)	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Calcification of media of medium arteries	• Diagnose diseases of medium size arteries • Describe etiopathogenesis of Medium size arteries
Types of Acid base disorders	• Identify and differentiate the major types of acid–base disorders (metabolic acidosis/alkalosis and respiratory acidosis/alkalosis) based on clinical presentation and laboratory findings. • Interpret arterial blood gas (ABG) values to determine primary disturbance, compensation, and underlying pathophysiology in a given clinical scenario.
Vasculitic disorder	• Recognize the clinical features and pathological changes seen in major vasculitic disorders affecting small, medium, and large vessels. • Correlate laboratory markers and biopsy findings to identify the type of vasculitis and understand its underlying immunopathogenesis.
Good pasture syndrome	• Identify the characteristic clinical, serological, and histopathological features of Goodpasture syndrome involving kidneys and lungs.
Pulmonary infarction	• Recognize the clinical presentation and morphological changes associated with pulmonary infarction.
Cardiac markers/enzymes	Cardiac Markers / Enzymes • Interpret the diagnostic significance of cardiac biomarkers (e.g.,

Lipid & Lipoproteins (Lab report discussion)	troponins, CK-MB) in suspected myocardial injury. • Correlate trends and timing of marker elevation with the underlying pathophysiology of acute coronary syndromes. Lipid & Lipoproteins Analyze lipid profile components (cholesterol, LDL, HDL, triglycerides) and relate them to cardiovascular risk assessment. Interpret abnormal lipoprotein patterns in clinical contexts and understand their pathophysiological implications.
Jaundice & LFTs (Lab report discussion)	• Interpret liver function test (LFT) patterns to differentiate between hepatocellular, cholestatic, and hemolytic causes of jaundice. • Correlate clinical features of jaundice with laboratory abnormalities to identify the underlying pathophysiology in a case scenario.
cholestatic disease	• Identify clinical features and biochemical patterns of cholestasis and differentiate intrahepatic from extrahepatic causes. • Correlate imaging and laboratory findings with the underlying pathophysiology of cholestatic liver disease in a case scenario.
Diagnosis of acute and chronic Hepatitis interpretations	• Interpret LFTs, viral markers, and serology profiles to differentiate acute from chronic hepatitis in a given clinical scenario. • Correlate clinical features with histopathological and laboratory findings to identify the underlying etiology and stage of hepatitis.
Importance of serum amylase analysis in diagnosis	• Identify the diagnostic significance of elevated serum amylase levels in conditions such as acute pancreatitis and other abdominal pathologies. • Interpret serum amylase results in correlation with clinical findings and other investigations to differentiate pancreatic from non-pancreatic causes.
Inflammatory bowel disease (case discussion)	• Differentiate the clinical features, laboratory findings, and histopathology of ulcerative colitis and Crohn's disease. • Correlate pathogenesis, complications, and diagnostic investigations to interpret IBD in a case-based scenario.

SMALL GROUP DISCUSSION /TUTORIOLS	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Meckel's diverticulum & diverticulitis	• Recognize the clinical presentation and pathological features of Meckel'sdiverticulum and diverticulitis in case-based scenarios. • Correlate complications and diagnostic findings (imaging, histology) with the underlying pathophysiology of these diverticular disorders.
• Acute & Chronic pancreatitis	Acute & Chronic Pancreatitis • Differentiate the clinical features, biochemical findings, and

	morphological changes between acute and chronic pancreatitis. • Correlate etiological factors with pathophysiology and complications to interpret pancreatitis in a case scenario.
• Pancreatic Cancer	• Recognize key clinical presentations and risk factors associated with pancreatic carcinoma. • Interpret imaging and pathological findings to understand the aggressive nature and diagnostic challenges of pancreatic cancer

BLOCK - XI		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
URINARY SYSTEM		
Pathogenesis and pathological response of glomerular injury	• Discuss the Pathogenesis and pathological response of glomerular injury	**Interactive Lecture**
Nephritic syndrome.	• Explain etiopathogenesis, clinical manifestation and diagnosis of nephritic syndrome.	**Interactive Lecture**
Nephrotic Syndrome	• Explain etiopathogenesis, clinical manifestation and diagnosis of nephrotic syndrome	**Interactive Lecture**
Tubulointerstial Nephritis	• Describe the causes, clinical features, and pathological changes seen in acute and chronic tubulointerstitial nephritis. • Explain the correlation between histopathology and renal dysfunction in TIN, including its progression and complications. •	**Interactive Lecture**
Vascular disease of Kidney	• Describe the types, pathogenesis, and pathological features of vascular diseases affecting the kidney and their impact on renal function.	**Interactive Lecture**
Cystic Diseases of kidney	• Describe the classification, pathogenesis, and morphological features of cystic kidney diseases and their clinical implications.	**Interactive Lecture**
Renal Failure/Acute Tubular necrosis	• Describe the causes, pathogenesis, and morphological changes in acute and chronic renal failure, with emphasis on acute tubular necrosis. • Explain the correlation between tubular injury, renal function impairment, and clinical manifestations in ATN. •	**Interactive Lecture**
Benign and malignant tumors of kidney	• Describe the common benign and malignant renal tumors, their histopathological features, and distinguishing characteristics. • Explain the clinical presentation, diagnostic findings, and prognostic significance of	**Interactive Lecture**

	different kidney tumors.	
Obstructive uropathy	• Describe the causes, pathogenesis, morphological changes, and clinical consequences of obstructive uropathy.	**Interactive Lecture**
Tumors of urinary bladder	• Describe the types, histopathological features, clinical presentation, and diagnostic criteria of benign and malignant bladder tumors.	**Interactive Lecture**
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
MALE GENITAL SYSTEM		
Congenital anomalies of Penis &Testis	• Describe the common congenital anomalies of the penis and testis, including hypospadias, epispadias, cryptorchidism, and testicular maldescent. • Explain the clinical significance, complications, and pathological features of these anomalies in relation to reproductive and urinary function.	**Interactive Lecture**
Tumors of testis.	• Describe the types, histopathological features, clinical presentation, and diagnostic evaluation of testicular tumors.	**Interactive Lecture**
Inflammatory/benign lesion of prostate	• Describe the pathological features, clinical presentation, and significance of prostatitis and benign prostatic hyperplasia	**Interactive Lecture**
Carcinoma Prostate	• Describe the histopathology, clinical features, risk factors, and diagnostic evaluation of prostate carcinoma.	**Interactive Lecture**
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
	FEMALE GENITAL SYSTEM AND BREAST	
Vulvar & vaginal pathologies	• Describe the common congenital, inflammatory, and neoplastic lesions of the vulva and vagina along with their histopathological features and clinical	**Interactive Lecture**

	significance.	
Acute and chronic cervicitis/Endocervical polyp_	• Describe the causes, pathological features, and clinical significance of acute and chronic cervicitis and endocervical polyps.	**Interactive Lecture**
Premalignant & malignant lesion of Cervix	• Describe the histopathology, risk factors, and clinical features of cervical intraepithelial neoplasia and invasive cervical carcinoma.	**Interactive Lecture**
Endometritis Endometriosis, Adenomyosis	• Describe the pathological features, etiology, and clinical significance of endometritis, endometriosis, and adenomyosis.	**Interactive Lecture**
Endometrial hyperplasia/CA endometrium	• Describe the types, histopathological features, risk factors, and clinical significance of endometrial hyperplasia and endometrial carcinoma.	**Interactive Lecture**
Benign &Malignant lesion of myometrium	• Describe the histopathology, clinical features, and significance of benign (e.g., leiomyoma) and malignant (e.g., leiomyosarcoma) myometrial lesions.	**Interactive Lecture**
Ovarian tumors	• Describe the types, histopathological features, clinical presentation, and diagnostic evaluation of benign and malignant ovarian tumors.	**Interactive Lecture**
Disease of pregnancy/Hydatidiform mole, Choriocarcinoma	• Describe the pathological features, clinical presentation, and complications of hydatidiform mole and gestational choriocarcinoma.	**Interactive Lecture**
Inflammatory/ Proliferative and Non proliferative Breast diseases	• Describe the pathological features, classification, and clinical significance of inflammatory, proliferative, and non-proliferative breast diseases.	**Interactive Lecture**
Stromal Tumors of Breast	• Describe the types, histopathological features, and clinical significance of stromal tumors of the breast, including fibroadenoma and	**Interactive Lecture**

	phyllodes tumor.	
Malignant lesion of breast	• Describe the histopathology, classification, clinical features, and diagnostic evaluation of malignant breast tumors, primarily breast carcinoma.	**Interactive Lecture**
Breast tumor markers	• Describe the commonly used breast tumor markers, their clinical significance, and role in diagnosis, prognosis, and monitoring of breast cancer.	**Interactive Lecture**
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
	BONES, JOINTS AND SOFT TISSUE	
Developmental disorders of bones & cartilage	Describe the causes and features of Metabolic and congenital bone diseases. • Osteogenesis imperfecta • Osteopetrosis	**Interactive Lecture**
Acquired disorders of bone and cartilage	Briefly describe acquired disorders of Bone and Cartilage: etiology, pathogenesis, morphology, clinical features, & lab diagnosis of: • Osteopenia and Osteoporosis • Paget Disease (Osteitis Deformans) • Osteomalacia and Rickets Hyperparathyroidism • Renal Osteodystrophy	**Interactive Lecture**
Inflammatory disease of bone	• Compare Acute and chronic osteomyelitis. • Discuss the etiology, pathogenesis, morphology, clinical features, & lab diagnosis of: • Pyogenic Osteomyelitis • Mycobacterial Osteomyelitis	**Interactive Lecture**
Bone tumors and tumor-like lesions	• Discuss the gross and microscopic features of Benign and malignant bone forming tumors • Give the classification gross and microscopic feature of Benign and malignant cartilage	**Interactive Lecture**

	forming tumors • Briefly Tumors of Unknown Origin	
Inflammatory and degenerative disease of joints	Explain the etiology, pathogenesis, lab diagnosis and features of Rheumatoid arthritis, Osteoarthritis.	**Interactive Lecture**
Crystal induced arthritis	Enumerate the causes and describe the features and lab diagnosis of Gout	**Interactive Lecture**
Tumors of soft tissue	Describe gross and microscopic feature of Lipoma, Liposarcoma, Leiomyoma, Leiomyosarcoma Describe gross and microscopic feature of Rhabdomyosarcoma, Synovial sarcoma	**Interactive Lecture**
Diseases of skeletal muscle	Describe the etiopathogenesis, morphological changes, clinical features and lab diagnosis of : • Muscular dystrophies • Inflammatory Myopathies • Toxic Myopathies	**Interactive Lecture**

Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
SKIN		
Nomenclature of skin lesions and dermatosis	Define macule, papule, nodule, bulla, blister, pustule, scale, lichenification, excoriation, hyperkeratosis, parakeratosis, acanthosis, dyskeratosis, acantholysis, papillomatosis, lentigines and spongiosis Enlist the organisms involved in the skin	**Interactive Lecture**
Blistering (bullous) diseases	Describe the etiology , morphological and clinical features of Bullous diseases i.e. • Inflammatory Blistering Disorder • Non-inflammatory Blistering Disorders	**Interactive Lecture**

Adnexal (appendage) tumors Premalignant and malignant epidermal tumors	Outline the types of benign epithelial, adnexal, premalignant tumors Describe the gross and microscopic feature of Squamous cell carcinoma and basal cell carcinoma • Actinic Keratosis • Squamous Cell Carcinoma • Basal Cell Carcinoma	**Interactive Lecture**
Disorders of pigmentation and melanocyte	Describe the gross and microscopic features, classification of Melanoma and Malignant melanoma	**Interactive Lecture**

Block XI Practical	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
URINARY SYSYTEM	
Chronic pyelonephritis	Examining the morphological features of Chronic pyelonephritis
Wilm's tumor	Examining the morphological features of Wilm's tumor
Renal cell carcinoma	Examining the morphological features of Renal cell carcinoma
Transitional cell carcinoma-Bladder	Examining the morphological features of Transitional cell carcinoma
Urine D/R	Urine D/R analysis
Renal Function tests	Renal Function tests interpretations
MALE GENITAL TRACT	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Benign prostatic hyperplasia	Examining the morphological features of Benign prostatic hyperplasia

Prostate carcinoma	Examining the morphological features of Benign Prostate carcinoma
Seminoma Testis	Examining the morphological features of Seminoma Testis
PSA	PSA interpretations
FEMALE GENITAL TRACT & BREAST	
Leiomyoma	Examining the morphological features of Leiomyoma
Cystadenoma (Serous and Mucinous)	Examining the morphological features of Cystadenoma (Serous and Mucinous)
CA Cervix,	Examining the morphological features of CA Cervix,
Endometrial Carcinoma	Examining the morphological features of Endometrial Carcinoma
Mature Cystic Teratoma	Examining the morphological features of Mature Cystic Teratoma
Gestational trophoblastic disease	Examining the morphological features of Gestational trophoblastic disease
Ovarian Tumors	Examining the morphological features of Ovarian Tumors
Endometriosis	Examining the morphological features of Endometriosis
Fibroadenoma	Examining the morphological features of Fibroadenoma
Invasive ductal carcinoma breast	Examining the morphological features of Invasive ductal carcinoma breast
Fibrocystic disease	Examining the morphological features of Fibrocystic disease
Breast Tumor Markers	Breast Tumor Markers Interpretation
BONES, JOINTS AND SOFT TISSUE	
Giant cell tumor,	Examining the morphological features of Giant cell tumor
Osteosarcoma	Examining the morphological features of Osteosarcoma
Uric acid and Gout	Uric acid and Gout interpretations

SKIN	
Nevi & Melanoma	Examining the morphological features of Nevi & Melanoma
SCC & BCC	Examining the morphological features of Nevi & Melanoma

CBL(Case Base Learning)	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Male infertility	• Identify the major causes of male infertility (pre-testicular, testicular, and post-testicular) • correlate them with relevant clinical, hormonal, and laboratory findings. • Explain the pathological basis of impaired spermatogenesis • interpret semen analysis, endocrine tests, and imaging to formulate an appropriate diagnostic
Congenital and developmental anomalies of Kidney	• Identify common congenital and developmental renal anomalies (renal agenesis, dysplasia, hypoplasia, ectopia, horseshoe kidney, cystic disorders) • relate their key morphological features to the clinical scenario. • Interpret clinical findings, imaging, and laboratory data to understand how these anomalies lead to functional impairment, complications, and clinical presentation in the given case.
Nephrolithiasis	Identify the etiological factors, pathophysiology, and clinical consequences of nephrolithiasis using case-based clinical, biochemical, and imaging findings
Wilms Tumor	• Recognize the clinical presentation, genetic basis (WT1/WT2), and pathological features of Wilms tumor in pediatric patients. • Interpret imaging and histopathological findings to understand tumor behavior, staging, and principles of management.
Hydronephrosis	Describe the causes, pathophysiology, and morphological consequences of hydronephrosis while correlating clinical and imaging findings in a case scenario.
Developmental Disorders of Bone and Cartilage	• Identify key developmental disorders of bone and cartilage • correlate their genetic, morphological, and clinical features within a case scenario.
Gout	• Analyze patient history, clinical presentation, and risk factors (hyperuricemia, diet, alcohol use, renal disease) to differentiate gout from other causes of acute monoarthritis. • Interpret laboratory findings (serum uric acid levels, inflammatory markers) and synovial fluid analysis to establish a definitive diagnosis of gout.
DUB	• Identify the hormonal and structural causes of dysfunctional uterine bleeding

	• correlate them with clinical presentation and endometrial changes.
Ectopic pregnancy and toxemia of pregnancy	Recognize the clinical presentation, risk factors, and pathological basis of ectopic pregnancy and toxemia of pregnancy, and correlate these with diagnostic findings in a case scenario
Gout	• Identify the pathogenesis, clinical manifestations, and diagnostic features of gout • correlate them with biochemical and morphological findings in a case scenario.
Paraneoplastic syndrome	• Identify the clinical features and underlying mechanisms of paraneoplastic syndromes and correlate them with associated malignancies in a case-based scenario.
GBS	• Recognize the clinical presentation, pathophysiology, and diagnostic findings of GBS • relate them to patient management in a case-based scenario.

BLOCK - XII		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
THE ENDOCRINE SYSTEM		
Hypopituitarism and Posterior pituitary syndrome	Discuss the causes, pathophysiology, and clinical manifestations of hypopituitarism and posterior pituitary disorders and correlate them with pathological and hormonal findings.	**Interactive Lecture**
Hyperpituitarism and adenomas	Describe the causes, pathophysiology, and clinical features of hyperpituitarism and pituitary adenomas, correlating them with hormonal and histopathological findings.	**Interactive Lecture**
Primary & Secondary Hypothyroidism	Differentiate primary and secondary hypothyroidism by describing their etiologies, hormonal profiles, and key pathological changes."	**Interactive Lecture**
Thyroiditis	Describe the types, causes, and pathological features of thyroiditis and their clinical correlations."	**Interactive Lecture**
Primary & Secondary hyperthyroidism	Differentiate primary and secondary hyperthyroidism by describing their etiologies, hormonal profiles, and key pathological changes."	**Interactive Lecture**
Thyroid Tumors	Describe the classification, key pathological features, and clinical significance of thyroid tumors."	**Interactive Lecture**
Adrenocortical hypofunction	Explain the causes, pathological changes, and clinical consequences of adrenocortical	**Interactive Lecture**

	hypofunction	
Adrenocortical hyperfunction and tumors	Describe the causes, pathological features, and clinical effects of adrenocortical hyperfunction and related tumors.	**Interactive Lecture**
Hypoparathyroidism Hyperparathyroidism	Explain the causes, pathology, and clinical effects of hypoparathyroidism. Describe the etiology, pathological features, and systemic effects of hyperparathyroidism.	**Interactive Lecture**
Pheochromocytoma	Describe the pathogenesis, key pathological features, and clinical effects of pheochromocytoma.	**Interactive Lecture**
Diabetes mellitus and its complications	Explain the pathogenesis, pathological features, and major complications of diabetes mellitus	**Interactive Lecture**
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
CENTRAL NERVOUS & PERIPHERAL NERVOUS SYSTEM		
Brain trauma Cerebrovascular diseases .	Explain the features of traumatic parenchymal/ vascular injuries	**Interactive Lecture**
Infections of brain	• Discuss features of Viral, Bacterial and Tuberculo meningitis and major difference between them.	**Interactive Lecture**
Acute meningitis	Discuss the etiopathogenesis, morphology, clinical features and lab diagnosis of : • Acute Pyogenic (Bacterial) Meningitis • Acute Aseptic (Viral) Meningitis	**Interactive Lecture**
Acute focal suppurative diseases	Discuss the etiopathogenesis, morphology, clinical features and lab diagnosis of : • Brain Abscess • Subdural Empyema • Extradural Abscess	**Interactive Lecture**
Chronic bacterial meningoencephalitis	• To learn about the causative agents, pathogenesis, diagnostic findings and be able to differentiate between different types of meningioencephalitis, with emphasis on tuberculosis encephalitis.	**Interactive Lecture**

Demyelinating & degenerative disease of brain	Discuss the etiopathogenesis, clinical features (morphology where applicable) and lab diagnosis of • Multiple sclerosis • Alzheimer disease • Parkinson's disease	**Interactive Lecture**
Tumors of brain	• Classify the important intracranial tumors • Give their gross and microscopic features of Gliomas Neuronal Tumors Poorly Differentiated Neoplasms Other Parenchymal Tumor Meningiomas • Enlist metastatic tumors of the brain	**Interactive Lecture**
Chronic bacterial meningoencephalitis	• To learn about the causative agents, pathogenesis, diagnostic findings and be able to differentiate between different types of meningoencephalitis, with emphasis on tuberculosis encephalitis.	**Interactive Lecture**
Cva	• Describe the pathogenesis,morphological features,clinical correlation,complications and diagnosis of Cerebrovascular accidents(CVA)	**Interactive Lecture**
Diseases of skeletal muscle	Describe the etiopathogenesis, morphological changes, clinical features and lab diagnosis of : • Muscular dystrophies • Inflammatory Myopathies • Toxic Myopathies	**Interactive Lecture**
Disease of neuromuscular junction	Describe the pathogenesis, morphological and clinical features of muscular dystrophies, Myopathies • Myasthenia Gravis	**Interactive Lecture**
Peripheral nerve sheath tumors	Discuss gross and microscopic feature of Peripheral nerve sheath tumors as: • Schwannomas	**Interactive Lecture**

	• Neurofibromas • Malignant Peripheral Nerve Sheath Tumors (MPNST) Neurofibromatosis	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Interactive Lecture**
HEMATOLOGY		
Anemias (overview)	**1.** Explain Stages of the formation of RBCs 2. Define and classify Anemia 3. Enlist its etiology, blood picture **4.** Explain its clinical features and various lab investigations for its diagnosis	**Interactive Lecture**
Hemolytic anemias	Describe and classify Hemolytic Anemia Explain morphology and pathogenesis of hemolytic anemia • Hereditary spherocytosis • G6pd deficiency disease • Paroxysmal nocturnal hemoglobinuria • Acquired hemolytic anemia	**Interactive Lecture**
Hemoglobinopathies	Describe pathogenesis,morphology of clinical outcomes, diagnosis of Sickle Cell disease & thalassemia.	**Interactive Lecture**
Anemia of diminished erythropoiesis	List causes of various types of anemia with diminished erythropoiesis and pathogenesis, its morphology and diagnosis of • Megaloblastic Anemia • Iron deficiency Anemia • Anemia of chronic disease • Aplastic anemia	**Interactive Lecture**
Lymphoid neoplasm	Define,, classify Clinical correlation of lymphoid neoplasm Describe the basis of Neoplastic proliferation of WBCs Explain the morphology, pathogenesis& diagnosis of various Lymphomas • Acute Lymphoblastic leukemia/lymphoma (ALL)	**Interactive Lecture**

	• Chronic LymphcyticLeukemia(CLL) • Follicular lymphoma • Diffuse large B cell Lymphoma • Burkitt Lymphoma • Multiple Myeloma • Mantle cell Lymphoma • Marginal zone Lymphomas • Hairy cell Leukemia • Hodgkin's Lymphoma	
Myeloid neoplasm	Discuss classification morphology, Clinical correlation & diagnosis of Acute Myeloid Leukemia & Myelodysplastic Syndrome • Acute myeloid Leukemia • Myelodysplastic Syndromes <u>Myeloproliferative Neoplasms</u> • Chronic Myeloid Leukemia (CML) • Polycythemia vera • Primary Myelofibrosis • Essential thrombocythemia	**Interactive Lecture**
Bleeding & coagulation disorders	Describe the various causes of Bleeding,and coagulation disorders-vessel wall abnormalities, due to decrease production of Platelet, due to defective production Describe the mechanisms involved in DIC ● Thrombocytopenia and its types (Hereditary& Acquired) ● DIC ● Von Willebrand disease ● Hemophilia ● Vitamin K deficiency disease Explain the coagulation pathways that form the basis of PT, APTT, Platelet count	**Interactive Lecture**
Transfusion reaction	● Enlist hazards of transfusion Explain hemolytic & Non hemolytic transfusion reaction	**Interactive Lecture**

BLOCK XII PRACTICAL	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
ENDOCRINOLOGY	
Multinodular goiter	Examine the morphology of Multinodular goiter
Follicular Adenoma	Examine the morphology of Follicular Adenoma
Papillary Carcinoma thyroid	Examine the morphology of Papillary Carcinoma thyroid
Spectrophotometer	Observe Spectrophotometer
Pituitary Function test	Pituitary Function test Interpretations
Thyroid function test	Thyroid Function test Interpretations
Adrenal function test	Adrenal Function test Interpretations
Parathyroid gland disorders	Parathyroid Function test Interpretations
Biochemical diagnosis of infertility	Biochemical diagnosis of infertility lab interpretation
HEMATOLOGY	
Absolute count and ESR	Perform Absolute count and ESR
Leishman stain and Retic count	Perform Leishman stain and Retic count
Anemia (IDA, Thalassemia)	Observe morphology of Anemia (IDA, Thalassemia)
DIC	Assessment of bleeding disorder & evaluation of INR
Bone marrow transplantation & blood transfusion	Observe principal of Bone marrow transplantation & blood transfusion
Blood grouping	Perform Blood grouping
Multiple Myeloma	Observe morphology of Anemia (IDA, Thalassemia)
Hodgkin's lymphoma and Non-Hodgkin's lymphoma	Observe morphology of Hodgkin's lymphoma and Non-Hodgkin's lymphoma
CNS	
CNS Tumors (Astrocytoma,Medulloblastoma, Meningioma)	Observe morphology of CNS Tumors
PNS Tumors (schawnomma/neurofibroma)	Observe morphology of PNS Tumors
. CSF D/R of meningitis	Observe CSF D/R of meningitis

CBL	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Anemias	Identify the underlying cause, pathophysiology, key laboratory findings, and

	clinical implications of the given anemia in a patient-based scenario.
Myeloid Neoplasm	Recognize the clinical features, diagnostic criteria, and molecular basis of myeloid neoplasms within a patient-centered scenario.
Lymphoid neoplasm	Recognize the clinical features, diagnostic criteria, and molecular basis of lymphoid neoplasms within a patient-centered scenario
Platelet disorder	Interpret Platelet disorder
CNS TUMORS	Identify the clinical presentation, imaging features, and pathological basis of CNS tumors in a patient-centered case scenario.
CSF	CSF Interpretation
Thyroid tumors	Explain the clinical features, risk factors, and key pathological findings essential for diagnosing thyroid tumors in a case-based scenario.
Goiter	Interpret the etiological factors, clinical presentation, and morphological changes associated with goiter in a patient-based scenario.

Community Medicine &

Public Health

Introduction:

Community Medicine integrates preventive, promotive, and curative aspects of health at the community level. The subject aims to develop the ability to assess, analyze, and address health problems of populations, emphasizing research methodology, epidemiology, and health management.

Learning Outcomes:

By the end of the course, students will be able to:

- Apply principles of epidemiology, biostatistics, and research methodology in community health studies.
- Interpret epidemiological data to identify health trends and risk factors.
- Explain determinants, indicators, and theories of health and disease causation.
- Evaluate health systems, primary health care, and national health programs.
- Design and implement health promotion and disease prevention activities.
- Demonstrate understanding of environmental, occupational, and nutritional health.
- Apply ethical principles in healthcare delivery and public health research.

BLOCK - X		
Topics of the Module	**Objectives: By the end of the block the students will be able to:**	**Teaching Strategies**
Medical Ethics	• Relate ethical issues and dilemmas with medical teaching and service delivery in a given scenario • Maintain confidentiality • Practice non-maleficence • Maintain Doctor-patient relationship/autonomy	**LGIS**
General epidemiology	• Describe different research designs used to collect, • Interpret results from epidemiological studies • Apply concepts & aims of Epidemiology to clinical medicine	**LGIS**
Biostatistics	• Identify various types of data, concept and uses. • Differentiate measures of central tendency (Mean, Median, and Mode) and dispersion (Range, Standard deviation, and Standard error). • Interpret the normal distribution curve, skewed distribution, bi and poly-modal distribution & Standard Normal Curve • Classify and explain various sampling techniques • Differentiate between null and alternate hypothesis, recall steps of its testing and indicate probable errors • Interpret p-value • Plan & present a research project. • Use relevant statistical program and computer for data entry and analysis	**LGIS**
Concept of Health and Disease	• Concept of Health and Disease • Summarize health's determinants and indicators. • Choose the most sensitive indicators by citing different examples ● Discuss theories of disease causation • Discuss concept of natural history of disease and iceberg phenomena in context of communicable and non-communicable diseases • Interpret levels of prevention and intervention measures, with applied examples. • Discuss six pillars of Lifestyle Medicine and expected disease prevention, treatment and reversal outcomes with utilization of Lifestyle Medicine • Discuss national guidelines for alignment with six pillars of Lifestyle Medicine	**LGIS** **LGIS**

Research methodology	• Apply basic biostatistics and epidemiological techniques to research community health projects • Draw conclusions from data • Prepare and present research report • Develop tool for data collection • Estimating the sample size • Formulate the research hypothesis/ research Question/ research objectives	**LGIS**
Infectious disease epidemiology (General)	• Interpret various terms used to describe infectious diseases • Relate levels of prevention and intervention measures, with applied examples. • Discuss various types of epidemics from the focus of disease spread and control • Illustrate graphically and relate the natural history and progression of an epidemic type to stages of prevention • Comprehend the objectives & logic in steps of investigating an epidemic • Assess the level of care at primary, secondary and tertiary level as applied in real life setting. • Recommend disease control measures Communicate effectively regarding preventive measures • Suggest various methods of sterilization and disinfection in given situations.	**LGIS**
General Immunology	• Explain immunology & its components • Describe prerequisites of vaccination including cold chain, hazards, contra-indications & precautions • Justify the use of different types of vaccines in different scenarios • Define EPI and explain its component vaccines • Community outreach activity of students for Polio Vaccination campaign • Plan a vaccination schedule according to given scenario applying current protocols/evidence based • Follow the protocol for cold chain maintenance for different vaccines • Check BCG scar • Advise mothers for vaccination in different situations	**LGIS**

Screening for disease	• Comprehend Concept and importance of screening • Describe qualities of a good screening test • Discover relationship between screening and prevalence of disease • Comprehend effects of changing sensitivity and specificity on usefulness of screening • Calculate accuracy of a screening test • Identify different misinterpretations/ errors in the screening programs Comprehend ethical concerns in carrying out screening programs	**LGIS**
Primary Health Care, Leadership, SDGs Internation.al health (partners in health),	• Comprehend the changing concept of health • Explain the concept of 'Health for All,' Principles of Primary Health care and relate its components/elements • Describe the Sustainable Development Goals (SDGs) and relate to national programs and developmental outcomes • Describe the concept of leadership and motivation and identify the role of leadership in PHC • Differentiate between comprehensive and selective PHC. • Identify and describe gaps in implementation of PHC. Assess the adequacy of level of healthcare at a given facility • Discuss how Lifestyle Medicine can decrease health inequities among populations with limited resources experiencing high burden of chronic diseases	**LGIS**

HMIS	• Identify existing sources of health related statistics in Pakistan, Census and its types. Collection and Registration of vital events in Pakistan. • Comprehend different stages of planning and discuss situational analysis • Interpret questionnaire for service assessment/ health benefits • Comprehend the rationale of devolution of power and the problems of health care system in Pakistan. Identify current gaps post 18th Amendment and role of tertiary-care facilities in delivering healthcare at all levels • Evaluate adequacy of Health System (THQ) using checklist. Plan a seminar/symposium, invite interdisciplinary guest-speakers for specific days of public health importance	**LGIS**
BLOCK XI		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Emerging & reemerging infections/ Hospital acquired infections Hospital waste management	• Differentiate between emerging and reemerging disease • Identify the causes and control of this emergence • Acquaintance with nosocomial infections, factors causing it and control measures • Comprehend the role of Hospital waste management in infectious disease control and select appropriate method. • Communicate effectively regarding preventive measures	**LGIS**
Personal hygiene,	• Discuss concept of hygiene in relation to personal hygiene and health	**LGIS**
Travel medicine	• Interpret the common health problems of travelers ● Advice the travelers to prevent the travel related problems	**LGIS**
Communicable diseases Prevention and Control ●	• Comprehend interaction of agent host and environment in the pre & pathogenesis phases. and modes of disease transmission • Relate the natural history of disease in regards to	**2 LGIS**

	incubation period, lab diagnosis and preventive measures • Discuss clinical presentations of different communicable diseases • Suggest strategies for disease control and prevention for communicable diseases in different situations. • Relate occupations with various diseases • Classify arthropods of medical importance and relate their role in disease transmission • Recommend control measures for arthropods with special emphasis on environmental vector breeding • Motivate people at risk for adopting primary preventive measures • Evaluate degree of dehydration on the basis of history and clinical examination using algorithm/ standards. • Demonstrate the skills for preparation/ administration for homemade/ prepared ORS	
Medical Sociology and Prevention of Mental and psychological illnesses	• Relate the social evils of the society with individual and public health • Relate the social structure of a hospital with doctor-patient & doctor-nurse relationship • Recommend solutions based on the application of bio-psycho-social model and theories of social behavior to prevent/decrease social deviances and evils. • Recognize characteristics of a mentally healthy person and warning signals of poor mental health • Identify common mental health problems (as pertains to symptomatic psycho-social aspects) of public health importance in Pakistan their risk factors/causes and prevention. • Enlist WHO criteria and recommendations to improve mental health in countries • Communicate effectively and ethically with individuals regarding mental health issues. • Discuss magnitude of drug abuse in Pakistan • Relate factors and populations associated with high risk for drug abuse • Apply three levels of prevention to decrease drug abuse in the country • Comprehend magnitude of tobacco smoking globally	**LGIS** **LGIS**

	as well as in Pakistan • Describe hazards associated with tobacco smoking ● Formulate behavior modification plan for patient(s) to quit smoking in hospital settings. • Educate parents on the sign and symptoms of drug abuse/addiction and when to seek professional help ● Educate individuals at risk to avoid and modify risk behaviors and seek professional help to quit smoking	
Health Education	• Define health education and describe its phases • Choose suitable method of health education for certain audiences ● Recognize scope, stages approaches, principles and functions of health education • Identify and overcome barriers of health education and outline an ideal communication process for a given situation • Compose a health education message in given situation • Prepare a plan for health education intervention programs for different types of audience in a given scenario • Educate various groups effectively • Use Role play as an educational and interventional tool • Advise paramedics and other auxiliary healthcare staff about infection control. To participate in health awareness campaigns pertaining to nationally and internationally recognized days for global public health and population issues • Utilize evidence-based models of health behavior change to assess patient's readiness and ability to make lifestyle changes • Utilize evidence-based behavior change counselling to support patients in lifestyle changes	**LGIS**

	Block XII	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
● Demography, Family Planning	● Relate fertility and population growth to epidemiological and demographic principles ● Interpret pyramids of different countries, correlate demographic structure with population change. Select Family planning methods according to the situations ● Extrapolate the need for population control ● Interpret/ distinguish Demographic, fertility and epidemiological transition ● Explain Demographic trap. Calculate demographic equation and indicators ● Outline strategies in health & social sectors applying multidisciplinary approach and demographic principles ● Communicate effectively to motivate women & men (inclusive approach) regarding family planning	**LGIS**
MCH (Reproductive Health, Preventive Pediatrics, Geriatrics	● Define and comprehend the rationale of Reproductive health. ● Application of different preventive measures in various phases of life to improve the maternal Health and outcome of pregnancy ● Create awareness among women regarding antenatal visits and postnatal follow-up. Determine the factors that contribute to increase MMR &IMR and interventions to control ● Discuss different indicators for maternal and child health care & services ● Describe the advantages and disadvantages of breast feeding and other feeding practices ● Educate the mothers about technique of breast feeding and advice to Tuberculous mother about lactation ● Discuss problems and diseases of geriatrics and their prevention. Suggest preventive measures for cancers of reproductive tract in individuals and populations at-risk ● Motivate women to vaccinate their babies on national immunization days ● Plot and interpret growth chart Ability to perform lifestyle Medicine Counselling in a culturally competent manner	**LGIS**

School and Dental Health Service	• ● Discuss objectives of school health ● Identify the duties of school medical officer, functions of SHS and role of teacher ● Discuss the common health problems of school children ● Educate school children for healthful behavior	**LGIS**
Current Health Programs in Pakistan	• ● Interpret the concepts of international days celebrations	**LGIS**
Partners in Health	• List various health agencies • Relate functions of different International Health agencies WHO, USAID, UNICEF, UNFPA to national and international care	**LGIS**
Health System in Pakistan, Health planning and management ●	● Health policy and planning in Pakistan ● Health System in Pakistan; the role of federal and provincial Governments in health care ● Planning programming budgeting system ● Define health care and health care system. Describe and relate the referral mechanism to various levels of health care facility ● Identify the causes of failure of adequate health-care delivery in Pakistan and give recommendations for improvement based on scenario ● Discuss the role of Lifestyle Medicine within Healthcare system framework	**LGIS**
Environmenta l Health	• Relate the current environmental indicators to legislative guidelines. and apply them for sustainable protection of environment in national, regional and global perspectives. • Outline modifications for specific environments to prevent and control diseases • Relate role of environment to hospital infections • Relate physical hazards to various occupations or climatic conditions • Identify personal protective measures for individuals and groups facing specific environmental hazards. • Identify protective measures against the high -risk physical environment in the healthcare profession • Educate individuals/communities on preventive environmental measures to maintain good health	**LGIS**

	• Calculate the amount of chlorine required to disinfect water • Collect water samples from different sources. • Practice through role play on how to prevent or reduce undue harmful environmental exposure to themselves, patients and their attendants in given situation	
Occupational Health	• Discuss occupational health, occupational hygiene, ergonomics, occupational diseases & Injuries. • Relate occupational disease agents and factors (physical, chemical, biological, psychological, mental) with health • Identify occupational hazards and suggest relevant control • Interpret Standardized Mortality Rate (SMR) with respect to particular trade ● Motivate a worker to take preventive measures at work place e.g. regular use of personal protective equipment	**LGIS**
Nutrition ●	• Define the terminologies used in relation to food & nutrition • Classify and comprehend the importance of different foods, minerals and vitamins • Describe a balanced diet chart • Relate the states which alter energy requirement of individuals • Identify the major nutritional problems of public health importance • Differentiate types of PEM and recommend preventive and corrective measures • Classify water-borne, meat-borne and milkborne diseases • Identify preventive measures for water borne, milk borne, meat-borne diseases. • Calculate the energy requirement and basal metabolic rate in a given scenario • Recognize nutritional hazards to which populations are exposed in emergency situations • Classify biological and social epidemiology of obesity • Correlate Immediate and delayed adverse effects of nutritional deficits with health status • Interpret obesity among adults on the basis of BMI • Plan individual and community-based methods of prevention and control of obesity. • Diagnose clinically the nutritional problems including iodine deficiency, anemia, fluoride deficiency, with their prevention on the basis of signs and symptoms according to relevant algorithm/ standard • Assess nutritional status in a community by anthropometry.	**LGIS**

	• Advise on restructuring or modifying the energy requirements (through diet) in relation to physiological states • Communicate effectively, especially regarding behavior and life-style modification • Communicate diet plan, nutritional and lifestyle modification	
Non-communicable diseases	• Classify biological and social epidemiology of different chronic noncommunicable diseases and determine their risk factors • Formulate preventive measures for these diseases in individuals and populations at-risk • Relate different risk factors to particular patients and general population • Estimate the extent of damage to individuals and community in terms of morbidity and mortality burden • Apply evidence-based Lifestyle Medicine guidelines for the development of a comprehensive based Lifestyle Medicine assessment and plan for chronic disease prevention, treatment, and reversal including based Lifestyle Medicine prescriptions	**LGIS**
Snake bite ● ●	• Differentiate between signs and symptoms of different snake-bites • Recommend preventive measures against snake bites in particular situations. • Educate regarding snake-bite prevention	**LGIS**
Injuries and accidents	• Categorize different types of accidents • Explain epidemiology and control of different types of accidents • Relate risk factors with types of accident	**LGIS**
Disaster management	• Differentiate between different disasters • List duties of a disaster & emergency management health team in disaster setting • Advise on Rehabilitation and reconstruction • Manage disaster utilizing knowledge of disaster management (POSDCORB), disaster impact and response, mitigation • Relate the application of National Disaster Management and Preparedness guidelines according to given scenario	**LGIS**

CLINICAL ROTATION/SMALL GROUP DISCUSSION/TUTORIALS		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Primary Health Care	• 1. Relate the Sustainable Development Goals (SDGs) to developmental outcomes of National programs 2. Identify gaps in the implementation of PHC 3. Discuss how Lifestyle Medicine can decrease health inequities among populations with limited resources experiencing high burden of chronic diseases	SGD
Healthcare System in Pakistan	• Relate the referral mechanism to various levels of healthcare facility • Discuss the National disease control programs; policies, strategies and operations • Develop health promotion program by utilizing health promotion models	SGD
Health Education and Communication	• Choose suitable method of health education for certain audiences • Identify barriers of HE and methods to overcome	SGD
Epidemiology and Biostatistics	• . Interpret Epidemiological rates in any source of data. • Relate various biases in data interpretation. • Analyze provided or collected data using SPSS • Apply software for referencing • Perform assigned commands on Microsoft word • Assess critically the prevailing health risk to which the workers are exposed during field visits. • Formulate comprehensive suggestions to minimize health risks. • Demonstrate the basic steps of an outbreak investigation in a simulated situation	SGD
Maternal, Newborn & Child Health (MNCH),	(Maternal & Child Health) • Apply preventive measures in various phases of life to improve the maternal health. (Antenatal Care) • Design public health message to create awareness among women regarding antenatal visits & followup • Perform antenatal check-up of women (Intra-natal Care) • Appraise the relationship between the maternal health status & the outcome of pregnancy.(Postnatal care) • Design public health message to create awareness among women regarding postnatal visits & followup. • Perform postnatal check-up of women (Child Care)	SGD

	• Educate mothers about weaning, EPI, preparing home-made ORS Advise pregnant women on nutritional & immunization needs • Counsel women who give bottle feeding (Neonatal Care) • Formulate interventions to prevent infant mortality in different situations 8. Plot & interpret growth chart.	
Family Planning	• Advise pregnant women on nutritional & immunization needs • Counsel women who give bottle feeding (Neonatal Care) • Formulate interventions to prevent infant mortality in different situations 8. Plot & interpret growth chart	SGD
Demography	• Evaluate role of demographic study in health and other services planning. • Analyze the significance of demographic trap and its implications. • Illustrate and interpret population pyramids of different countries.	SGD
Communicab le Disease Epidemiolog y	• Comprehend modes of disease transmission, interaction of agent host and environment in the pre & pathogenesis phases • Suggest strategies for disease control and prevention • Evaluate degree of dehydration on the basis of history and clinical examination using algorithm/ standards • Compare and contrast the clinical presentations of specific diseases • Motivate people to adopt preventive measures to control spread of infections. • Counsel health care workers to adopt personal protective measures	SGD
Emerging & re-emerging Infections, Hospital acquired infections Hospital waste management	• Analyze factors causing emerging and re-emerging diseases, nosocomial infections and measures to control • Correlate the role of Hospital waste management in infectious disease control	SGD
NonCommunicab le Diseases Epidemiolog y	• . Assess risk factors for different chronic noncommunicable diseases • Recommend preventive measures in individuals and	SGD

	populations at-risk • Estimate the extent of damage to individuals and community in terms of morbidity and mortality • Restructure and communicate diet plan, nutritional and lifestyle modification	
Nutrition	• . Evaluate the importance of balanced diet and its role in nutritional problems of public health importance • Relate the states which alter the energy requirement of individuals and advise as per modified energy requirements • Recommend preventive and corrective measures for PEM, nutritional problems including iodine deficiency, anaemia, fluoride deficiency on the basis of sign & symptoms • Assess the nutritional status of different age groups in a community • Identify preventive measures for water-borne, meat-borne & milk-borne diseases • Categorize and interpret obesity among adults on the basis of BMI • Plan individual & community-based methods to communicate effectively for prevention & control of obesity with emphasis on behaviour & lifestyle modification • Inspect slaughter house and observe characteristics of fresh meat, fish, eggs etc	SGD
Environment	• Relate the bio-psychosocio model with different types of environment • Evaluate the current environmental indicators according to legislative guidelines for sustainable protection of environment in national, regional and global perspectives • Relate role of environment to hospital infections and prevention 4. Identify personal protective measures for individuals or groups facing specific environmental hazards • Educate individuals/ communities regarding effect of harmful environmental exposure and its prevention. • Calculate the amount of chlorine required to disinfect water	SGD
Disasters Management	• 1. Integrate the steps of disaster management cycle in different natural and man-made disaster	SGD

	• Review the duties of disaster management health team and the role of Medical Officer in disaster setting. • Differentiate between emergency triage & triage during disaster • Analyse practical problems during response phase (staffing, volunteer management, food, shelter etc) • Relate the application of National Disaster management and preparedness guidelines according to given scenario	
Occupational Health	• . Interpret appropriate indicators to describe occupational risk • Identify risk factors of clinically common occupational disorders • Evaluate the preventive & control measures for health protection of workers including legislative measures • Counselling and motivation of personnel to take preventive measures at workplace	SGD

CLINICAL ROTATION/FIELD VISITS		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Primary Health Care	• 1. Relate the Sustainable Development Goals (SDGs) to developmental outcomes of National programs • Identify gaps in the implementation of PHC • Discuss how Lifestyle Medicine can decrease health inequities among populations with limited resources experiencing high burden of chronic diseases	Field Visit
Healthcare System in Pakistan	• Relate the referral mechanism to various levels of healthcare facility • Discuss the National disease control programs; policies, strategies and operations • Develop health promotion program by utilizing health promotion models	Field Visit
Health Education and Communication	• 1. Choose suitable method of health education for certain audiences • Identify barriers of HE and methods to overcome	Field Visit
Epidemiology and Biostatistics	• . Interpret Epidemiological rates in any source of data. 2. Relate various biases in data interpretation. • Analyze provided or collected data using SPSS • Apply software for referencing • Perform assigned commands on Microsoft word • Assess critically the prevailing health risk to which the workers are exposed during field visits. 2. Formulate comprehensive suggestions to minimize health risks. • Demonstrate the basic steps of an outbreak investigation in a simulated situation	Field Visit
Maternal, Newborn & Child Health (MNCH),	• Apply preventive measures in various phases of life to improve the maternal health. • (Antenatal Care) Perform antenatal check-up of women • Design public health message to create awareness among women regarding antenatal visits & followup • (Intra-natal Care) Appraise the relationship between the maternal health status & the outcome of pregnancy. • (Postnatal care) Design public health message to create awareness among women regarding postnatal visits & followup.	Field Visit

	• Perform postnatal check-up of women (Child Care) • Educate mothers about weaning, EPI, preparing home-made ORS Advise pregnant women on nutritional & immunization needs • Counsel women who give bottle feeding (Neonatal Care) • Formulate interventions to prevent infant mortality in different situations 8. Plot & interpret growth chart.	
Family Planning	• Advise pregnant women on nutritional & immunization needs • Counsel women who give bottle feeding (Neonatal Care) • Formulate interventions to prevent infant mortality in different situations 8. Plot & interpret growth chart	Field Visit
Demography	• Evaluate role of demographic study in health and other services planning. • Analyse the significance of demographic trap and its implications. • Illustrate and interpret population pyramids of different countries.	Field Visit
Communicab le Disease Epidemiolog y	• Comprehend modes of disease transmission, interaction of agent host and environment in the pre & pathogenesis phases • Suggest strategies for disease control and prevention • Evaluate degree of dehydration on the basis of history and clinical examination using algorithm/ standards • Compare and contrast the clinical presentations of specific diseases • Motivate people to adopt preventive measures to control spread of infections. • Counsel health care workers to adopt personal protective measures	Field Visit
Emerging & re-emerging Infections, Hospital acquired infections Hospital waste management	• 1. Analyze factors causing emerging and re-emerging diseases, nosocomial infections and measures to control • 2. Correlate the role of Hospital waste management in infectious disease control	Field Visit

NonCommunicable Diseases Epidemiology	• . Assess risk factors for different chronic noncommunicable diseases • Recommend preventive measures in individuals and populations at-risk • Estimate the extent of damage to individuals and community in terms of morbidity and mortality 4. Restructure and communicate diet plan, nutritional and lifestyle modification	Field Visit
Nutrition	• . Evaluate the importance of balanced diet and its role in nutritional problems of public health importance 2. Relate the states which alter the energy requirement of individuals and advise as per modified energy requirements 3. Recommend preventive and corrective measures for PEM, nutritional problems including iodine deficiency, anaemia, fluoride deficiency on the basis of sign & symptoms 4. Assess the nutritional status of different age groups in a community • Identify preventive measures for water-borne, meat-borne & milk-borne diseases 6. Categorize and interpret obesity among adults on the basis of BMI 7. Plan individual & community-based methods to communicate effectively for prevention & control of obesity with emphasis on behaviour & lifestyle modification 8. Inspect slaughter house and observe characteristics of fresh meat, fish, eggs etc	Field Visit
Environment	• Relate the bio-psychosocio model with different types of environment 2. Evaluate the current environmental indicators according to legislative guidelines for sustainable protection of environment in national, regional and global perspectives 3. Relate role of environment to hospital infections and prevention 4. Identify personal protective measures for individuals or groups facing specific environmental hazards 5. Educate individuals/ communities regarding effect of harmful environmental exposure and its prevention. Calculate the amount of chlorine required to disinfect water 7. Collect water samples from different sources	Field Visit
Disasters Management	• 1. Integrate the steps of disaster management cycle in different natural and man-made disaster 2. Review the duties of disaster management health team and the role of Medical Officer in disaster setting. 3.	Field Visit

	Differentiate between emergency triage & triage during disaster 4. Analyse practical problems during response phase (staffing, volunteer management, food, shelter etc) 5. Relate the application of National Disaster management and preparedness guidelines according to given scenario	
Occupational Health	• . Interpret appropriate indicators to describe occupational risk 2. Identify risk factors of clinically common occupational disorders 3. Evaluate the preventive & control measures for health protection of workers including legislative measures 4. Counselling and motivation of personnel to take preventive measures at workplace	Field Visit

ENT

Otorhinolaryngology

Introduction:

The ENT course in Fourth Year MBBS provides foundational knowledge of diseases of the ear, nose, throat, and related head and neck structures. It trains students in recognizing, diagnosing, and managing common ENT disorders through clinical skills and procedural understanding.

Learning Outcomes:

By the end of the course, students will be able to:

- Describe and differentiate common ENT pathologies based on signs, symptoms, and investigations.
- Demonstrate proper clinical examination of the ear, nose, and throat.
- Interpret audiograms, tympanograms, and radiological findings related to ENT conditions.
- Perform and observe minor ENT procedures (e.g., ear syringing, anterior rhinoscopy).
- Apply principles of infection control and patient safety in ENT practice.
- Recognize emergencies like stridor, epistaxis, and foreign bodies and outline their management.

BLOCK - X		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Review of Anatomy of the Ear.	• Describe the gross anatomical division of the ear; external ear, middle ear and inner ear. • Identify the functions of external ear and tympanic membrane. • Describe the anatomy of middle ear "ossicles, middle ear muscle and eustachian tube. • Identify the structures of the inner ear and understand their role in hearing and balance. • Explain the process of hearing from the outer ear to the brain	**Interactive Lecture/ Flip Classroom**
Disease of External Ear	Recognize and differentiate common external ear disorders. Understand the basic anatomy and physiology of the external ear. Demonstrate proficiency in clinical examination of the external ear, including otoscopic examination, and accurately assess signs of infection, trauma, or abnormalities. List appropriate treatment options for common external ear disorders. Describe preventive strategies to reduce the risk of external ear infections and other related diseases. •	**Interactive Lecture/ Flip Classroom**
Diseases of Middle EAR Otitis Media with Effusion +Acute Otitis Media	nd risk factors a • Identify the typical signs and symptoms associated with Otitis Media with effusion. • List steps of otoscopic examination, tympanometry, and audiometric testing to diagnose OME and AOM. • familiar with the standard treatment protocols for Otitis Media with Effusion and Acute Otitis Media. • Learn about the preventive strategies for middle ear infections	**Interactive Lecture/ Flip Classroom**
Diseases of Middle Ear Chronic Suppurative Otitis Media	• Describe the characteristic clinical presentation of CSOM. • Understand and be familiar with diagnostic tools and techniques used to confirm CSOM. • Outline standard treatment protocols for CSOM. • Identify potential complications associated with CSOM.	**Interactive Lecture/ Flip Classroom**

	• Identify common complications of CSOM, including hearing loss, cholesteatoma, mastoiditis, and tympanic membrane perforation. • Recognize risk factors that increase the likelihood of developing CSOM complications, such as prolonged untreated infection, immunocompromised states, and poor treatment compliance. • Recognize the clinical signs and symptoms of severe CSOM complications, including: • Mastoiditis • Cholesteatoma • Intracranial complications • Facial nerve palsy • Understand and be familiar with diagnostic methods used to identify complications of CSOM. • Describe appropriate treatment options for various CSOM complications. • • Understand the management of intracranial complications, including emergency care, surgical intervention, and long-term monitoring.	
Facial nerve	• Describe the anatomical course of the facial nerve. • Outline the motor, sensory, and parasympathetic functions of the facial nerve. • Recognize the clinical manifestations of facial nerve dysfunction. • Identify common etiologies of facial nerve	**Interactive Lecture/ Flip Classroom**
Vertigo, Meniere's disease, BPPV, Otosclerosis, Vestibular neuronitis	• Describe the underlying mechanisms and pathophysiology of vertigo • Differentiate between the clinical manifestations of vertigo. • Apply knowledge to perform a basic differential diagnosis of vertigo • Explain the diagnostic tests and procedures commonly used to diagnose these vestibular and auditory disorders. • Outline the treatment and management strategies for each condition.	**Interactive Lecture/ Flip Classroom**
Diseases of Inner Ear Presbycusis, Noise induced	• Explain the underlying mechanisms and pathophysiology of presbycusis, (NIHL), and ototoxicity. • Identify and differentiate the clinical presentations of	**Interactive Lecture/ Flip Classroom**

hearing loss, Ototoxicity	presbycusis. • Discuss the risk factors for developing presbycusis, noise-induced hearing loss, and ototoxicity. • Describe the diagnostic techniques used to evaluate and diagnose these inner ear conditions. • Outline the management strategies for the following.	
Audiology PTA, impedance, BERA, OAE	• Explain the basic principles of audiology. • Describe the procedure and significance of Pure Tone Audiometry (PTA} • Explain the principles of impedance audiometry and interpret the results. • Understand the purpose and procedure of Brainstem Evoked Response Audiometry (BERA • Describe the concept and clinical application of Otoacoustic Emissions (OAE) testing.	**Interactive Lecture/ Flip Classroom**
Referred Otalgia	• Explain the concept of referred otalgia. • Describe the common extrinsic causes of referred otalgia • Explain the underlying mechanisms of referred otalgia and shared nerve pathways. • Develop the ability to conduct a thorough patient history and physical examination to differentiate referred otalgia from primary ear pathologies • Discuss the management approaches for referred otalgia.	**Interactive Lecture/ Flip Classroom**
Deaf Child	• Describe the various causes of deafness in children • Understand how deafness impacts the development of language, speech, and cognitive skills in children. • Examine the social and emotional challenges faced by deaf children. • Explain the methods for early identification of hearing loss in infants and young children. • Outline the various communication methods available for deaf children.	**Interactive Lecture/ Flip Classroom**
Rehabilitation of the hearing impaired	• Define different types of hearing loss (sensorineural, conductive, mixed). • Explain the causes and symptoms of hearing impairment.	**Interactive Lecture/ Flip Classroom**

BLOCK - XI		
Topics of the Module	• **Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Anatomy & Physiology of The Nose & PNS	• Identify and describe the main components of the nose, including the external nose, nasal cavity, nasal septum, turbinates, and mucous membranes. • Understand the role of the nose in respiration, including the filtration, humidification, and warming of inhaled air. • Explain the function of the nasal mucosa and its role in trapping debris and pathogens. • Learn the main blood vessels (e.g., the facial artery) and their branches that supply the nasal and sinus structures. • Understand the causes and effects of conditions like rhinitis, sinusitis, nasal polyps, and deviated septum.	**Interactive Lecture/ Flip Classroom**
Congenital Ana molies	• Define congenital anomalies (birth defects) and differentiate between structural and functional anomalies. • Describe the most common congenital anomalies affecting different organ systems. • Discuss the role of genetic mutations, chromosomal abnormalities, and inheritance patterns (e.g., autosomal dominant, autosomal recessive) in congenital anomalies. • Learn about screening and diagnostic techniques. • Understand the medical, surgical, and therapeutic options available for managing congenital anomalies.	**Interactive Lecture/ Flip Classroom**
Trauma & Fracture of the Nose & PNS	• Identify the key anatomical structures of the nose and paranasal sinuses. • classify and differentiate between types of nasal fractures. • Describe the clinical presentation of nasal trauma.	**Interactive Lecture/ Flip Classroom**
	• Recognize the physical, psychological, and social consequences of hearing loss on an individual's life. • Discuss various approaches to rehabilitation, including auditory training, speech therapy, and the use of hearing aids and cochlear implants. • Learn how to conduct and interpret basic hearing assessments (e.g., audiograms).	

	• outline the diagnostic work-up for suspected nasal and PNS fractures. • Describe conservative and surgical management options for nasal fractures and PNS injuries.	
Acute Inflammatory Disease of the Nose & PNS.	• Identify the anatomy of the nose and paranasal sinuses. • Distinguish between various acute inflammatory conditions of the nose and paranasal sinuses • Explain the common causes of acute inflammatory diseases • Identify the typical clinical signs and symptoms of acute rhinosinusitis. • Describe the diagnostic steps for acute rhinosinusitis.	**Interactive Lecture/ Flip Classroom**
Chronic Inflammatory Disease of the Nose & PNS.	• Describe the underlying mechanisms and pathophysiology of chronic inflammatory conditions of the nose and paranasal sinuses. • Differentiate between the types of chronic rhinosinusitis. • recognize the multiple etiological factors contributing to chronic inflammatory diseases of the nose and sinuses. • Identify and describe the common symptoms of chronic rhinosinusitis. • Outline the diagnostic approach for chronic rhinosinusitis.	**Interactive Lecture/ Flip Classroom**
Epistaxis	• Describe the anatomy of the nasal cavity. • Differentiate between anterior and posterior epistaxis. • Identify and describe the signs and symptoms of epistaxis, including the history of bleeding. • Outline the step-by-step management of epistaxis.	**Interactive Lecture/ Flip Classroom**
Nasal Septal Diseases.	• Identify and describe the normal anatomy of the nasal septum. • Recognize the common types of septal deviations and deformities. • Identify the clinical signs and symptoms of nasal septal diseases. • Describe the various diagnostic tools used in the assessment of nasal septal disease. • State non-surgical and surgical treatment options.	**Interactive Lecture/ Flip Classroom**

Nasal Polyp	• Explain the underlying pathophysiological mechanisms involved in the formation of nasal polyps. • Identify common clinical symptoms associated with nasal polyps. • Enlist the risk factors for developing nasal polyps. • Diagnose nasal polyps through clinical examination • Enlist medical and surgical management options for nasal polyps	**Interactive Lecture/ Flip Classroom**
Chronic Granulomatous disease of the Nose & PNS	• Describe the underlying mechanisms of chronic granulomatous disease. • Recognize the common signs and symptoms of chronic granulomatous disease. • Enlist causes of granulomatous inflammation in the nose and sinuses. • Understand how to approach the diagnosis of granulomatous disease in the nasal and sinus region through a combination of clinical examination • List the management strategies for chronic granulomatous disease.	**Interactive Lecture/ Flip Classroom**
Tumor of the Nose/ Naso Pharynx & PNS.	• differentiate between benign and malignant tumors affecting the nasal cavity, nasopharynx, and paranasal sinuses.. • identify the typical symptoms of tumors in the nose and paranasal sinuses. • List the risk factors and potential causes of tumors in these regions. • diagnostic approaches for tumors in these areas,. • list the management strategies for tumors in the nose and paranasal sinuses.	**Interactive Lecture/ Flip Classroom**
Headache & facial Pain.	• Differentiate between the various types of headaches • identify the key clinical features of common headache types and facial pain. • understanding of the mechanisms behind headache and facial pain. • outline a systematic approach to diagnosing headache and facial pain,. • Describe various treatment strategies for both acute and chronic headaches and facial pain.	**Interactive Lecture/ Flip Classroom**
Nasal Allergy & vasomotor Rhinitis	• explain the underlying mechanisms of nasal allergies (allergic rhinitis • distinguish between allergic rhinitis	**Interactive Lecture/ Flip Classroom**

	• identify the common symptoms of allergic rhinitis. • list the diagnostic tools used to evaluate nasal allergies and vasomotor rhinitis. • list the treatment strategies for managing both conditions.	

BLOCK - XI		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Anatomy of Oral Cavity & Mouth Ulcer	• identify and describe the key anatomical structures of the oral cavity, • describe the histological structure of the oral mucosa, including the epithelial and connective tissue layers. • recognize various types of mouth ulcers • describe the common causes of mouth ulcers, including trauma, infections, autoimmune conditions, nutritional deficiencies, and systemic diseases. • knowledge of both preventive and therapeutic measures for managing mouth ulcers.	**Interactive Lecture/ Flip Classroom**
Pre-Malignant conditions of oral cavity & Tumors of the Oral Cavity	• define and explain what constitutes a pre-malignant condition in the oral cavity. • identify the clinical and histopathological features of common pre-malignant lesions in the oral cavity. • differentiate between benign and malignant tumors of the oral cavity,. • knowledge of the key risk factors for oral cancers and pre-malignant conditions • know the diagnostic techniques used in the detection of oral malignancies,	**Interactive Lecture/ Flip Classroom**
Anatomy of the oropharynx.	• define the anatomical boundaries of the oropharynx, • explain the function of the oropharynx in both swallowing (deglutition) and breathing. • identify and describe the muscles involved in the movements of the oropharynx. • describe the blood supply to the oropharynx, • identify the tonsils (palatine tonsils, lingual tonsils, and pharyngeal tonsils) and their role in the lymphatic system.	**Interactive Lecture/ Flip Classroom**
Benign and malignant disease of the oropharynx.	• recall the anatomy of the oropharynx • describe common benign conditions affecting the oropharynx, including benign tumors	**Interactive Lecture/ Flip Classroom**

	• differentiate between benign and malignant tumors in the oropharynx. • describe the etiology and risk factors for malignant diseases of the oropharynx • recognize the clinical signs and symptoms of both benign and malignant diseases of the oropharynx.	
Diseases of Neck Spaces	• identify and describe the major neck spaces (e.g., submandibular, submental, parapharyngeal, retropharyngeal, and prevertebral spaces) and their relationship to surrounding anatomical structures. • differentiate between the various types of diseases and infections that affect neck spaces. • common signs and symptoms associated with neck space infections and pathologies. • understand the underlying pathophysiology of neck space infections. • describe the diagnostic methods (e.g., clinical evaluation, imaging studies such as CT or MRI.	**Interactive Lecture/ Flip Classroom**
Anatomy and physiology of laryngo pharynx, Congenital anomalies of larynx & Acute laryngo tracheal bronchitis, vocal nodules, and laryngocele.	• describe the anatomical structure of the laryngopharynx, • recognize and describe common congenital anomalies of the larynx,. • understand the pathophysiology of acute laryngotracheal bronchitis (commonly known as croup. • describe the formation of vocal nodules, including their association with vocal misuse or overuse. • explain the anatomy and development of a laryngocele,	**Interactive Lecture/ Flip Classroom**
Airway Management, Tracheostomy & Tumors of the larynx. Vocal Nodules and Laryngocele	• describe the basic principles of airway management. • explain the indications for performing a tracheostomy (• identify the different types of laryngeal tumors, • describe the formation and pathophysiology of vocal nodules. • understand the anatomy and development of a laryngocele, including its pathophysiology as an air-filled dilation of the saccule of the larynx.	**Interactive Lecture/ Flip Classroom**
Aero digestive foreign body &	• describe the anatomy of the aero-digestive tract, including the mouth, pharynx, larynx, trachea, and	**Interactive Lecture/ Flip**

disease of the larynx.	esophagus. • classify and recognize the different types of foreign bodies that may be inhaled. • describe the most common diseases affecting the larynx. • differentiate between acute and chronic laryngitis, recognizing their common causes. • identify the risk factors for laryngeal cancer.	**Classroom**
Neck Mass.	• describe the anatomical regions of the neck and classify neck masses based on their location. • recognize and differentiate between the common causes of neck masses, including benign conditions. • describe the diagnostic steps involved in evaluating a neck mass, including a thorough patient history. • identify the "red flags" that may suggest malignancy in a neck mass,. • Students should be familiar with the general principles of managing neck masses,	**Interactive Lecture/ Flip Classroom**
Diseases of the Esophagus	• describe the anatomy of the esophagus, • recognize and describe common diseases of the esophagus. • Students should understand the pathophysiology of gastroesophageal reflux disease (GERD) • identify the risk factors and symptoms of esophageal cancer, describe the pathophysiology of achalasia,	**Interactive Lecture/ Flip Classroom**
Diseases of Thyroid Gland	• describe the structure and function of the thyroid gland, including its location, size, and the hormones. • identify and describe the pathophysiology, clinical features, and causes of hypothyroidism. • describe the common causes of thyroid nodules and goiter (e.g., benign multinodular goiter, thyroid cancer, iodine deficiency). • identify the types of thyroid cancer. • describe different types of thyroiditis, including Hashimoto's thyroiditis, subacute thyroiditis, and acute thyroiditis.	**Interactive Lecture/ Flip Classroom**
Diseases of Salivary Gland	• describe the structure, anatomy, and locations of the major salivary glands. • recognize and differentiate between common diseases of the salivary glands.	**Interactive Lecture/ Flip Classroom**

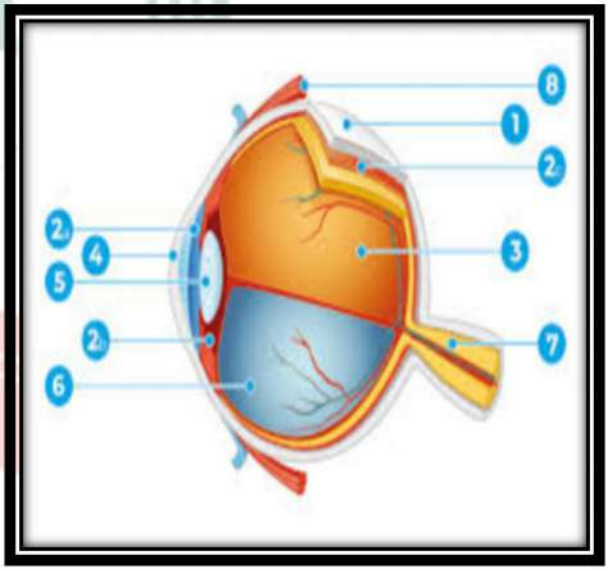
	• recognize signs such as swelling, pain, dry mouth, and fever, and understand diagnostic approaches • identify benign and malignant salivary gland tumors. • • • describe the pathophysiology and clinical presentation of autoimmune diseases that affect the salivary glands, such as Sjögren's syndrome.	

Simulations / Skills Lab	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Video demonstration/ Examination of Ear/ Otoscopic examination	• List the examination points of the ear. • Describe how tympanic membrane looks on otoscopy.
Video demonstration/Examination of Nose	• List the examination points of the Nose. • Describe how tympanic membrane looks on otoscopy.
Video demonstration/ Examination of Throat	• List the examination points of the Throat. • Describe how tympanic membrane looks on otoscopy.
Video demonstration/ Examination of Neck	• List the examination points of the Neck. • Describe how tympanic membrane looks on otoscopy.
Pure Tone Audiometry	• Analyze different types of pure tone audiograms. • Interpretation of pure tone audiograms.
Impedance Audiometry	• Define impedence audiometry. • Interpretation of graphs of tympanometry.

Topics of the Module	Objectives: By the end of the module the students will be able to:
History Taking, Examination, Symptom Etiology, Diseases of External Ear	State the anatomy of external ear. List pathologies related to external ear. List different points of history taking of ear.
Chronic Suppurative Otitis Media	• Define chronic suppurative otitis media. • Name different types of chronic suppurative otitis media. • Describe how tympanic membrane looks on ototscopy. •
History Taking, Examination, Symptom Etiology, Acute and Chronic Diseases of Nose, PNS	• State the anatomy of nose and paranasal sinus. • List the etiology and symptoms of diseases of nose and PNS. • Describe different types of diseases of nose and paranasal sinus.
Nasal Polyp, Granulomatous Disease of Nose	• Define nasal polyp. • List different types of nasal polyps. • Examine patient with nasal polyps
History Taking, Examination, Symptom Etiology, Acute and Chronic Tonsillitis	• Define acute and chronic tonsillitis. • List the etiology and symptoms of acute and chronic tonsillitis. • Recall points of history and examination in a patient presenting with tonsillitis.
Mouth Ulcers and Tumors of Oral Cavity	• Define oral ulcers and tumors of oral cavity. • List the etiology and symptoms of oral ulcers. • Recall the points of examination in a patient with oral ulcers.
Disease of Middle EAR OME- AOM	• Define otitis media with effusion. • Define acute otitis media. • Recall the signs and symptoms of patients with OME\AOM
Disease of Internal EAR Menier's Disease, B.P.V, Otosclerosis/ Deaf Child	• Define Menier's disease. • Define otosclerosis. • Define BPPV. • List the etiology of vertigo. • Differentiate between different types of vertigo. • Examination of patient presenting with vertigo
DNS, Septal Hematoma, Abscess, Nasal Trauma	• Define DNS and septal hematoma. • List the etiology of nasal trauma. • Describe the xray of nasal bone fracture. • Enlist the points of examination in a patient with nasal trauma.

Epistaxis, Foreign Body Nose, Rhinolith Allergic Rhinitis	• Define epistaxis, rhinolith, allergic rhinitis. • Enlist the examination points of epistaxis and its management. • Describe the methods of removal of foreign body
Adenoid, Pharyngitis Neck Abscess	• Define adenoids, Pharyngitis and neck abscess. • Describe the Xray of adenoids and neck abscess.
Disease of Larynx, Acute Laryngo-tracheobronchitis, Epiglottitis, Vocal Nodule, Laryngeal Cancer	• Define Acute Laryngo-tracheobronchitis, Epiglottitis, Vocal Nodule, Laryngeal Cancer. • Enlist the signs and symptoms of croup, vocal nodule, laryngeal cancer. • Describe the examination points of vocal nodule and laryngeal cancer

Ophthalmology (Eye)



Introduction:

Ophthalmology introduces students to the anatomy, physiology, and pathology of the eye. The subject emphasizes understanding visual disorders, diagnostic procedures, and the principles of ocular examination and management of common eye diseases.

Learning Outcomes:

By the end of the course, students will be able to:

- Describe the anatomy and physiology of the visual system and its relevance to disease.
- Perform a systematic eye examination, including visual acuity testing, fundoscopy, and slit-lamp examination.
- Diagnose and outline management plans for common ocular disorders such as refractive errors, cataract, glaucoma, and conjunctivitis.
- Identify ophthalmic emergencies and describe appropriate first-line management.
- Demonstrate awareness of preventive ophthalmology, including eye hygiene and screening programs

BLOCK - X		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Eye Lid & adnexa	Identify Ptosis, Lid Tumors and Benign lesions, • Entropion, Ectropion , Dry eyes • Identify eyelid and adnexal disorders based on clinical assessment • Evaluate dry eye and lacrimal system disorders • Recognize conditions requiring referral to ophthalmologist	Interactive Lecture/ flip classroom
Conjunctiva, Episclera & Sclera	Recognize conditions like Pterygium, Pingeculae, conjunctivitis episcleritis and scleritis and their systemic association when presents. • Identify red eye causing common conditions for their initial management • • Differentiate episcleritis from scleritis • • Identify systemic associations and initiate basic management	Interactive Lecture/ flip classroom
Orbit	Recognize Proptosis and its common causes like thyroid eye disease, orbital inflammatory disease and orbital tumors. Advise common investigations required for its evaluation. • Summarize various medical and surgical management options.	Interactive Lecture/ flip classroom
Uveitis	• Identify uveitis as a cause of decreased vision • • Recognize signs of acute and chronic uveitis • • Initiate initial treatment and referral	Interactive Lecture/ flip classroom

Block XI		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Corneal Diseases	• Identify corneal ulcers for giving initial treatment. • Summarize principles of corneal disease management.	Interactive Lecture/ flip classroom
Lens	• Identify different types of cataract • recognize type of visual deterioration in each type of cataract. • Justify different types of surgical options of cataract including phacoemulsification • Indicate possible complications of cataract surgery	Interactive Lecture/ flip classroom

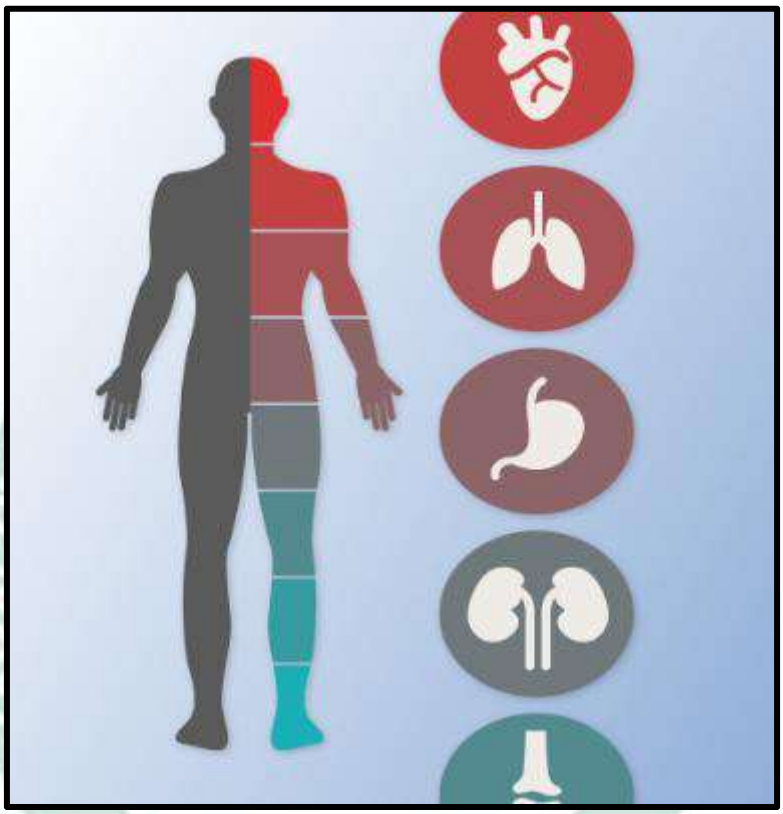
Refractive errors& Refractive Surgery	• Identify common refractive conditions of the eye like myopia, hypermetropia and astigmatism • Summarize various treatment options.	Interactive Lecture/ flip classroom
Glaucoma and ocular therapeutics	• Differentiate between various types of Glaucoma, its clinical signs, investigations, common VF defects and various anti Glaucoma medications. • Enlist other options of Glaucoma management including laser filtration surgery, cyclo-destructive procedures and implants. • Identify shallow anterior chamber for avoiding mydriatic eye drops to prevent acute congestive glaucoma. • Suggest emergency treatment of acute angle closure glaucoma.	Interactive Lecture/ flip classroom

BLOCK XII		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Retinal vascular diseases, Retinal Detachment, Common Fundus Pathologies,	• Correlate symptoms with signs of retinal vascular diseases, ocular tumors and fundus pathologies • Identify retinal disorder as a cause of reduce vision. • Suggest common treatment option of retinal diseases. • Discuss broad outline of management of RD, diabetic retinopathy & AMD and use of lasers in ophthalmology •	Interactive Lecture/ flip classroom
Strabismus & Neuro Ophthalmology	• Differentiate between comitant and non-comitant strabismus. • Perform cover & uncover test. • Enlist surgical and non-surgical treatment of strabismus. • Reproduce Cranial nerve pathway and nerve supply of extra ocular muscles • Enlist relevant laboratory investigations and imaging &surgical and non-surgical treatment options.	Interactive Lecture/ flip classroom
Ocular trauma	• Differentiate between penetrating and non- penetrating ocular injuries. • Discuss different types of chemicals damaging eye • (Acid/alkali/Alcohol/elfy) and its symptoms and signs. • Mange chemical injuries of the eye and to removes conjunctival foreign body.	Interactive Lecture/ flip classroom

Simulations / Skills Lab	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Patient communication	• Establish rapport with the patient and demonstrate proper greeting and counseling
Assessment of vision	• Assess visual acuity in children and adults, color vision, and Amsler grid
Visual field examination	• Examine visual fields by confrontation method
Refractive errors	• Identify the type of refractive error
Ophthalmoscopy (Fundoscopy)	• Differentiate normal optic disc and macula from abnormal
Anterior segment examination	• Examine anterior segment using torch and slit lamp
Ophthalmic instruments	• Enlist and identify common ophthalmic instruments
Ocular movements and squint	• Classify various types of squint
Retinoscopy	• Perform retinoscopy and write optical prescription
Pupillary examination	• Examine pupillary light reactions
Retinal diseases	• Identify retinal disease as a cause of loss of vision
Examination of proptosis	• Examine proptosis and assess its clinical significance
Tonometry	• Measure intraocular pressure
Patient communication	• Establish rapport with the patient and demonstrate proper greeting and counseling
Assessment of vision	• Assess visual acuity in children and adults, color vision, and Amsler grid
Visual field examination	• Examine visual fields by confrontation method

CLINICAL ROTATION/ BEDSIDE/ OPD		
Diagnose vision loss due to cataract	Cataract examination	OPD
Prescribe common eye drops keeping in mind contraindications	• Ocular pharmacology	OPD
Enumerate laser use in ophthalmology	• Introduction to lasers	• OPD
Examine eyelids	• Lid examination	• OPD
Enlist helpful ophthalmic investigations	• Overview of ocular investigations	• Ward
Observe common ophthalmic surgical procedures and instruments	• Cataract, glaucoma, oculoplastics, retinal detachment surgeries and instruments	• OT
Develop communication skills and professionalism	• Patient greeting, counseling, ethical interaction	• Bedside

GENERAL MEDICINE & ALLIED



Introduction

Medicine is a broad-based specialty dedicated to providing primary and specialized care to adults. Therefore, it forms a key component of the undergraduate curriculum and is taught throughout the five years with increased emphasis in last three years. Its primary focus is on building knowledge, skills and attitudes of the students for the practice of medicine not only at the primary care level but to advance to postgraduate studies for clinical practice, medical education and research. Our aim is to prepare future doctors for independent practice after graduation as a general practitioner who can provide patient centered medical care with highest standards of professionalism

Learning Outcome

By the end of the course, students will be able to:

- Conduct complete history taking and physical examination.
- Formulate differential diagnoses and management plans for common medical conditions.
- Interpret laboratory and imaging findings relevant to internal medicine.
- Recognize and manage medical emergencies.
- Demonstrate professional communication, empathy, and ethical conduct with patients.

Disciplines Involved:

1. Cardiology
2. Endocrinology (& Genetic Disorders)
3. Gastroenterology
4. Haematology
5. Infectious Diseases
6. Internal Medicine
7. Nephrology
8. Neurology
9. Oncology
10. Pulmonology
11. Rheumatology
12. Toxicology & Environmental Medicine

GENERAL MEDICINE & ALLIED

INTRODUCTION TO MEDICINE AND ALLIED		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
General Physical-1 examination	• Define the components of GPE. • Identify abnormal general physical signs. • Explain the clinical importance of each sign.	**Bedside teaching**
General Physical-2 examination	• Correlate normal with abnormal findings of GPE • Recognise key abnormal signs relevant to each system.	**Bedside teaching**
Respiratory examination	• Describe all components of respiratory examination. • Assess chest expansion, tracheal position, and tactile vocal fremitus. • Identify normal vs abnormal chest findings.	**Bedside teaching**
Abdominal. Examination	• Explain systematic abdominal exam. • Identify normal vs abnormal signs.	**Bedside teaching**
Cardiovascular Examination	• Perform a systematic cardiovascular examination including pulse, JVP, precordium, and peripheral signs. • Assess different pulse types and character • Locate the apex beat and identify abnormalities. • Recognise common heart sounds and murmurs.	**Bedside Teaching**
Neurology Examination-UL	• Perform a structured neurological examination of the upper limbs (inspection, tone, power, reflexes, sensation, coordination). • Assess dermatomes, myotomes, and deep tendon reflexes of UL. • Identify upper vs lower motor neuron signs.	**Bedside teaching**

Neurology examination- LL	• Conduct a complete neurological exam of the lower limbs (inspection, tone, power, reflexes, sensation, gait). • Assess lower limb dermatomes and myotomes. • Examine knee, ankle, and plantar reflexes (including Babinski sign). • Evaluate coordination with heel–shin testing.	**Bedside teaching**
History taking of common symptoms on medicine- Cough	• Identify characteristics such as duration, type, and triggers of cough. • Recognise associated symptoms suggesting underlying respiratory or systemic pathology. • Understand risk factors and red flags in patients presenting with cough. • Use history to guide appropriate investigations and management.	**Bedside teaching**
History taking of common symptoms on medicine- SOB	• Assess onset, duration, triggers, and severity of shortness of breath. • Identify associated symptoms such as chest pain, edema, or cough. • Recognise presentations requiring urgent attention. • Integrate history to guide evaluation, differential diagnosis, and management.	**Bedside teaching**
History taking of common symptoms on medicine- Hemetemesis	• Understand the clinical significance of hematemesis. • Identify associated symptoms and risk factors for upper gastrointestinal bleeding. • Recognise warning signs that require urgent intervention. • Integrate history to guide immediate management and investigations.	**Bedside teaching**
History taking of common symptoms on medicine- abdominal pain	• Characterise the location, severity, timing, and radiation of abdominal pain. • Identify associated features such as vomiting, bowel changes, and systemic symptoms. • Recognise red flags indicating urgent conditions. • Use history to guide differential diagnosis and further management.	**Bedside teaching**

History taking of common symptoms on medicine-jaundice	• Understand the clinical importance of taking a thorough history in patients with jaundice. • Identify key features such as onset, duration, progression, and associated symptoms including pruritus, dark urine, pale stools, and systemic signs. • Recognise risk factors, exposures, and past medical history relevant to jaundice, including liver disease, medications, infections, and alcohol use. • Integrate history findings with physical examination and investigations to guide diagnosis, determine severity, and plan management.	**Bedside teaching**
History taking of common symptoms on medicine-headache	• Understand the clinical importance of obtaining a detailed history in patients presenting with headache. • Identify characteristics such as onset, duration, frequency, severity, location, quality, and associated symptoms. • Recognise red flags and risk factors that may indicate serious underlying pathology, including neurological deficits, systemic symptoms, or sudden onset. • Integrate history findings with physical examination and investigations to guide diagnosis and management planning.	**Bedside teaching**

CRITICAL CARE AND EMERGENCY MEDICINE		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
RESPIRATORY FAILURE	• Define Respiratory Failure and understand its importance in critically ill patients. • Recognise severity, type (hypoxemic vs hypercapnic), and high-risk scenarios in Respiratory Failure. • Understand immediate stabilization and ICU management principles in Respiratory Failure. • Identify potential complications and strategies to	**Interactive lecture/bedside teaching**

	prevent deterioration in Respiratory Failure.	
ARDS	• Define ARDS and understand underlying pathophysiology. • Recognise diagnostic criteria (Berlin). • Identify common causes such as sepsis, trauma, aspiration. • Understand ventilatory management (low tidal volume, PEEP). • Recognise complications and prognosis	**Interactive lecture/bedsjde teaching**
SEPSIS	• Understand the basic concept and definition of sepsis. • Know how to assess severity and identify high-risk patients. • Understand general principles of initial management. • Recognise situations requiring urgent intervention or escalation. • Understand key complications of sepsis.	**Interactive lecture/bedside teaching**
DKA	• Understand what DKA is and its basic underlying concept. • Recognise how to broadly assess the severity of DKA. • Understand the overall goals and principles of management of DKA. • Identify situations that need urgent escalation or higher-level care. • Understand the major complications that can occur in a patient with DKA.	**Interactive lecture/bedside teaching**
Anaphylaxis	• Define Anaphylaxis and understand its clinical importance. • Recognise the severity and risk factors in Anaphylaxis. • Understand the principles of urgent management in Anaphylaxis. • Identify major complications and strategies to prevent recurrence in Anaphylaxis.	**Interactive Lecture/bedside teaching**

Fulminant Liver failure	• Understand the definition and pathophysiology of fulminant (acute) liver failure. • Recognize the key clinical features and progression of acute liver failure. • Learn the essential laboratory tests and criteria used to assess severity and prognosis. • Understand the major complications, including encephalopathy, coagulopathy, and multiorgan involvement. • Become familiar with principles of initial stabilization and supportive management. • Understand indications for transfer to a specialized liver unit or transplant center. • Discuss prognostic scoring systems commonly used in acute liver failure.	**Interactive lecture/bedside teaching**

MEDICAL ONCOLOGY		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Multiple myeloma	• Understand the definition and pathophysiology of multiple myeloma. • Recognize the common presenting features and typical clinical manifestations. • Learn the key laboratory and diagnostic investigations used to confirm the disease. • Understand the principles of staging, prognosis, and risk stratification.	**Interactive lecture/CBL**
Gastric carcinoma	• Recognise clinical features of gastric cancer • Enlist risk factors of gastric carcinoma • Understand the principles of diagnosis, staging of gastric cancer • Outline general management in Gastric Cancer and the treatment based on staging.	**Interactive lecture**
Lymphoma	• Understand the definition, types, and epidemiology of lymphoma. • Differentiate between Hodgkin lymphoma (HL) and Non-Hodgkin lymphoma (NHL) in terms of pathology and clinical features. • Recognize the common presenting symptoms and systemic "B symptoms." • Learn the basic diagnostic approach, including laboratory tests, imaging, and biopsy techniques. • Understand staging systems (e.g., Ann Arbor) and their clinical significance. • Become familiar with general management principles, including chemotherapy, radiotherapy, targeted therapy, and stem cell transplantation. • Identify common complications and supportive care strategies.	**Interactive lecture/CBL**
Acute leukemia	• Define acute leukemia and differentiate between ALL (Acute Lymphoblastic Leukemia) and AML (Acute Myeloid Leukemia). • Understand the pathophysiology and genetic abnormalities associated with acute leukemia (e.g., Philadelphia chromosome in ALL).	**Interactive lecture/CBL**

	• Identify risk factors and common etiologies. • Know the clinical presentation, including fatigue, pallor, bleeding, fever, and infections. • Recognize laboratory findings: pancytopenia, circulating blasts, bone marrow involvement. • Understand diagnostic workup: CBC, peripheral smear, bone marrow biopsy, immunophenotyping, cytogenetics, molecular tests. • Outline treatment principles: induction, consolidation, maintenance therapy, and supportive care. • Recognize complications of therapy, including tumor lysis syndrome and infections. • Understand prognostic factors in acute leukemia.	
Chronic leukemia	• Define chronic leukemia and differentiate CML (Chronic Myeloid Leukemia) vs CLL (Chronic Lymphocytic Leukemia). • Understand pathophysiology and molecular basis (e.g., BCR-ABL in CML, immunophenotype in CLL). • Identify typical clinical features, such as lymphadenopathy, hepatosplenomegaly, fatigue, and incidental findings. • Understand laboratory findings: leukocytosis, abnormal differential counts, smudge cells in CLL. • Know the diagnostic workup: CBC, peripheral smear, bone marrow, cytogenetics, molecular testing. • Outline treatment strategies: tyrosine kinase inhibitors (CML), chemotherapy, immunotherapy (CLL), and indications for watchful waiting. • Recognize complications and disease progression, including transformation to acute leukemia (blast crisis in CML, Richter transformation in CLL). • Understand prognostic indicators and risk stratification.	**Interactive lecture/CBL**

ENDOCRINOLOGY

Diabetics and it's complications	• Define diabetes mellitus and differentiate between type 1 and type 2. • Recognize common symptoms and signs of hyperglycemia and hypoglycemia. • Know basic investigations for diagnosis (FBS, RBS, HbA1c, OGTT). • Understand acute complications (DKA, HHS, hypoglycemia) and their management. • Understand basic prevention strategies and lifestyle management.	**Tutorial**
Thyroid disorders	• Outline the causes of hyperthyroidism. • Enlist the management plan for hyperthyroidism Discuss the causes of hyperthyroidism	**Tutorial**
Addisons disease	• Identify clinical features of addisons disease • Provide causes of Addisons disease Enlist the Management of addisons disease	**Tutorial**
Cushing's syndrome	.Identify the clinical features of cushing's syndrome • Provide the causes of Cushing's syndrome • Enlist the management of cushings syndrome	**Tutorial**
Prolactinoma	• Understand the pathophysiology of prolactin excess. • Recognize common clinical features. • Describe the diagnostic approach. • Understand principles of management. • Know the general prognosis and follow-up considerations.	**Tutorial**

RHEUMATOLOGY		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Rheumatoid Arthritis	• Describe pathophysiology and risk factors of RA. • Recognise hallmark clinical features (symmetrical small-joint polyarthritis, morning stiffness). • Order and interpret investigations (RF, anti-CCP, ESR/CRP, X-rays). • Outline treatment including DMARDs and biologics. • Identify extra-articular manifestations •	**Interactive lecture/CBL**
SLE	• Understand autoimmune mechanisms and risk factors. • Identify clinical features (malar rash, arthritis, nephritis, CNS). • Interpret ANA, anti-dsDNA, complement levels. • Outline treatment based on organ involvement. • Recognise complications such as lupus nephritis and thrombosis. •	**Interactive lecture/CBL**
Ankylosing Spondylitis	• Understand pathophysiology and role of HLA-B27. • Recognise hallmark symptoms (inflammatory back pain, stiffness). • Interpret imaging (X-ray sacroiliitis, MRI). • Outline treatment including NSAIDs, physiotherapy, biologics. • Identify extra-articular features (uveitis, IBD). •	**Interactive lecture**
Gout	• Understand uric acid metabolism and factors causing hyperuricemia. • Recognise clinical features of acute and chronic gout. • Interpret joint aspiration findings (needle-shaped, negatively birefringent crystals). • Outline acute management and long-term urate-lowering therapy. • Identify complications such as tophi and	**Interactive lecture/cbl**

Seronegative Poly Arthritis Osteoarthritis	nephropathy. • • Define diagnostic criteria for Seronegative PolyArthritis • Correlate etiology of the disease to its presentation. • Diagnose the patient on the basis of presenting complaints and clinical examination • Propose appropriate Investigations and laboratory findings tot establishdiagnosis. Manage complications of the disease • Diagnose the patient on the basis of presenting complaints and clinical examination • Determine causes of osteoarthritis established through Investigations and laboratory findings. Manage complications of the disease	**Interactive lecture**
Polymalgia rheumatica	• Define Polymalgia rheumatica • Develop therapeutic plan for the disease after diagnosing based on clinical presentation of various stages, and investigations	**Interactive lecture**
Fibromyalgia	• Understand the general pathophysiology of fibromyalgia. • Recognize common clinical features of fibromyalgia. • Describe the general diagnostic approach in fibromyalgia. • Understand principles of management of fibromyalgia.	**Interactive lecture/CBL**

PSYCHIATRY		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Phenomenology	• Classify Psychiatry disorders • Elaborate epidemiological and etiological basis of psychiatric disorders • Outline diagnostic plan for Psychiatric disorders	**Interactive lecture/ bedside teaching**

Anxiety disorders	• Classify anxiety disorders • Discuss the clinical features of anxiety disorders • Enlist the management plan of anxiety disorders	**Interactive lecture/ bedside teaching**
Mood disorders	• Diagnose mood Disorder on the basis of etiology • Discuss the Management and prognosis of mood disorders	**Interactive lecture/ bedside teaching**
Schziophrenia	• Diagnose Schizophrenia based on signs and symptoms • Devise a plan for treatment of disease, side effects of the treatment and its withdrawal. • Assess prognosis of the disease	**Interactive lecture**
Psychopharmacology	• Classify drugs used to treat psychiatric disorders • Elaborate mode of action of drugs used in psychiatry and their side effects	**Interactive lecture/ bedside teaching**

Dermatology		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Basic Dermatology	• Apply concepts of anatomy and physiology of skin to clinical dermatology • give pathologic basis of skin lesions • Identify different types of skin lesions characteristic differentiating features of various skin lesions	**Interactivelecture**
Pruritis	• Classify types of pruritis • Identify its Characteristic lesions • Enlist specific lab investigations • Discuss the steps of management	**Interactive lecture/bedside teaching**
Scabies	• Understand the cause and transmission of scabies. • Discuss key clinical features of scabies • Outline the management plan	**Interactive lecture**

Eczema	• Classify eczema • Apply diagnostic criteria to clinical assessment of eczema • Develop management plan of eczema	**Interactive lecture/bedside teaching**
Alopecia	• Understand the broad types and patterns of alopecia. • Recognize general clinical features that help identify hair loss disorders. • Enlist common causes and contributing factors. • Understand the basic principles of evaluation and management. • Identify situations where referral or further work-up is required.	**Interactive lecture/bedside teaching**

	General Medicine	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Pneumonia	• Define pneumonia and recognise typical and atypical clinical features. • Identify common causative organisms. • Interpret chest X-ray findings suggestive of pneumonia. • Outline key investigations (CBC, CRP, cultures). • Describe management including CURB-65 scoring and antibiotic choices. • Recognise complications such as sepsis, effusion, and respiratory failure.	**Interactive lecture**
COPD	• Describe the pathophysiology of chronic bronchitis and emphysema. • Identify clinical features of stable COPD and exacerbations. • Interpret spirometry showing obstructive pattern. • Discuss pharmacological and non-pharmacological management. • Recognise when to start LTOT (long-term oxygen therapy).	**Interactive lecture**

	• Identify complications like cor pulmonale.	
Asthma	• Define asthma and understand airway hyper-responsiveness. • Recognise symptoms and triggers. • Interpret spirometry with reversibility. • Outline stepwise treatment according to guidelines. • Identify features of severe and life-threatening asthma.	**Interactive lecture**
Interstitial Lung Disease	• Define ILD and differentiate major types (IPF, hypersensitivity pneumonitis, sarcoidosis). • Recognise clinical features such as dry cough and inspiratory crackles. • Interpret HRCT findings. • Outline management including antifibrotics, immunosuppression, and oxygen therapy.	**Interactive lecture**
Bronchogenic carcinoma	• Understand types (SCLC vs NSCLC) and risk factors. • Recognize red flag symptoms (hemoptysis, weight loss, clubbing). • Interpret CXR/CT features suggestive of malignancy. • Explain diagnostic pathway including bronchoscopy and biopsy. • Outline management options: surgery, chemo, radiotherapy, immunotherapy.	**Interactive lecture**
Multiple sclerosis	• Define Multiple Sclerosis and understand its clinical significance. • Recognise high-risk patients and severe presentations in Multiple Sclerosis. • Understand general management principles and supportive care in Multiple Sclerosis.	**Interactive lecture**
CVA	• Understand the basic pathophysiology of ischemic and hemorrhagic stroke. • Recognize the major risk factors for stroke. • Enlist the key clinical features based on affected vascular territories. • Describe principles of acute management and	**Interactive lecture**

	secondary prevention. • Recognize potential complications and long-term consequences of stroke.	
Epilepsy	• Understand the basic pathophysiology and classification of seizures and epilepsy. • Recognize common clinical features of focal and generalized seizures. • Identify important historical clues that help differentiate epilepsy from syncope and other mimics. • Outline essential diagnostic approaches, including EEG and neuroimaging. • Describe principles of initial and long-term management of epilepsy. • Recognize red flags and complications, including status epilepticus and psychosocial impacts.	**Interactive lecture**
Dengue	• Understand the virology and pathophysiology of dengue infection. • Recognize the phases of dengue illness (febrile, critical, recovery). • Identify key clinical features, including warning signs that predict severe dengue. • Differentiate dengue from other febrile illnesses using characteristic patterns. • Outline essential investigations such as CBC, hematocrit, and dengue serology/NS1. • Describe principles of management, including fluid strategy and monitoring. • Recognize complications such as plasma leakage, shock, bleeding, and organ involvement.	**Interactive lecture**
Malaria	• Understand the life cycle and pathophysiology of malaria. • Recognize key clinical features of uncomplicated and severe malaria. • Identify important historical clues such as travel, fever pattern, and exposure. • Outline essential investigations, including	**Interactive lecture**

	thick/thin smear and rapid diagnostic tests. • Describe principles of treatment for Plasmodium falciparum and non-falciparum malaria. • Recognize complications such as severe anemia, cerebral malaria, AKI, and acidosis.	
Acute kidney injury	• Define AKI and differentiate it from chronic kidney disease. • Classify AKI into pre-renal, intrinsic (renal), and post-renal causes. • Recognize key clinical features, including oliguria, edema, and systemic symptoms. • Identify appropriate investigations to confirm AKI and determine underlying etiology. • Outline initial management, including fluid and electrolyte correction, avoiding nephrotoxins, and indications for renal replacement therapy. • Understand common complications of AKI and principles of monitoring patient progress.	**Interactive lecture**
Chronic kidney Injury	• Define CKD and understand the criteria for diagnosis (duration, GFR, markers of kidney damage). • Identify common causes of CKD, including diabetes, hypertension, and glomerulonephritis. • Recognize clinical features and complications, including anemia, bone-mineral disorders, fluid overload, and cardiovascular disease. • Outline appropriate investigations to assess kidney function, stage CKD, and detect complications. • Describe principles of management, including treating underlying causes, controlling blood pressure and diabetes, dietary measures, and pharmacological interventions. • Understand indications for renal replacement therapy and transplant referral	**Interactive lecture**

Toxicology – OPP poisoning	• Define organophosphate (OPP) poisoning. • Understand the general mechanism of toxicity in OPP poisoning. • Recognize common clinical features of OPP poisoning. • Describe the general diagnostic approach in OPP poisoning. • Understand principles of management of OPP poisoning.	**Interactive lecture**
Toxicology- Paracetamol poisoning	• Define paracetamol poisoning. • Understand the general mechanism of toxicity in paracetamol poisoning. • Recognize common clinical features of paracetamol poisoning. • Describe the general diagnostic approach in paracetamol poisoning. • Understand principles of management of paracetamol poisoning. • Know potential complications and follow-up considerations in paracetamol poisoning.	**Interactive lecture**

Clinicopathological Conference (CPC)	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Hypothyroidism	• Outline the causes of hypothyroidism. • Enlist the management plan for hypothyroidism • Discuss the causes of hypothyroidism
Hyperparathyrodism	• Define primary, secondary, and tertiary hyperparathyroidism. • Understand basic physiology of PTH and calcium regulation. • Recognize common clinical features (bone pain, stones, abdominal pain, mood changes). • Know key investigations (serum calcium, phosphate, PTH, vitamin D, renal function). • Identify common causes of hyperparathyroidism. • Understand simple management principles for each type. • Recognize complications (renal stones, osteoporosis).
Iron deficiency anaemia	• Define Iron Deficiency Anemia and understand its clinical significance. • Recognise high-risk patients and severity in Iron Deficiency Anemia. • Understand general management principles in Iron Deficiency Anemia. • Identify major complications and strategies to prevent recurrence in Iron Deficiency Anemia.
Headache	• Define primary and secondary headaches. • Recognize common types of primary headaches (migraine, tension, cluster). • Identify red-flag features suggesting secondary or serious cause. • Know key points in headache history (onset, pattern, triggers, associated symptoms). • Offer relevant management plan
Parkinson's disease	• Recognize key clinical features of the disease • Outline the essential investigations used to support diagnosis. • Describe first-line and advanced management options, including medication and referral indications. • Identify complications such as motor fluctuations, dyskinesias, cognitive decline, and autonomic symptoms.
Inflammatory bowel disease	• Understand the basic pathophysiology of inflammatory bowel disease (Crohn's disease and ulcerative colitis). • Recognize key clinical features and extra-intestinal manifestations. • Outline the essential investigations • Describe first-line and escalation management options, including

	steroids, immunomodulators, and biologics.
Upper GI bleed	• Understand the basic concept of upper Gi bleed • Enlist the causes of Upper GI bleed • Know how to assess overall severity. • Understand general principles of stabilisation and management. • Recognise situations requiring urgent intervention. • Understand important complications.
Acute viral hepatitis	• Understand the broad virology and types of acute viral hepatitis. • Recognize the typical symptom patterns and clinical course. • Learn the key investigations used to confirm the diagnosis and assess severity. • Understand the general principles of management, including supportive care and monitoring. • Identify features that suggest severe or fulminant hepatitis and require urgent action. • Discuss important complications and their prevention. • Apply knowledge to case scenarios to strengthen clinical reasoning.
Chronic Diarrhea	• Identify patterns and features that help classify chronic diarrhea (e.g., watery, fatty, inflammatory). • Describe a systematic diagnostic approach including history, examination, and basic investigations. • Understand the principles of management based on underlying causes. • Recognize potential complications associated with prolonged diarrhea.

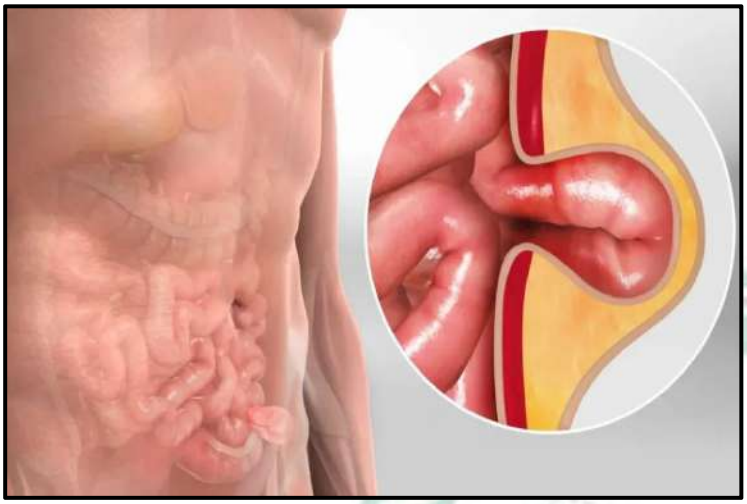
Simulations / Skills Lab	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
BLS	• Describe the steps in the adult BLS algorithm. • Understand the importance of early CPR and early defibrillation.
LP needle	• List indications and contraindications • Understand layers traversed during LP. • Know complications and management of post-LP headache.
Foleys	• Identify indications for Foley's (retention, monitoring output). • Understand anatomy relevant to catheterization. • Know complications: UTI, hematuria, urethral trauma.
NG insertion	• Describe indications (feeding, decompression, lavage, medication delivery). • Explain contraindications (basilar skull fracture, severe facial trauma, esophageal varices, strictures). • Understand verification methods for correct placement.
Injection techniques	• Identify indications, contraindications, and complications of intradermal, subcutaneous, and intramuscular injections. • Select appropriate anatomical sites for each type of injection. • Demonstrate proper aseptic technique during preparation and administration. • Accurately draw medications, calculate doses, remove air bubbles, and choose appropriate needle sizes. • Safely perform intradermal, subcutaneous, and intramuscular injections on models/mannequins.
IV cannulation	• Explain indications and contraindications for intravenous cannulation. • Identify appropriate peripheral veins for cannulation based on clinical context. • Prepare and assemble equipment required for IV access. • Demonstrate correct steps of aseptic technique prior to cannulation. • Perform IV cannulation using a safe, systematic approach.

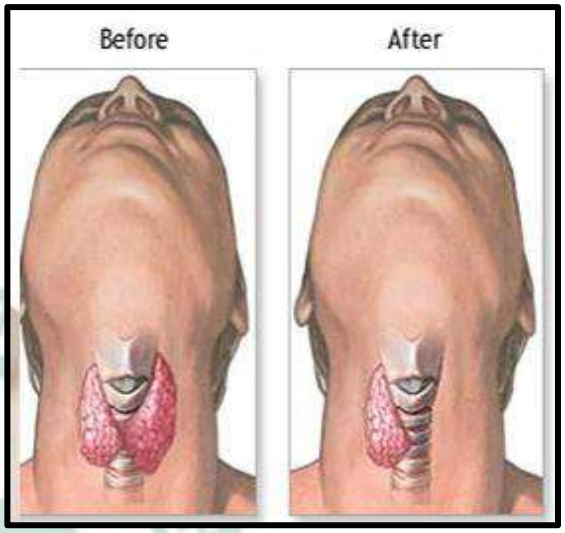
SMALL GROUP DISCUSSION/TUTORIALS	
Topics of the Module	**Objectives: By the end of the module the students will be able to:**
Diabetes	• Discuss the clinical features of diabetes • Outline the types of diabetes • Enlist the complications of diabetes • Offer the treatment plan for diabetes
Acromegaly	• Outline the clinical features of acromegaly • Discuss the lab investigations of acromegaly • Offer treatment plan for acromegaly
Hypopituitism	• Define hypopituitarism. • List common causes of hypopituitarism. • Identify key clinical features of pituitary hormone deficiencies. • Describe basic investigations used to diagnose hypopituitarism. • Outline the general principles of management, including hormone replacement
Chronic liver disease	• Define CLD and cirrhosis. • List common causes of CLD. • Recognize key symptoms and signs of CLD. • Know basic tests used to diagnose CLD.
Decompensated Chronic Liver disease-Ascites	• Define ascites and understand why it occurs in CLD. • List common causes of ascites in chronic liver disease. • Recognize symptoms and signs of ascites. • Know the basic investigations for ascites (ultrasound, ascitic tap, SAAG). • Identify complications of ascites. • Understand simple management steps of ascites.

Decompensated Chronic Liver disease- upper GI bleed	• Understand why patients with CLD develop varices and are at high risk of bleeding. • Recognize symptoms and signs of variceal upper GI bleed (hematemesis, melena, shock). • Know immediate stabilisation steps • Identify essential initial treatments for variceal bleed • Understand the need for urgent endoscopy for diagnosis and band ligation.
Decompensated Chronic Liver disease- Hepatic encephalopathy	• Define hepatic encephalopathy and understand why it occurs in CLD. • Recognize early and late symptoms/signs of HE (confusion, sleep–wake reversal, asterixis, coma). • Know common precipitating factors (infection, GI bleed, constipation, electrolyte disturbance). • Understand basic investigations to assess HE and exclude other causes of altered mental status. • Know simple management steps (lactulose, rifaximin, correcting triggers).
GERD	• Define GERD. • Understand the general pathophysiology of GERD. • Recognize common clinical features of GERD. • Describe a systematic diagnostic approach in GERD. • Understand principles of management of GERD. • Know potential complications and follow-up considerations in GERD.
Guillian Barre Syndrome	• Define Guillain-Barré syndrome. • Understand the general pathophysiology of Guillain-Barré syndrome. • Recognize common clinical features of Guillain-Barré syndrome. • Describe a systematic diagnostic approach in Guillain-Barré syndrome. • Understand principles of management of Guillain-Barré syndrome.
Myasthenia Gravis	• Define Myasthenia Gravis and understand its clinical importance. • Recognise common presentations and situations requiring urgent attention in Myasthenia Gravis. • Understand general principles of diagnosis and management in Myasthenia Gravis.

*

GENERAL SURGERY





INTRODUCTION

Surgery is an important part of the undergraduate curriculum and is taught throughout the five years with increased emphasis in last two years. It focuses on building basics of surgical practice as much as relevant for general practitioner and is built upon an understanding of anatomical structure and functions and its clinical surgical relevance.

Aim is to provide state of the art educational programs in all areas of clinical surgery and in the biologic basis of surgical illness with a special emphasis on research which will. Moreover, to provide the best possible care to patients who require surgical services. contribute to the practical solutions and theoretical structure of future surgical practice

LEARNING OUTCOME

Learning Outcomes:

By the end of the course, students will be able to:

- Describe principles of surgical care and wound healing.
- Perform preoperative and postoperative patient assessments.
- Recognize surgical emergencies and outline their management.
- Demonstrate understanding of aseptic techniques and operation theatre protocols.
- Apply knowledge of surgical anatomy to clinical procedures and case discussions.

Departments Involved:

1. Anesthesia and Critical Care
2. General Surgery
3. Neurosurgery
4. Orthopedic Surgery and Trauma
5. Pediatric Surgery
6. Plastic Surgery
7. Urology
8. Vascular Surgery

GENERAL SURGERY & ALLIED

INTRODUCTION TO SURGERY		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
TRAUMA		
Trauma & Tissue Response	• Classify major types of trauma • Relate mechanisms of trauma to injury patterns • Apply ATLS primary survey (ABCDE) for immediate stabilization • Outline definitive management for common trauma injuries • Conduct secondary survey according to ATLS protocol • Define triage and justify its importance. • Evaluate the role of multidisciplinary teams in trauma care	**Interactive Lecture**
Chest Trauma	• Differentiate blunt vs penetrating vs blast chest trauma • Classify chest trauma into immediate & delayed life-threatening categories • Recognize and manage pneumothorax, hemothorax, rib fractures, flail chest • Describe indications, procedure, and complications of chest tube thoracotomy	**Interactive Lecture**
Abdominal Trauma	• Identify causes & risk factors for abdominal trauma • Recognize presentations of common visceral injuries • Outline diagnostic tools & management strategies for abdominal trauma	**Interactive Lecture**
Genitourinary Trauma	• Identify causes & predisposing factors of genitourinary trauma, • Recognize indications for conservative management of renal injuries. • Enlist investigations & grading systems for GU trauma • Outline operative options for renal trauma • Describe causes, presentation & management of testicular injuries	**Interactive Lecture**
Upper Extremity Trauma	• Recall upper-limb bone & joint anatomy • Explain principles of fracture management	**Interactive Lecture**

	• Interpret radiology of common upper-limb fractures • List complications of fracture healing • Outline management of humerus, radius & ulna fractures	
Lower Extremity Trauma	• Classify tibia & fibula fracture patterns • Interpret long-bone fracture patterns on X-ray • List complications of lower-limb fractures • Describe surgical management of femoral neck, shaft & tibial fractures	**Interactive Lecture**
Compartment Syndrome	• Define compartment syndrome & identify causes • Describe clinical features & diagnostic criteria • Explain pathophysiology & consequences • Outline emergency & definitive management	**Interactive Lecture**
Neurosurgery		
Head Trauma	• Classify head injuries & mechanisms • Describe ATLS-based assessment (GCS, pupils, neuro exam) • Explain pathophysiology of raised ICP & herniation • Interpret CT findings in head trauma • Identify neurosurgical red flags • Outline emergency management per ATLS • Describe definitive treatment of intracranial injuries • Recognize complications of head trauma	**Interactive Lecture**
Neck & Spine Trauma	• Classify cervical & spinal injuries • Describe ATLS evaluation & immobilization • Interpret radiological findings • Explain pathophysiology & ASIA classification • Outline emergency & definitive management options	**Interactive Lecture**
Intracerebral Hemorrhage	• Define ICH & identify major causes • Explain pathophysiology & hematoma evolution • Recognize clinical presentation & deficits • Interpret CT/MRI features of ICH • Outline emergency management • Describe surgical indications & complications	**Interactive Lecture**
Space Occupying Lesions & Brain Tumors	• Define SOLs & classify brain tumors • Explain pathophysiology of mass effect & raised ICP • Recognize clinical features of SOLs & tumors	**Interactive Lecture**

	• Interpret CT/MRI findings • Outline medical & surgical management	
Infections & inflammatory diseases of spine	• Classify spinal infections & inflammatory disorders. • Identify predisposing factors & risk groups • Recognize clinical features & complications • Interpret lab & imaging investigations • Outline medical & surgical management	**Interactive Lecture**
Spinal Tumors	• Classify spinal tumors by location & histology • Identify risk factors & predisposing conditions • Recognize clinical features & neurological deficits • Interpret imaging & lab findings • Outline medical & surgical management principles	**Interactive Lecture**
Peripheral Nerve Injury	• Classify peripheral nerve injuries • Identify causes & risk factors • Recognize clinical features & deficits • Interpret diagnostic investigations • Outline management & prognosis	**Interactive Lecture**
Degenerative Diseases of Spine	• Classify degenerative spinal disorders • Identify risk factors & predisposing conditions • Recognize clinical features & deficits • Interpret imaging & investigations • Outline management strategies	**Interactive Lecture**
PLASTIC & RECONSTRUCTIVE SURGERY		
Skin & Skin Tumors	• Classify common benign and malignant skin lesions • Recognize clinical features of skin tumors • Identify risk factors and etiologies • Outline diagnostic approaches • Describe management options	**Interactive Lecture**
Wounds & Dressings	• Classify types of wounds • Describe wound healing phases • Identify complications of wound healing • Select appropriate dressings • Outline principles of wound care	**Interactive Lecture**
Types of Burns	• Classify burns by depth and extent • Identify common causes of burns • Recognize clinical features of different burns • Determine severity using scoring systems	**Interactive Lecture**

Pathophysiology & Management of Burns	• Explain systemic and local pathophysiology. • Recognize complications • Outline acute burn management • Explain wound care principles in burns	**Interactive Lecture**
Management of Burns	• Apply first-aid measures • Outline fluid resuscitation protocols • Describe surgical interventions • Explain long-term rehabilitation	**Interactive Lecture**
Skin Grafts	• Classify skin grafts • Identify indications and contraindications • Describe graft harvesting and application • Recognize graft complications	**Interactive Lecture**
Flaps	• Classify types of flaps • Identify indications for flap coverage • Describe flap design and surgical principles • Recognize complications of flap surgery	**Interactive Lecture**
Hand Applied Anatomy	• Recall osseous and soft tissue anatomy of the hand • Explain functional anatomy • Relate anatomy to common injuries • Interpret clinical relevance	**Interactive Lecture**
Hand Surgery	• Recognize common hand injuries and deformities. • Outline principles of hand fracture management. • Describe tendon and nerve repair techniques • Explain rehabilitation strategies • Recognize complications of hand surgery	**Interactive Lecture**
UROLOGY		
Nephrolithiasis	• Classify urinary stones by composition and location • Identify risk factors and predisposing conditions • Recognize clinical presentation • Interpret diagnostic investigations	

	• Outline management strategies	
Upper Urinary Tract Infections	• Classify upper urinary tract infections • Identify risk factors and predisposing conditions • Recognize clinical features • Interpret diagnostic investigations • Outline management strategies	**Interactive Lectures**
Renal Carcinoma	• Classify renal tumors • Identify risk factors and predisposing conditions • Recognize clinical features • Interpret diagnostic investigations • Outline management strategies	**Interactive Lectures**
Lower Urinary Tract Symptoms (LUTS)	• Classify LUTS based on storage and voiding symptoms • Identify common causes and risk factors • Recognize clinical presentation and complications • Interpret diagnostic investigations • Outline management strategies	**Interactive Lecture**
Lower Urinary Tract Infections (LUTIs)	• Classify LUTIs • Identify risk factors and predisposing conditions • Recognize clinical features • Interpret diagnostic investigations • Outline management strategies	**Interactive Lectures**
Urinary Bladder Carcinoma	• Classify bladder tumors • Identify risk factors and predisposing conditions • Recognize clinical presentation • Interpret diagnostic investigations • Outline management strategies	**Interactive Lecture**
Benign Prostatic Hyperplasia (BPH)	• Define and classify BPH • Identify risk factors and pathophysiology • Recognize clinical features and complications • Interpret diagnostic investigations • Outline management strategies	**Interactive Lectures**
Prostatic Carcinoma	• Classify prostate cancer and risk groups • Identify risk factors and predisposing conditions • Recognize clinical features • Interpret diagnostic investigations • Outline management strategies	**Interactive Lectures**

Testis & Scrotum	• Classify testicular and scrotal disorders • Identify risk factors and predisposing conditions • Recognize clinical features • Interpret diagnostic investigations • Outline management strategies	**Interactive Lectures**

Simulations / Skills Lab

Skill	Level of Performance	Objectives: By the end of the module the students will be able to:
Application of POP (Plaster of Paris)	Assists	• Describe indications, contraindications, and complications of POP application. • Identify materials and assist in proper application and molding. • Monitor neurovascular status and ensure patient safety.
Endotracheal Intubation	Assists	• Explain indications, contraindications, and complications. • Assist in preparation of airway equipment. • Assist during intubation and recognize correct tube placement.
Lumbar Puncture / Spinal Anaesthesia	Assists	• Describe relevant anatomy, indications, and complications. • Assist in patient positioning and aseptic precautions. • Monitor patient during and after the procedure.
Stitching of Wounds	Assists	• Explain principles of wound healing and suturing. • Identify suturing instruments and materials. • Assist in suturing while maintaining asepsis.
Intravenous Line Insertion	Performs under Direct Supervision	• Explain indications and complications of IV cannulation. • Perform IV line insertion using aseptic technique. • Secure IV line and ensure proper waste disposal.
Foley's Catheterization	Performs under Direct Supervision	• Describe indications, contraindications, and complications. • Perform catheterization maintaining aseptic precautions. • Ensure patient dignity and recognize complications.

Passage of Nasogastric Tube	Performs under Direct Supervision	• Explain indications and complications of NG tube insertion. • Perform NG tube insertion correctly. • Confirm tube placement and ensure patient comfort.
Intramuscular Injection	Performs under Indirect Supervision	• Identify appropriate sites and drugs for IM injection. • Perform IM injection safely and correctly. • Follow infection control and waste disposal protocols.
Subcutaneous Injection	Performs under Direct Supervision	• Describe indications and sites for SC injections. • Perform SC injection with correct technique. • Educate patient regarding post-procedure care.
Taking Blood Samples	Performs under Direct Supervision	• Explain indications and complications of venipuncture. • Perform blood sample collection safely. • Label and handle samples appropriately.
Removal of Surgical Drains	Performs under Direct Supervision	• Describe indications and precautions for drain removal. • Remove surgical drains using aseptic technique. • Identify and report complications.
Antiseptic Dressing	Performs under Indirect Supervision	• Explain principles of wound care and antisepsis. • Perform antiseptic dressing independently. • Assess wound healing and signs of infection.

PEADIATRICS

Introduction

Pediatrics is an integral part of the undergraduate curriculum. Basics of pediatrics is established in the initial years through contribution from basic sciences. It has been taught as a major subject in last two years.

Aim is to equip the average student with minimum essential knowledge, skill and attitude to enable them to manage patients appropriately.

Course Outcomes

By the end of the course, students will be able to:

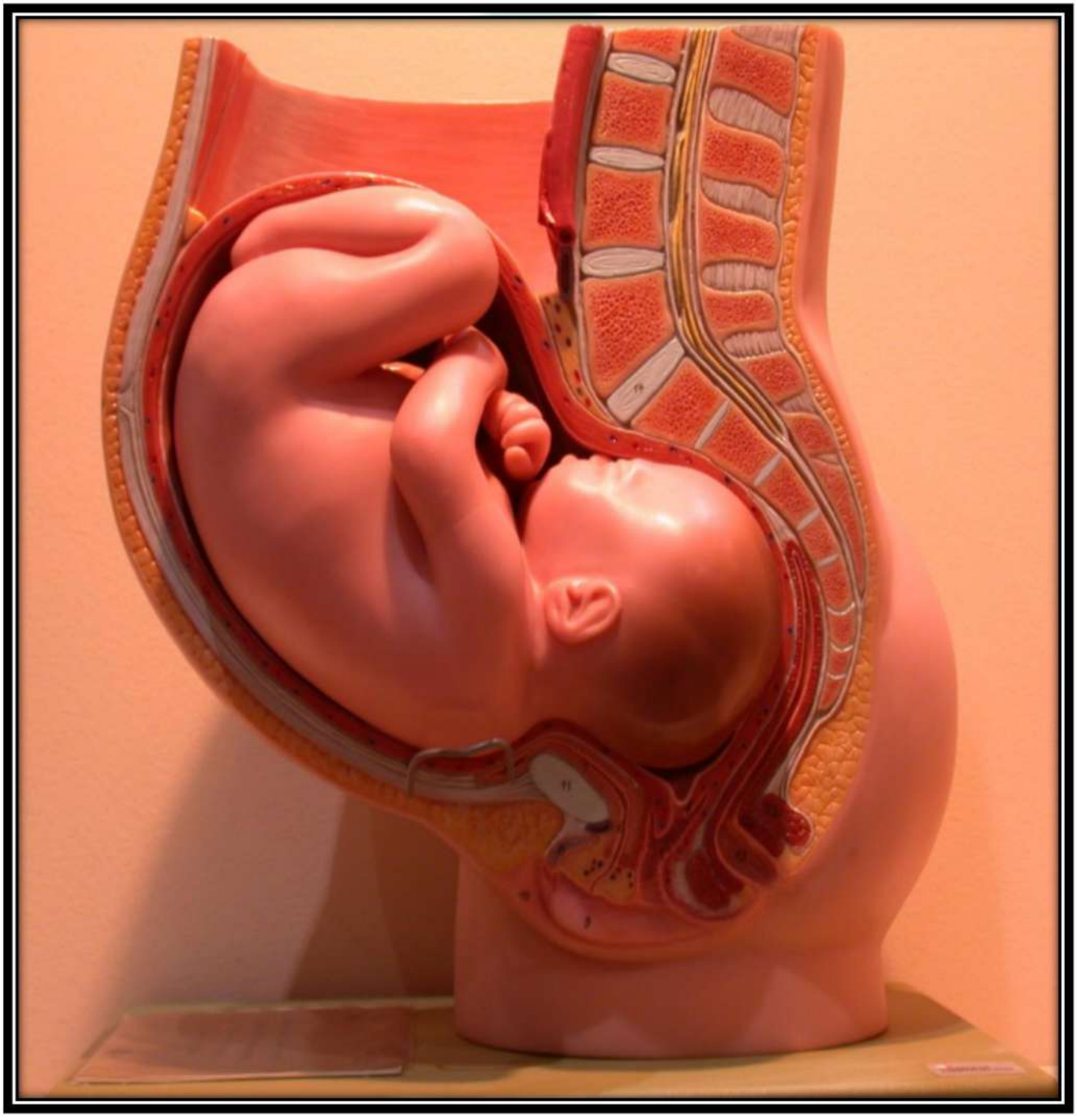
- Assess growth, development, and nutritional status of children.
- Diagnose and manage common pediatric diseases.
- Identify pediatric emergencies and outline immediate care.
- Counsel parents on immunization, nutrition, and child health promotion.
- Demonstrate empathetic communication and ethical responsibility in child care.

PEADIATRICS		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Nutrition	• Assess nutritional status based on feeding history and clinical examination • Interpret anthropometry, basic hematological and biochemical indices to identify basic dietary deficiency. • Identify the causes, clinical presentation of child with PEM. • Discriminate the assessment findings and laboratory findings of kwashiorkor and marasmus. • Formulate the treatment plan for PEM. • Identify the causes and clinical signs of micronutrient deficiency	03 LGIS
Respiratory Diseases	• Describe the clinical features of cystic fibrosis and bronchiectasis • List the diagnostic workup for cystic fibrosis and bronchiectasis • Enumerate the management options for cystic fibrosis and bronchiectasis • List the complications of cystic fibrosis and bronchiectasis	01 LGIS
Gastroenterology	• Differentiate between organic and inorganic causes of recurrent abdominal pain • Identify the clinical presentation of Worms infestation, Giardia and Amoebiasis • Describe the treatment options of Worms infestation, Giardia and Amoebiasis • Correlate the common causes of constipation to the pathophysiological changes seen in constipation. • List the general and specific measures for the treatment of constipation • Enumerate the preventive measures for the constipation	02 LGIS
CNS Diseases	• Identify diagnostic criteria for febrile, afebrile seizures and status epilepticus. • Recognize trends related to epilepsy and seizure management.	03 LGIS

	• Identify Ataxia & movement disorders, Neuromuscular disorders and Neurodegenerativedisorders • Recognize hypotonia in children • To enlist causes of hypotonia in children	
Neonatology	• Demonstrate understanding of the normal growth of newborn • Identify need for resuscitation in newborn and risks of birth asphyxia • Explain APGAR scoring system • Devise treatment plan for neonatal convulsions based on the etiology • Describe the pathophysiology of infant of diabetic mother (IDM) • Describe the management of post-natal hypoglycemia infant of diabetic mother (IDM) • Describe the clinical features of TORCH infection • Describe the management option of TORCH infection	03 LGIS
Endocrinology	• Identify common endocrinological diseases • Develop management plans for common endocrinology diseases	03 LGIS
Hematology	• Explain classification and causes of anaemias. • Generate differential diagnosis for aplastic anemia • Discuss management of anemias with special reference to aplastic anemias	01 LGIS
Psychological Paediatrics	• Recognize psychological disorders in children (Autism, ADHD, enuresis, encopresis, child abuse) • List the causes of common psychological disorders	03 LGIS
Congenital and Acquired Heart Disease	• Correlate pathophysiology of pediatric CCF and cardiomyopathy to its clinical presentation. • Identify clinical features of CCF and cardiomyopathy • Identify common pediatric cardiac failure syndromes • Discuss the treatment of CCF and cardiomyopathy	01 LGIS
Bone and Rheumatologic disorders	• Diagnose and manage case of Rheumatological and bones disorders. • Classify the rheumatological and bones disorders. • Identify the clinical features of rheumatological and bones disorders • Formulate management plan for rheumatological and bones disorders.	02 LGIS

Childhood Poisoning	• Differentiate the various types of poisoning and their signs and symptoms • Define the goals of treatment • Appraise the pharmacological basis for enhancing elimination of drugs and use of specific antidotes	02 LGIS
X-ray Interpretation	• Identify the X-ray (X-ray neck, chest, abdomen, bone and joints) • Describe the radiological finding in given X-ray • Interpret the finding on X-ray • Formulate the X-ray based diagnosis	01 LGIS

GYNAECOLOGY & OBSTETRICS



Introduction

Obstetrics and Gynecology is an integral part of the undergraduate curriculum. Basis of Obstetrics and Gynecology is established in the initial years through contribution from basic sciences. It is being taught as a major subject in the last two years of undergraduate program. Aim is to train and develop medical students to practice as a safe obstetrician and gynecologist and to advance in the field of Obstetrics and Gynecology

Course Outcomes:

- Describe normal pregnancy, labor, and puerperium.
- Recognize and manage common obstetric and gynecological conditions.
- Perform basic obstetric and gynecologic examinations.
- Identify and manage obstetric emergencies.
- Counsel women on reproductive health, family planning, and preventive care.

GYNAECOLOGY& OBSTETRICS		
Topics	**Objectives:** **By the end of the lecture the students will be able to describe :**	**Teaching Strategies**
Development of female genital tract	• Normal development of female genital tract • Common anomalies in development	**Interactive Lecture**
Physiology of menstrual cycle	• HPO axis and its functioning	**Interactive Lecture**
Menstrual disorders	• Terminologies • Menstrual disorders and their Causes	**Interactive Lecture**
Physiology of pregnancy	• Physiological changes during the course of normal pregnancy	**Interactive Lecture**
Miscarriages	• Classification and presentation • The investigations protocol	**Interactive Lecture**
Ectopic pregnancy	• Types according to locations • Diagnostic clinical features and investigations	**Interactive Lecture**
Antenatal care	• Importance of booking lobotomy tests and scans • The high risk pregnancies by identifying medical and surgical issues • Plan mode of birth	**Interactive Lecture**
Hyperemesis gravidarum	• Clinical features and management • The differential diagnosis	**Interactive Lecture**
Prenatal diagnosis	• Common disorders that can be diagnosed by PND • Different techniques to diagnose	**Interactive Lecture**

Primary amenorrhea Secondary amenorrhea + PCOS	• Causes of primary and secondary amenorrhea • Rotterdam criteria • Investigations and diagnosis	**Interactive Lecture**
Endometriosis adenomyosis	• Pathophysiology of endometriosis and adenomyosis • Clinical presentation • Investigation and diagnosis	**Interactive Lecture**
Anemia in pregnancy	• WHO trimester wise expected Hemoglobin levels • Common types of anemia's in pg • Effects of anemia on mother and baby	**Interactive Lecture**
Molar pregnancy	• Difference between complete and partial mole • Clinical presentation ,investigations and diagnosis	**Interactive Lecture**
Hypertension in pregnancy	• Difference in Chronic, Gestational Hypertension and preeclampsia • Effects of hypertension on pregnancy • Investigations and monitoring required	**Interactive Lecture**
Contraception	• Classification of contraceptives and their duration of action • Male contraception's	**Interactive Lecture**
Sub fertility	• Primary and secondary infertility • Investigations and diagnosis	**Interactive Lecture**
Benign diseases of ovary	• Common benign diseases of ovary • Clinical presentation and investigations	**Interactive Lecture**
Pre term Labor	• Definition of preterm labor its risk factors • Diagnosis and investigation	**Interactive Lecture**
Upper and lower genital infections	• Common infections, causative agents and diagnosis	**Interactive Lecture**

Chronic pelvic pain Endometriosis/adenomyosis	• Causes of CPP • Causes and labs	**Interactive Lecture**
Malpresentation	• Definition and different types • Management of Malpresentation	**Interactive Lecture**
Pelvic inflammatory diseases	• Causative organisms,its clinical presentation and its investigations	**Interactive Lecture**
Hydrops/fetal infections	• Causes, investigations and diagnosis, prognosis	**Interactive Lecture**
Sexually transmitted infections	• Causative organisms, clinical presentation and diagnosis	**Interactive Lecture**
Antepartum Haemorrhage	• Causes, risk factors ,clinical presentation, investigations	**Interactive Lecture**
Uterovaginal prolapse and incontinence	• Different degrees of prolapse • Clinical features • Conservative treatment	**Interactive Lecture**
Classification of Medical disorders during pregnancy	• Types of medical diseases in pregnancy • Maternal and fetal complications if untreated	**Interactive Lecture**
Common Infections during pregnancy	• Viral and bacterial infections according to trimester and their side effects	**Interactive Lecture**

Drug safety, drug abuse and smoking during pregnancy	• Use of different groups of drug during pregnancy and their importance and contraindications • Teratogenicity of drugs • Impact of drug addiction and smoking on pregnancy	**Interactive Lecture**
Classification of gynecological malignancies	• Genital tract malignancies and their risk factors • Clinical findings • Investigations and diagnosis	**Interactive Lecture**
Cesarean section indications/timing/pre and postop care	• Common indications and their categories • Preop ,intra op and post op care in cesarean section	**Interactive Lecture**
Puerperium	• Puerperium and its common issues •	**Interactive Lecture**
Benign and malignant vulvul diseases	• Malignant diseases of vulva • Benign conditions affecting vulva	**Interactive Lecture**
Menopause and Osteoporosis	• Toes of menopause, • Clinical features • Long term health sequel related to menopause especially osteoporosis	**Interactive Lecture**
Maternal collapse/AFE/PE	• Common causes • ABC of resuscitation • CPR and its modification for obs patient	**Interactive Lecture**
Postdates pregnancy	• Definition of term,postterm and postdates pregnancy • Methods of IOL	**Interactive Lecture**

Oligohydramnios and polyhydramnios	• Normal AFI and its abnormalities and its impact on pregnancy • Investigation tools	**Interactive Lecture**
Screening for gynecological cancers	• Common gynecological cancers and their screening strategies especially focusing on cervical screening	**Interactive Lecture**
Fetal growth restriction/SGA	• Growth centiles, difference between SGA and FGR • Risk factors and pathophysiology • Investigations and monitoring during pregnacy	**Interactive Lecture**
Carcinoma of cervix	• Risk factors in males and females • Clinical presentation • Investigations and staging	**Interactive Lecture**
Stages and mechanism of labour	• Definition of labor and its Stages • Define mechanism of normal labor and its Steps	**Interactive Lecture**
Malignant diseases of ovary	• Risk factors • Clinical presentation and stages • Investigations and diagnosis	**Interactive Lecture**
Intrapartum care	• Important components of care • Basics of partogram and CTG	**Interactive Lecture**
Rh sensitization	• What is Rh sensitization • Events associated with sensitization • How to prevent Rh sensitization • How to monitor a patient who has been sensitized	**Interactive Lecture**
Post-menopausal bleeding	• Causes of PMB • Risk factors for PMB and endometrial CA • Investigation and diagnosis	**Interactive Lecture**
Obstructed labor and brow presentation	• Definition of obstructed labor • Normal presentation and attitude, which diameters will deliver and which would not and why	**Interactive Lecture**
Poor pregnancy outcome/IUFD	• Risk factors • Clinical presentation and diagnosis	**Interactive Lecture**
Operative delivery	• Types of instruments used for operative birth • Fetal and maternal indications of use • Complications	**Interactive Lecture**

Third stage of labor and primary PPH	• PPH types and AMTSL • Prevention and management • Risk factors	**Interactive Lecture**
Fetal surveillance	• Importance of fetal surveillance • SFH,Ultrasound for fetal wellbeing and biometry,CTG,FKCC,	**Interactive Lecture**

WORKSHOPS	
Topics	**Objectives: By the end of the WORKSHOP the students will be able to:**
Breast feeding counseling	• Counsel postnatal/ post op patients regarding benefits of breastfeeding • Clarify myths and misconceptions regarding BF • Enhances their communication skill

PATIENT SAFETY

Introduction

Patient Safety is an essential component of medical education, emphasizing the knowledge, skills, and attitudes required to provide safe, effective, and compassionate healthcare. The module aims to develop awareness among medical students regarding common medical errors, system-based safety principles, teamwork, communication, and quality improvement.

Through interactive sessions, clinical discussions, and reflective exercises, students will understand the importance of a culture of safety and their role in ensuring patient well-being during clinical practice.

Course Objectives

By the end of the Patient Safety course, MBBS Fourth Year students will be able to:

- Understand the concept and importance of patient safety in healthcare delivery
- Identify common causes of medical errors and adverse events
- Apply principles of safe clinical practice to minimize patient harm
- Promote teamwork, communication, and professionalism in patient care
- Develop awareness of system-based approaches to error prevention

Learning Outcomes

At the completion of the course, students will be able to:

- Recognize adverse events and near-misses in clinical settings
- Explain the role of human factors in patient safety
- Apply principles of effective communication during patient care and handovers
- Participate in error reporting and root cause analysis processes
- Demonstrate professional accountability and ethical responsibility in ensuring patient safety

PATIENT SAFETY		
Topics of the Module	**Objectives: By the end of the module the students will be able to:**	**Teaching Strategies**
Introduction to Patient Safety	• • Define patient safety and explain its importance in clinical practice. • Describe the burden of preventable harm in healthcare systems. • Recognize patient safety as a core professional responsibility of a clinician.	**Interactive Lecturer**
From Error to Harm	• • Differentiate between error, near miss, adverse event, and sentinel event. • Explain how system failures and human errors contribute to patient harm. • Identify common clinical scenarios where errors occur in hospital settings.	**Interactive Lecturer**
Human Factors and Safety	• • Explain the role of human factors (fatigue, workload, cognition, communication) in medical errors. • Recognize how environmental and organizational factors influence clinician performance. • Apply principles of human factors to reduce risk in clinical care.	**Interactive Lecturer**
Root Cause Analyses and Actions	• • Describe the purpose and steps of Root Cause Analysis (RCA) • . Participate in identifying system-based causes of adverse events. • Propose corrective and preventive actions based on RCA findings.	**Interactive Lecturer**
Achieving Total Systems Safety Pursuing	• • Explain the concept of systems thinking in patient safety. • Identify high-risk processes and safety barriers in healthcare systems. • Advocate for standardization, checklists, and protocols to improve safety.	**Interactive Lecturer**
Professional Accountability and a Just Culture	• Define professional accountability and Just Culture principles. • Distinguish between blameworthy and non-blameworthy actions. • Demonstrate ethical responsibility in reporting errors without fear of punishment.	**Interactive Lecturer**

Teamwork and Communication	• • Explain the role of effective teamwork in preventing patient harm. • Demonstrate structured communication tools (e.g., SBAR, handovers). • Recognize the impact of hierarchy and communication failures on patient safety.	**Interactive Lecturer**
Responding to Adverse Events	• • Describe appropriate clinical and ethical responses to adverse events. • Demonstrate skills in open disclosure and apology to patients and families. • Recognize the emotional impact of adverse events on healthcare providers (second victims).	**Interactive Lecturer**
Introduction to Patient Safety	• Define patient safety and explain its importance in clinical practice. • Describe the burden of preventable harm in healthcare systems. • Recognize patient safety as a core professional responsibility of a clinician.	**Interactive Lecturer**
From Error to Harm	• • Differentiate between error, near miss, adverse event, and sentinel event. • Explain how system failures and human errors contribute to patient harm. • Identify common clinical scenarios where errors occur in hospital settings.	**Interactive Lecturer**

CLINICAL ROTATION SCHEDULE 4TH YEAR

Clinical Rotation Schedule 4th Year MBBS Batch 07 (2023 - 2027) Class of 2025-26
Karachi Institute of Medical Sciences
Ref. No: KIMS/DME/2025/11/

Clerkships	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6
Clerkship - 1 (Weeks 06/06)	EYE (6 weeks)	ENT (6 weeks)	Community Medicine (6 weeks)	Gen Surgery – I (3wks), Gen Surgery II(2wks), Med Oncology(wk1)	Gen Medicine(2wks), Endo (2wks), Rheuma(2wks)	Dermatology(3wks), Psychiatry(3wks)
				Critical Care	Total (6 weeks)	Emergency Medicine & Critical care
				(Total 6 weeks)		(Total 6 weeks)
Clerkship - 2 (Weeks 06/06)	ENT (6 weeks)	Community Medicine (6 weeks)	Gen Surgery – I (3wks), Gen Surgery II(2wks), Med Oncology(wk1)	Gen Medicine(2wks), Endo (2wks), Rheuma(2wks)	Dermatology(3wks), Psychiatry(3wks)	EYE (6 weeks)
			Critical Care	Total (6 weeks)	Emergency Medicine & Critical care	
			(Total 6 weeks)		(Total 6 weeks)	
END OF Block Exam (1WK)						
Clerkship - 3 (Weeks 06/06)	Community Medicine (6 weeks)	Gen Surgery – I (3wks), Gen Surgery II(2wks), Med Oncology(wk1)	Gen Medicine(2wks), Endo (2wks), Rheuma (2wks)	Dermatology(3wks), Psychiatry(3wks)	EYE (6 weeks)	ENT (6 weeks)
		Critical Care	Total (6 weeks)	Emergency Medicine & Critical care		
		(Total 6 weeks)		(Total 6 weeks)		
Clerkship - 4 (Weeks 06/06)	Gen Surgery – I (3wks), Gen Surgery II(2wks), Med Oncology(wk1)	Gen Medicine(2wks), Endo (2wks), Rheuma(2wks)	Dermatology(3wks), Psychiatry(3wks)	EYE (6 weeks)	ENT (6 weeks)	Community Medicine (6 weeks)
	Critical Care	Total (6 weeks)	Emergency Medicine & Critical care			
	(Total 6 weeks)		(Total 6 weeks)			
END OF Block Exam(1WK)						
Clerkship - 5 (Week 06/06)	Gen Medicine(2wks), Endo (2wks), Rheuma(2wks)	Dermatology(3wks), Psychiatry(3wks)	EYE (6 weeks)	ENT (6 weeks)	Community Medicine (6 weeks)	Gen Surgery – I (3wks), Gen Surgery II(2wks), Med Oncology(wk1)
		Emergency Medicine & Critical care				Critical Care
	Total (6 weeks)	(Total 6 weeks)				(Total 6 weeks)
Clerkship - 6 (Weeks 06/06)	Dermatology(3wks), Psychiatry(3wks)	EYE (6 weeks)	ENT (6 weeks)	Community Medicine (6 weeks)	Gen Surgery – I (3wks), Gen Surgery II(2wks), Med Oncology(wk1)	Gen Medicine(2wks), Endo (2wks), Rheuma(2wks)
	Emergency Medicine & Critical care				Critical Care	
	(Total 6 weeks)				(Total 6 weeks)	Total (6 weeks)
PRE-Annual Exam(2WKS)						

Clinical Rotation Plan

<table>
<tr><td colspan="11">Year IV (40 Wks)</td></tr>
<tr><td colspan="4">BLOCK X</td><td colspan="4">BLOCK XI</td><td colspan="2">BLOCK XII</td><td>2 wks</td></tr>
<tr><td colspan="4">12 + 1 = 13 wks</td><td colspan="4">12 + 1 = 13 wks</td><td colspan="2" rowspan="2">12 wks</td><td rowspan="3">Pre Annual Exam</td></tr>
<tr><td colspan="3">12 wks</td><td>1 wk</td><td colspan="3">12 wks</td><td>1 wk</td></tr>
<tr><td colspan="3">• Cardiovascular System
• Respiratory System
• Oral cavity and Gastrointestinal tract
• Hepatobiliary system and Pancreas</td><td>E
O
B</td><td colspan="3">• Urinary System
• Male Genital system
• Female Genital system
• Diseases of Breast
• The Skin
• Bones, Joints and Soft Tissue</td><td>E O
B</td><td colspan="2">• The Endocrine system
• Central nervous and peripheral nervous system
• Hematology</td></tr>
<tr><td colspan="11">Classroom Teaching: Special Pathology, Medicine, Surgery, Gynae, Paeds, Com Med, Eye & ENT lectures/ SDGs/ CBLs longitudinally</td></tr>
<tr><td colspan="11">Clinical Rotations (min. 20 hrs/ wk)</td></tr>
<tr><td>Batches</td><td>Grp1</td><td>Grp2</td><td>Grp3</td><td colspan="3">Grp4</td><td colspan="3">Grp5</td><td colspan="2">Grp6</td></tr>
<tr><td>Duration</td><td>6wks</td><td>6wks</td><td>6wks</td><td colspan="3">6wks</td><td colspan="3">6wks</td><td colspan="2">6wks</td></tr>
<tr><td></td><td></td><td></td><td></td><td>3wkS</td><td>2wks</td><td>1wk</td><td>2wks</td><td>2wks</td><td>2wks</td><td>3wks</td><td>3wks</td></tr>
<tr><td>Dept</td><td>Eye</td><td>ENT</td><td>Community Medicine</td><td>Gen SurgeryI</td><td>Gen SurgeryII</td><td>Med Oncology</td><td>Gen Med</td><td>Endo</td><td>Rheuma</td><td>Dermatology</td><td>Psychiatry</td></tr>
<tr><td></td><td></td><td></td><td></td><td colspan="3">Critical Care 20</td><td></td><td></td><td></td><td colspan="2">Emergency Medicine & Critical care 20</td></tr>
<tr><td>Hours</td><td>120</td><td>120</td><td>120</td><td>45+10=55</td><td>30+10=40</td><td>25=25</td><td>40</td><td>40</td><td>40</td><td>50+10=60</td><td>50+10=60</td></tr>
</table>

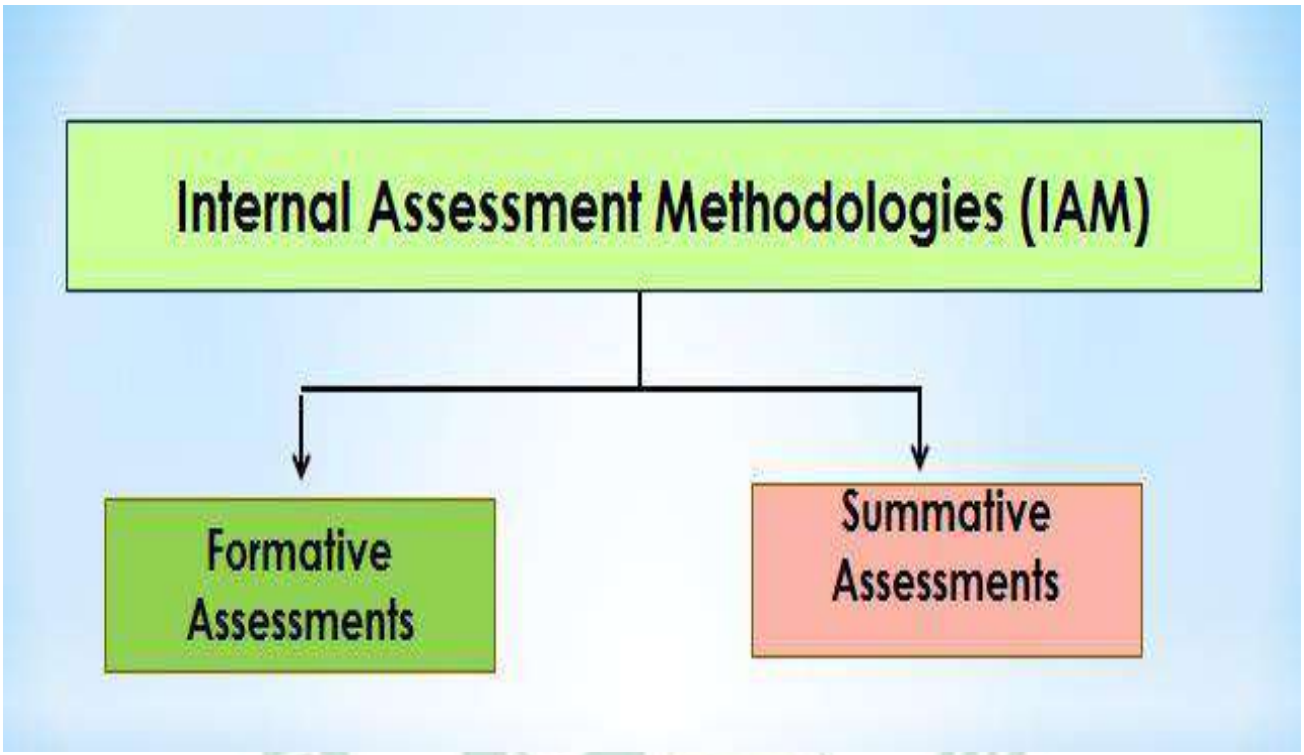
LEARNING RESOURCES

Special Pathology	**Text Books**	• Robbins & cotrans basis of pathology 11th edition • Robbins & cotrans basic of pathology text book of medical microbiology Lange
Community Medicine & Public Health	**Text Books**	• Public Health and Community Medicine by Muhammad Ilyas • Parks's Text book of Preventive Medicine & Social Medicine by K. Park
Research Methodology & EBM	**Text Books**	• Epidemiology by Leon Gordis • Biostatistics by Kuzma
Ophthalmology	**Text Books**	Kanski's Clinical Ophthalmology: A Systematic Approach: Excellent for its systematic approach, comprehensive coverage, and valuable clinical images (atlas). • Basic & Clinical Science Course (BCSC) Series: A comprehensive series from the AAO, great for in-depth knowledge. The Wills Eye Manual: Office and Emergency Room Diagnosis and Treatment of Eye Disease: A quick, practical guide for clinical settings. • Clinical Ophthalmology Text & Atlas by Shafi M. Jatoi: Designed for undergrads, covering the full curriculum with many photos.
ENT	**Text Books**	• Dhingra text book of ENT by P.L dhingra • Ear Nose and Throat by Udaipurwala
Medicine	**Text Books**	• Davidson's Principles and Practice of Medicine • Current Medical Diagnosis and Treatment • Oxford Handbook of Clinical Medicine

		• Macleod Clinical Methods • Hutchinson Clinical Methods
Surgery	**Text Books**	• Bailey & Love 28th edition • Browe's introduction to the signs and symptoms of surgical disease's
Gynecology & Obstetrics Surgery	**Text Books**	• Obstetrics by Ten teachers 21st edition • Gynae by ten teachers 21st edition • Dewhurst text book of Obstetrics and gynae
Paediatrics	**Text Books**	• Basis of Pediatrics (Pervaiz Akbar khan) • llustrated textbook of Paediatrics (Haque and Talal) • Current diagnosis and treatment Paediatrics (William W.Hay Jr./Myron J Levin) • •Clinical methods (Macleo`s clinical examination)
Patient Safety	**Text Books** **Reference Books**	• Patient Safety: Protect Yourself from Medical Errors – Institute for Healthcare Improvement (IHI) • Essentials of Patient Safety – Charles Vincent
E-Learning Resource		
Learning Management System (LMS) Link	https://kimsmalir.edu.pk/	

EXAMINATION

Each student undergoes internal and external series of examinations at KIMS



Internal Assessment focuses on the process of learning. It gives priority to psychomotor and affective skills. Its results are usually immediately made known to the learner and discussed with him/her to make the process of learning better.

There are two types of internal assessments

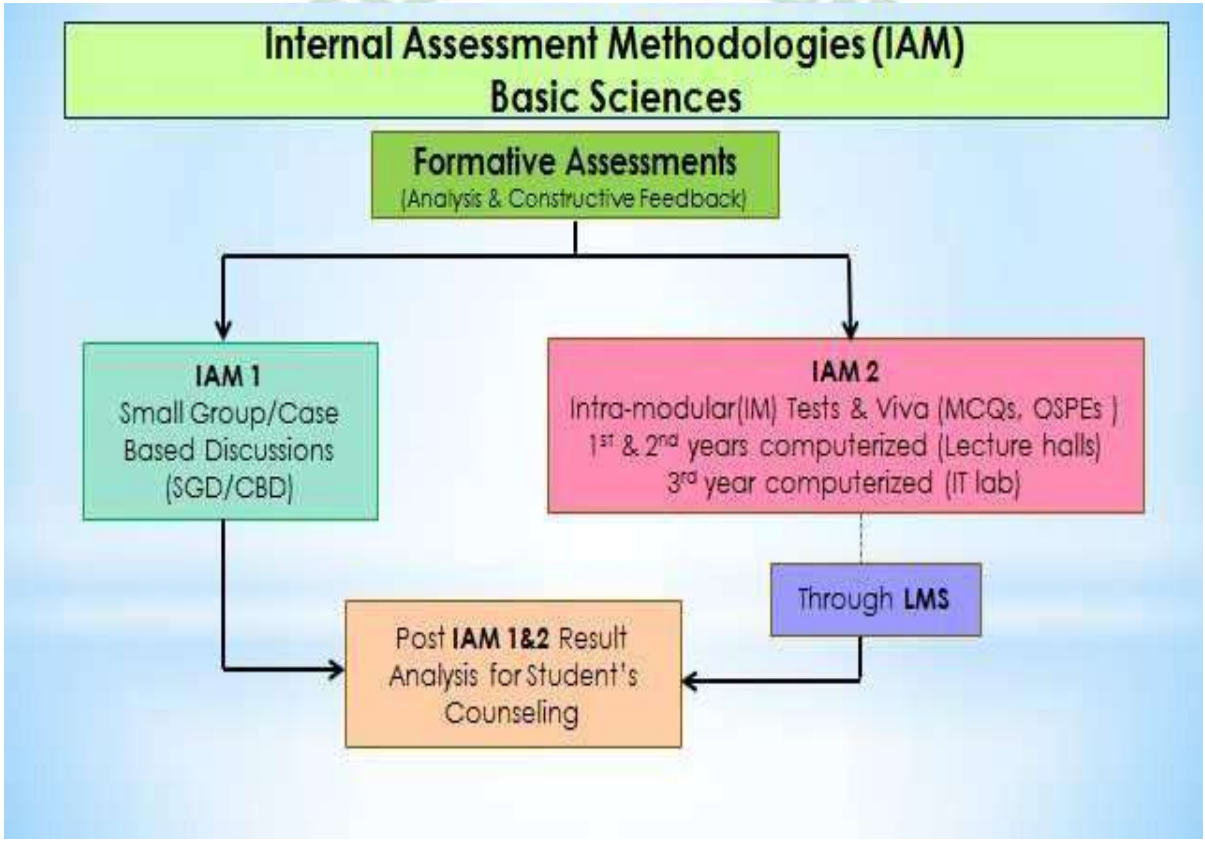
1. Formative Assessment
2. Summative Assessment

Formative Assessment

Formative assessment monitors students' learning and provides ongoing feedback that can be used by teachers to improve their teaching and by students to improve their learning.

They are meant to help students identify their strengths and weaknesses and target areas that need work.

At KIMS students undergo series of written class tests (MCQs, Short Answer Questions), OSPE, Viva Exam and Journal Clubs to enhance their learning experiences.



Summative Assessment

The goal of summative assessment is to evaluate student learning at the end of a module by comparing it against some standard or benchmark. Summative assessments are counted in the internal assessment which carries 20% weightage of total exam marks.

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Internal Assessment (Theory)

(Pathology / Community Medicine & Public Health)

Criteria	Weightage (%)	Blocks (I / II / III)	Marks Details
Continuous Assessment (Average score of class tests / quizzes)	**03%**	**I / II / III**	**Marks Obtained × 3 / Total Marks**
End of Block (EOB) Exam (For each discipline)	**05%**	**I / II / III**	**Marks Obtained × 5 / Total Marks**
Attendance	**02%**	**I / II / III**	**95% = 2 90–94% = 1.5 85–89% = 1**
Pre-Annual Examination (Theory Papers I, II & III)	**10%**	—	**Marks Obtained × 10 / Total Marks**
Final Internal Assessment (Theory)	**20%**	—	—

Internal Assessment (Practical)

(Pathology / Community Medicine & Public Health)

Criteria	Weightage (%)	Blocks (I / II / III)	Marks Details
Continuous Assessment (EOB)	05%	I / II / III	Marks Obtained × 5 / Total Marks
Attendance	02%	I / II / III	95% = 2 90–94% = 1.5 85–89% = 1
Practical Books / Logbooks	01%	—	Marks Obtained × 1 / Total Marks
Discipline / Attitude / Responsibility & Teamwork	02%	—	Marks Obtained × 2 / Total Marks
Pre-Annual Practical Examination	10%	—	Marks Obtained × 10 / Total Marks
Final Internal Assessment (Practical)	**20%**	—	—

Internal Assessment (Theory) – ENT & Ophthalmology

Assessment Tool	Weightage (%)
Continuous Assessment (Periodical Class Tests)	03%
End of Rotation / Block (EOB) Exam	05%
Pre-Annual Examination	10%
Attendance	02%
Final Internal Assessment (Theory)	**20%**

Attendance Criteria

Attendance (%)	Marks
≥ 95%	2
90 – 94%	1.5
85 – 89%	1

Internal Assessment (Practical) – ENT & Ophthalmology

Assessment Tool	Weightage (%)
End of Rotation (EOR) Exam (Ward Test + OSCE / Viva of EOB)	06%
Logbooks / Portfolio + Discipline / Attitude / Responsibility & Teamwork	02%
Pre-Annual Practical Exam (OSCE / Viva)	10%
Attendance	02%
Final Internal Assessment (Practical)	**20%**

Summative/Continuous Assessment:

This will include:

1. Module Tests
2. Pre-Prof Examination

The college will send your continuous assessment marks directly to JSMU

Prof-Exam conducted by NUMS will include:

1. Theory paper of One Best Answer
2. OSPE Exam
3. Continuous Assessment results

FEEDBACK AND COUNSELING FACILITIES FOR STUDENTS

A. Senior faculty members of all departments are actively involved in resolving academic and non-academic issues of allocated students and carrier counseling.

B. Psychosocial counseling sessions (life skills) are regularly conducted by qualified student counselor

C. Individual students are also referred to the student counselor, if needed

Robust feedback systems

1. **Feedback on attendance**

Attendance report is forwarded to students and parents on daily basis

2. **Feedback on academic performance**

Academic performance reports are also regularly forwarded to students and parents. Moreover, individual students are given feedback on their academic performance during tutorials. MCQ and SEQ papers are also discussed with students in small groups.

3. **Parents of weak students are regularly contacted (PTM sessions)**

1. Students' feedback on assessment strategies will be taken in a preformed proforma for feedback twice a year i.e., Mid-term and pre-prof exams.

2. Feedback of theory as well as OSPE/OSCE & Viva will be taken.