

# WAH MEDICAL COLLEGE

2021-2025

A photograph of the Wah Medical College building, a large, modern structure with a brown facade. The building is partially obscured by a large blue diagonal graphic element. A flagpole with a blue flag is visible in the foreground. The sky is blue with some clouds.

Wah  
Medical  
College

Department of Medical Education

STUDY GUIDE  
3rd YEAR MBBS  
Y3BIX

2021-2025

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## **1. VISION**

National University of Medical Sciences envisions a world with a better quality of life for all by enhancing our contribution to healthcare, education, innovation and research.



## **2. MISSION**

“To produce competent medical professional graduates equipped with sound knowledge & research capabilities based on scientific principles, imbued with ethics and moral values primed to serve the community through the profession and pursue research & advanced training in any branch of medicine”.

## 1. Program Learning Outcomes of WMC MBBS Program:

At the end of our five-year MBBS program, the graduates should be able to:

PLO 1: Independently manage common, non-critical clinical problems.

PLO 2: Assist in the management of critically ill patients & demonstrate competency in life saving procedures.

PLO 3: Exhibit the attributes of an ethical professional.

PLO 4: Conduct research which brings relevance to health care practices.

PLO 5: Act as an efficient community health promoter.

PLO 6: Exhibit scientific knowledge in all professional activities.

PLO 7: Demonstrate clear and efficient written & verbal communication skills.

PLO 8: Exhibit the habits of a lifelong learner.

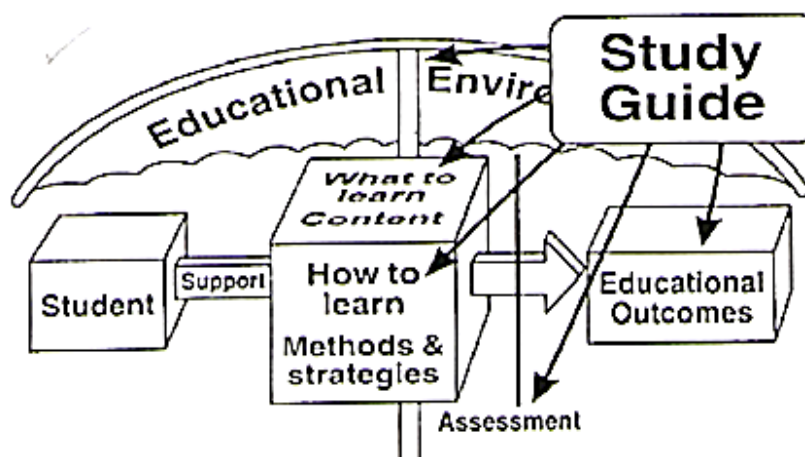
## 2. Introduction to the Study Guide:

### I. Objectives of the Study Guide

Dear Students,

We, at the Department of Medical Education, Wah Medical College, have developed this study guide especially for you. This study guide aims to:

- Inform you about the organization of learning programs in this block which will help you to contact the right person in case of any difficulty.
- Help you in organizing and managing your studies throughout the block
- Guide you on assessment methods, rules, and regulations.
- Define the outcomes which are expected to be achieved at the end of the block.
- Identify the learning strategies that will be implemented to achieve the block outcomes such as lectures, small group discussions, clinical skills, demonstration, tutorial, and case-based learning
- Provide a list of learning resources such as books, and journals for students to consult to maximize their learning.



**Figure 1. Objectives of the study Guide**(HARDEN, J.M. LAIDLAW, E.A. HESKETH, 1999)


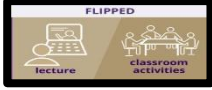







## II. Commonly used abbreviations & Logos in the study guide

### Learning Outcomes:

Learning outcomes are statements that define the expected goal of your course, lesson, or activity in terms of demonstrable skills or knowledge that will be acquired by you as a result of instruction. In simple words, these are the things that you must be able to tell or do with the required attitude after learning a particular topic.

### 1. Educational Strategies:

These are the methodologies through which you will be taught by your instructors. These can include.

Abbreviation	Logos
LGIS: Large Group interactive session/Lecture	
Flipped Classroom	
CBL: Case based learning.	
Practicals	
Demonstrations	
SGD: Small group discussions	
BST: Bedside Teaching	
Skill Lab	
Clinical Teaching (OPD/ OT/ IPD)	

## **Large Group Interactive Sessions**

In a large group, the lecturer introduces a topic or common clinical condition and explains the underlying phenomena through questions, pictures, videos of patient's interviews, exercises, etc. Students are actively involved in the learning process.

## **Flipped classroom**

A pedagogical approach in which the conventional notion of classroom-based learning is inverted: students are introduced to the learning material before class with classroom time then being used to deepen understanding through discussion with peers and problem-solving activities facilitated by teachers.

## **Small Group Discussion**

This format helps students to clarify concepts, acquired skills or attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews, or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials, and self-study. The facilitator's role is to ask probing questions, summarize, or rephrase to help clarify concepts.

## **Case-Based Learning**

This is a small group discussion format where learning is focused around a series of questions based on a clinical scenario. Specifically, designed case scenarios and the learning outcomes to be achieved are shared with the student before the session. Students prepare for the CBL and during class they discuss and answer the questions applying relevant knowledge gained in clinical and basic health sciences during the block. Faculty members are present as a guide and an assessor.

## **Self-Directed Study**

Students assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from learning Resource Center, teachers, and resource persons within and outside the college. Students can utilize the time within the college schedule hours for self-study.

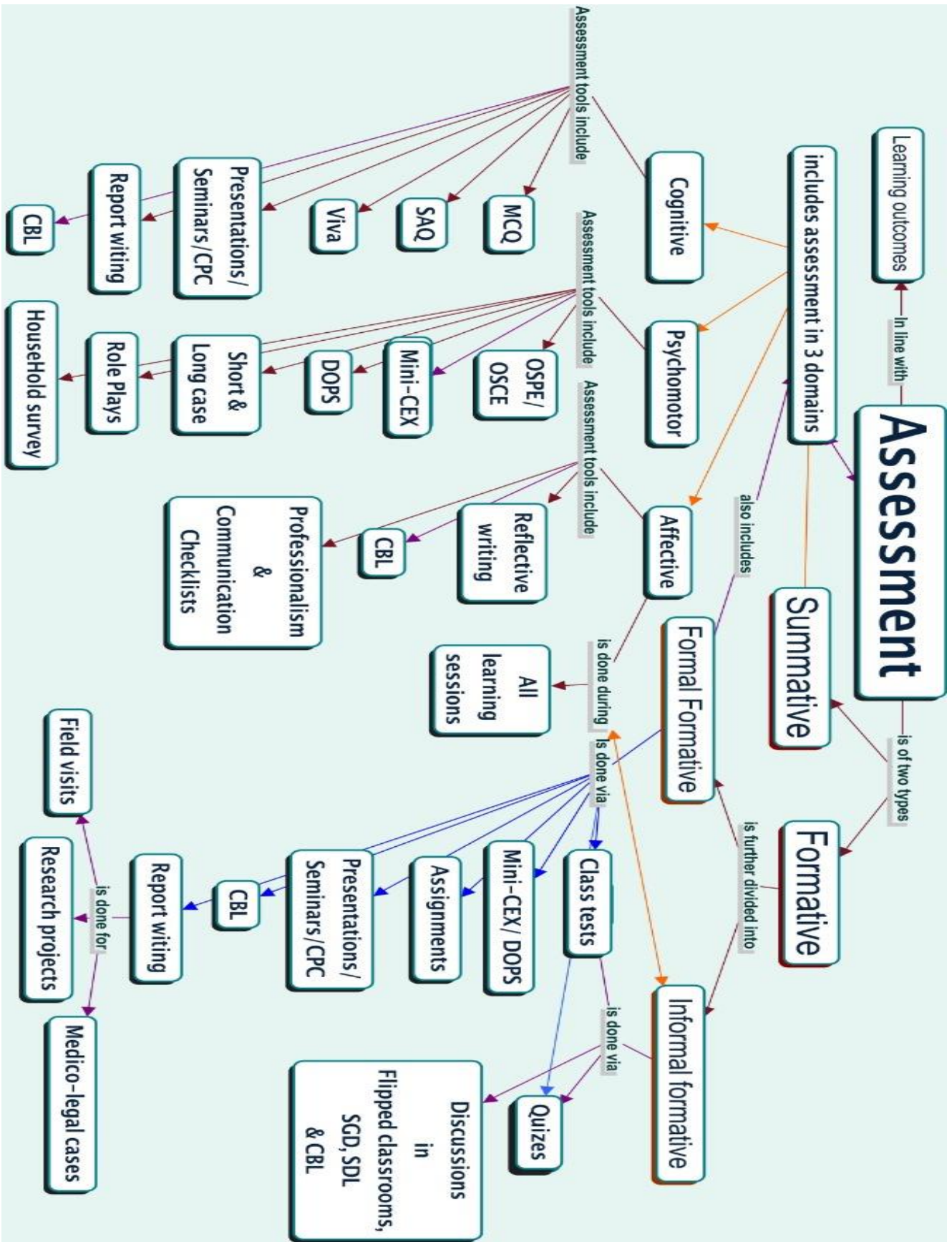
## **Bedside teaching**

Students learn clinical case scenarios/ patient examination firsthand at the patient's bedside with the help of the instructor in case of online teaching, the same cases will be shown to you online with the help of videos and live clinical teaching.



### 3. Assessment Map & Strategies

Assessment map & strategies should be consulted for detailed format on how assessment take place



## 4. Formative assessment

Formative assessments are used in the middle of a lesson/module/block to determine how students are progressing. During the block, students shall be continually formatively assessed in all three learning domains i.e., Cognitive, Psychomotor & Affective via:

1. Class tests, Assignments, Presentations, Quizzes
  2. Assessment of professionalism via checklists provided in logbooks/ practical copies in all learning sessions.
  3. Viva
  4. Subject-specific & Integrated CBL Assessment
  5. Practical Assessment (OSPE)
  6. Ward tests (Mini-CEX, DOPS, OSCE)
- Some of these assessments will be used only to inform students where they stand against benchmarks (Informal Formative) and some will be used in the calculation of internal assessment (Formal Formative).
  - The scores of all formal formative assessments shall be used for calculation of the **internal assessment** according to NUMS curriculum. The weighting of internal assessment shall be **20%** in 3<sup>rd</sup> professional MBBS Examination. Internal assessment will be submitted to NUMS examination branch at least two weeks prior to the annual exam.
  - The same internal assessment shall be counted both for annual and supplementary examinations. The students who are relegated, however, can improve the internal assessment during the subsequent year.

## 5. Summative Assessment

- In a summative assessment, success is measured at the end of a checkpoint. They will be in the form of End of the block (EBE) exams; theory & practical / OSPE, OSCE, Ward test, pre-annual and professional exams.
- There shall be **three EBE** and one **pre-annual** examination.
  - To be eligible to sit in the pre-annual exam a student must pass at least **50% of all the formal formative assessments** conducted during the year.
  - The final decision of eligibility to sit in the pre-annual exam for the students failing to meet the requirements will be taken by the respective HODs & the departmental board of studies (dBOS). This decision will be on a case-to-case basis depending upon the student's performance in all 3 learning domains throughout the year.
  - **Logbooks** will be maintained to record students' performance during each clinical subject rotation. The ward test will also contribute towards internal assessment. Failure in clinical assessment will require the student to repeat the end rotation exam.

- The structure of the paper of all the EBE and pre-annual will be the same as that for the annual examination though syllabus will be different.
- The syllabus for EBE will be announced by the department at least 02 weeks prior to examination.
- Pre-annual examination will be from the whole syllabus.
- The date sheet for EBE and pre-annual examinations will be prepared by coordinators of 3rd year while the examinations will be conducted by the respective departments.

### **Annual Professional Examination:**

- A student shall fulfill the following conditions to be eligible to appear in a professional examination:
  - Registered in NUMS and has studied the prescribed courses in the academic year.
  - Have at least **75% cumulative attendance in each subject** at the end of the academic year. Students' presence will be marked in all sessions.
  - Paid the prescribed examination fee.
  - Paid all college dues for the current academic year.
  - Have **no major disciplinary case** during the current academic year.
- Annual theory and practical Examination shall be of **300** marks each in Pharmacology & G. Pathology + Microbiology and **200** in Forensic Medicine & Toxicology.
- The weighting of the professional examination will be 80 %, each for theory and practical, which will contribute towards the final scores of the subject.
- An aggregate of **50% in Theory and 50% in Practical** of that subject will be declared pass in that subject.

### **Marks Distribution will be as follows:**

#### **GENERAL PATHOLOGY & MICROBIOLOGY (300) & PHARMACOLOGY (300)**

**Total Marks Theory** MCQs: 60 (40%) + SEQs:60 (40%) + IA:30 (20%) = 150

#### **Paper 1:**

- a. 80 MCQs of 60 marks (0.75 mark each)
- b. Marks of MCQ components shall be rationalized to **40% weightage** out of 150. If a candidate obtains 70 marks in MCQs it will be rationalized as:  
 $70/80 \times 60 = 52.50$
- c. Time = 80 min

#### **Paper-2:**

- a. 9x SEQs (7SEQs of 6 Marks each & 2 SEQs of 9 Marks each= 60 Marks)
- b. Time = 100 min
- c. Pass Marks = 75

#### **Internal Assessment**

- a. 20% = 30 marks.
- b. Detail of marks distribution for IA is given in the table below.

#### **FORENSIC MEDICINE (200)**

**Total Marks of theory** = 100 = 40MCQs + 40 SEQs+ 20 IA

**Paper-1:** 40 x MCQs (1 mark each) = 40 marks

**Paper-2:** 7x SEQs (5x6 Marks & 2x5 Marks) = 40 marks

Time Allowed= 03 hrs

**Internal assessment** 20% = 20 marks

Pass Marks= 50 %in Theory & 50 % in Practical each

<b>Internal Assessment -Theory</b>		
	<b>Weighting – 20% of 150 = 30 marks</b>	<b>Weighting – 20% of 100 = 20 marks</b>
<b>Items for IA</b>	<b>Weightings</b>	<b>Weightings</b>
Attendance in Lectures: ≥ 90% = 10 80-89% =7 75-79% = 5	10% of 30 = 3 marks 7% of 30 = 2.1 marks 5% of 30 = 1.5 marks	10% of 20 = 2 marks 7% of 20 = 1.4 marks 5% of 20 = 1 mark
EBE/ Theory exam of clinical rotation	45% of 30 = 13.5 marks	45% of 20 = 9 marks
Continuous assessment: Average score in theory exams (Formal Formative)	20% of 30 = 6 marks	20% of 20 = 4
Pre-annual Exam	25% of 30 = 7.5 marks	25% of 20 = 5
<b>Total</b>	<b>3 + 13.5 + 6 + 7.5 = 30 marks</b>	<b>2 + 9 + 4 + 5 = 20 marks</b>

<b>Internal Assessment -Practical</b>		
	<b>Weighting – 20% of 150 = 30 marks</b>	<b>Weighting – 20% of 100 = 20 marks</b>
<b>Items for IA</b>	<b>Weightings</b>	<b>Weightings</b>
Attendance in Practicals: > 90% = 10 80-89% =7 75-79% = 5	10% of 30 = 3 marks 7% of 30 = 2.1 marks 5% of 30 = 1.5 marks	10% of 20 = 2 marks 7% of 20 = 1.4 marks 5% of 20 = 1 mark
End of Ward rotation (Skill assessment)	45% of 30 = 13.5 marks	45% of 20 = 9 marks
Continuous assessment: Average score in skill assessment (Formal Formative)	20% of 30 = 6	20% of 20 = 4
Pre-annual Exam	25% = 7.5	25% of 20 = 5
<b>Total</b>	<b>3 + 13.5 + 6 + 7.5 = 30 marks</b>	<b>2 + 9 + 4 + 5 = 20 marks</b>

## 6. Structured Summary of Y3B-IX M- XIX Digestive System & Metabolism - II Module

BLOCKS	BLOCK – IX
<b>Module</b>	<b>MODULE- XIX Digestive System &amp; Metabolism - II Module</b>
<b>DURATION</b>	<b>03 weeks</b>
<b>Prerequisite Module</b>	2 <sup>nd</sup> Prof. Exam
<b>Pharmacology</b>	Drugs acting on GIT, Endocrinology
<b>Pathology</b>	Nutritional Diseases, Pathogens causing Gastrointestinal infections
<b>Forensic Medicine</b>	Specific Poisons
<b>Community Medicine</b>	Parasitology, Prevention of Typhoid, Cholera, Amoebiasis, Giardiasis, and Diarrheal diseases
<b>Medicine</b>	Diarrhea, jaundice, fever, acute viral hepatitis, neoplasia, AIDS, Bronchial Asthma
<b>Surgery</b>	Abdominal injury, acute abdomen, skin swellings, sinuses and fistulas, wound infections
<b>Pediatrics</b>	Anemias, pediatric GIT illnesses, infectious diseases
<b>Gynecology</b>	Acute pelvic pain and upper GIT infections
<b>ENT</b>	Oral cavity, pharynx. larynx and oesophagus
<b>Ophthalmology</b>	Retina, extra ocular muscles, ocular injuries, common ophthalmic conditions

## 7. Block Development Committee

<b>Chairperson</b>	Prof. Brig (R) Dr. Tariq Masood Malik	
<b>Block In charge</b>	Dr. Lubna Ghazal	
<b>Members/ Resource persons</b>	<b>Pharmacology:</b> <b>Forensic Medicine:</b> <b>Pathology:</b> <b>Community Medicine &amp; Research Methodology</b> <b>Medicine</b> <b>Surgery</b> <b>Pediatrics</b> <b>Gynecology</b> <b>ENT</b> <b>EYE</b> <b>P-CMILE</b>	Dr. Saima Rafique Dr. Muhammad Iqbal Dr. Lubna Ghazal Dr. Robina Mushtaq Rizvi Dr. Robina Mushtaq Rizvi Dr. Riffat Omer Dr. Naeem Akhter Dr. Saba Mushtaq Dr. Khair-un Nisa Col (R) Muhammad Asad Chughtai Dr. Mariyam Shafi Dr. Ambreen Ansar
<b>Study guide developed By</b>	Department of Medical Education Wah Medical College under Supervision of Prof. Dr. Musarat Ramzan	
<b>Resource person for Study Guide</b>	Dr. Ambreen Ansar	

## 8. Course content

### Pharmacology

#### Subject Learning Outcomes (SLO)

#### Subject Learning Outcomes (SLO)

After completion of the course of Pharmacology & Therapeutics, the students would be able to:

1. Correlate the core concepts of pharmacokinetic and pharmacodynamic parameters of drugs to their therapeutic relevance. (PLO -1, 2, 6)
2. Rationalize the drug treatment strategies for common diseases in our community. (PLO -1,2,5,6)
3. Identify and report the potential adverse drug reactions (ADR), drug- drug interactions during polypharmacy. (PLO-5,6)
4. Demonstrate the foundation skills for safe and effective treatment by prescribing rational generic drugs for a given disease condition. (PLO-1,2, 5, 6)
5. Counsel the patient effectively on the proper use of prescription drugs. (PLO-1,2, 5, 6)
6. Interpret the data of studies designed to observe the effects of various drugs. (PLO-6)

#### Block Learning Outcomes (BLO):

- **BLO-1:** Develop and justify the management plan of common disorders of gastrointestinal tract (peptic ulcer, vomiting, constipation, diarrhea, and hepatitis) (SLO-2,3,4,5)
- **BLO-2:** Correlate the pathophysiological basis of pituitary, thyroid, pancreatic, adrenal and gonadal hormones to their therapeutics. (SLO-2,3,4,5)

S#	Topic	Educational Strategy	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Anti-Emetics	LGIS, CBL	Dr. Abeera, (Asst. Prof)	Must know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>● Justify the use of specific antiemetic drugs in patients with vomiting due to various causes i.e GI infection, motion sickness, hyperemesis gravidarum &amp; chemotherapy induced vomiting. (BLO-1) <i>MCQ/SEQ (S/F)</i></li> </ul>				
2.	Drugs used to treat diarrhea and inflammatory bowel syndrome	LGIS	Dr. Saima, (Asst. Prof)	Must know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>● Justify the use of various drugs in the treatment of acute / chronic diarrhea. (BLO-1) <i>MCQ/SEQ (S/F)</i></li> </ul>				
3.	Drugs used to treat inflammatory bowel disease	LGIS	Dr. Saima, (Asst. Prof)	Good to know

<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Summarize the mechanism of action, uses, adverse effects &amp; drug interactions of drugs used for treatment of inflammatory bowel disease. (BLO-1) <i>MCQ/SEQ (S/F)</i></li> </ul>				
4.	Drugs used to treat acid peptic disease (APD)	Flipped Classroom, CBL	Dr Ayesha Afzal (Assoc. Prof)	Must know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Rationalize the use of various drugs &amp; drug regimens in treatment of acid peptic disease/peptic ulcer. (BLO-1) <i>MCQ/SEQ (S/F)</i></li> </ul>				
5.	Anti-Helminthic Drugs	LGIS	Dr. Saima, (Asst. Prof)	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Rationalize the use of drugs in different helminthic infections. (BLO-1) <i>MCQ/SEQ (S/F)</i></li> </ul>				
6.	Anti- Amoebic Drugs	LGIS	Dr Ayesha Afzal, (Assoc. Prof)	Must know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Discuss the role of different anti-amoebic drugs in treatment of various forms of amoebiasis. (BLO-1) <i>MCQ/SEQ (S/F)</i></li> </ul>				
7.	Laxatives & Purgatives	LGIS	Dr. Abeera, (Asst. Prof)	Must know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Evaluate the role of laxatives &amp; purgatives in treatment of constipation. (BLO-1) <i>MCQ/SEQ (S/F)</i></li> </ul>				
8.	Treatment of Hepatitis B & C	LGIS	Dr Ayesha Afzal, (Assoc. Prof)	Good to know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Outline the treatment plan for the management of hepatitis B &amp; C. (BLO-1) <i>MCQ/SEQ (S/F)</i></li> </ul>				
9.	Hypothalamic & Pituitary Hormones	LGIS	Dr. Saima, (Asst. Prof)	Nice to know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Relate the pharmacology of agonists &amp; antagonists of hypothalamic &amp; pituitary hormones with its clinical therapeutics. (BLO-2) <i>MCQ/ Assignment (F)</i></li> </ul>				
10.	Gonadal Hormones & Inhibitors	LGIS	Dr Ayesha Afzal, (Assoc. Prof)	Nice to know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Justify the clinical use of gonadal hormones in relation to reproductive physiology. (BLO-2) <i>MCQ (S/F)</i></li> </ul>				



11.	Drugs Used to treat Infertility	LGIS	Dr. Abeera (Asst Prof)	Good to know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Rationalize different treatment modalities for infertility. (BLO-2) <i>MCQ (S/F)</i></li> </ul>				
12.	Drugs affecting uterine motility	LGIS	Dr. Abeera (Asst Prof)	Good to know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Relate the pharmacological effects of drugs affecting uterine motility with its therapeutics. (BLO-2) <i>MCQ (S/F)</i></li> </ul>				

## Practical Work

### Block Learning Outcomes:

After completion of block, students should be able to:

- Justify the selection of priority drugs for certain indications and prescribe medicine accordingly.
- Counsel the patient on the use/adverse effects of administered drugs.

S.#	Topic	Educational Strategy	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	<b>Prescription writing on Acute watery diarrhea &amp; Acid Peptic disease</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof) All Lecturers	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Write a suitable prescription for diarrhea &amp; Acid peptic disease after justifying the selection of a P- drug</li> <li>Counsel the patient regarding route of administration &amp; adverse effects of drugs. <i>Observed OSPE (F &amp; S)</i></li> </ul>				
2.	<b>Prescription writing on Amoebic dysentery &amp; Ankylostomiasis</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof.) All Lecturers	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Write a suitable prescription for amoebic dysentery &amp; ankylostomiasis after justifying the selection of a P- drug</li> <li>Counsel the patient regarding route of administration &amp; adverse effects of drugs. <i>Observed OSPE (F &amp; S)</i></li> </ul>				

# Case Based Learning (CBLs)

**Time: (1.5 hours)**

**Mode of Assessment: Quiz, MCQs, Theory & viva voce**

**Conducted by: All lecturers & Asst. Professors**

**CBL No: 01 Antiemetic Drugs**

## **Case Scenario:**

A female patient is receiving highly emetogenic chemotherapy for metastatic carcinoma. She is pre-treated with Dolasateron to prevent nausea and vomiting. During the infusion phase there was no episode of vomiting but the patient again experienced it after 24 hrs of chemotherapy. Vomiting was controlled by adding dexamethasone.

## **Learning Outcomes:**

### **The students should be able to:**

- Justify the use of specific antiemetic drugs in patients with vomiting due to various causes (chemotherapy induced nausea and vomiting, motion sickness, GI infection, hyperemesis gravidarum).

**CBL No: 02 Acid Peptic Disease**

## **Case Scenario:**

A 30- year-old lady comes to the clinic with complaints of recurrent epigastric pain which is aggravated by spicy food and increased tea intake. Her symptoms increase during stress. She usually takes ant-acids to relieve her heart-burn symptoms. But her symptoms are not completely relieved.

## **Learning Outcomes:**

The students should be able to:

- Justify the treatment plan for the management of patients with acid peptic disease/peptic ulcer.

**CBL No: 03 Gonadal Hormones & Inhibitors**

## **Case Scenario:**

A 53-year-old woman is diagnosed with breast cancer. The “lump” is removed and lymph nodes are negative for signs of cancer. She is started on tamoxifen, a selective estrogen receptor modulator (SERM).

## **Learning Outcomes:**

### **The students should be able to:**

- Justify the clinical use of gonadal hormones in relation to its therapeutics.

## **Learning Resources:**

### **Textbook:**

- Basic and Clinical Pharmacology by Bertram G Katzung 15<sup>th</sup> Edition

### **Reference Books:**

- The Pharmacological Basis of Therapeutics by Goodman & Gilman Latest Edition

### **1. Online resources:**

- <https://www.youtube.com/>
  - Pharmacology lectures by Dr. Najeeb
  - Pharmacology lectures by Kaplan
  - Pharmacology made easy

## 2. Library resources:

- Tripathy KD, Essentials of Medical Pharmacology, 6th Edition.
- Lippincott Illustrated Reviews Pharmacology 7th Edition
- Current Medical Diagnosis and treatment- latest Edition
- Oxford Handbook of clinical medicine by J.A. B. Collier-latest edition
- Workbook and Casebook for Goodman and Gilman's The Pharmacological Basis of Therapeutics: latest Edition.

### ● Teaching Faculty:

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## General Pathology

### Subject Learning Outcomes (SLO):

- Correlate the etiology and morphological changes of prevalent diseases with pathogenesis.
- Devise appropriate plan of lab investigations based on signs & symptoms of patients.
- Correlate cellular responses to stress and toxic insults with clinical presentation and lab reports.
- Interpret the relevant lab procedures required to diagnose common diseases.

### Block Learning Outcomes (BLO):

At the end of third block, the student of 3<sup>rd</sup> year MBBS should be able to:

- Justify the contribution of nutritional factors in common diseases and its effects on the human body.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Dietary Insufficiency Protein energy malnutrition Vitamin deficiencies	LGIS	Dr Lubna Ehtizaz	Good to Know

#### Learning Outcomes:

- Identify the nutritional factors contributing in diseases and the effects it produces.

#### Assessment strategy:

MCQ, SEQ/ SAQ, Viva-Voce

### References/ Learning resources:

- Robbins & Cotran Pathologic Basis of Diseases 10th Edition.
- Robbins Basic Pathology 10th Edition

## Microbiology

### Block Learning Outcomes:

At the end of third block, the student of 3<sup>rd</sup> year MBBS should be able to:

- Correlate the pathogenesis with clinical manifestations, diagnostic modalities, treatment and preventive strategies of microorganisms causing prevalent systemic infections.

S #	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Salmonella, Shigella, Yersinia,	LGIS/ CBL	Asstt Prof Dr Lubna Ghazal, All faculty members	Must know
2.	Vibrio, Campylobacter, Helicobacter species	LGIS/ CBL	Asstt Prof Dr Tahira Tehseen, All faculty members	Must know

**Learning Outcomes:**

- Describe general characteristics (shape, class, growth requirements) of above-mentioned bacilli.
- Correlate their pathogenesis with clinical manifestations, diagnostic modalities, treatment and preventive strategies.
- Differentiate between MDR and XDR typhoid.

**Assessment strategy:**

- MCQ, SEQ/ SAQ/OSPE

3.	Entamoeba, Giardia, Cryptosporidium	LGIS	Asstt Prof Dr Tahira Tehseen	Must know
4.	Intestinal nematodes	LGIS	Asstt Prof Dr Tahira Tehseen	Must know
5.	Tissue nematodes	LGIS	Asstt Prof Dr Sarwer Ali	Must Know

**Learning Outcomes:**

- Describe general characteristics (shape, class, growth requirements) of above-mentioned parasites.
- Correlate their pathogenesis with clinical manifestations, diagnostic modalities, treatment and preventive strategies

**Assessment strategy:**

- MCQ, SEQ/ SAQ/OSPE

**References/ Learning resources:**

- Review of Medical Microbiology and Immunology, Warren Levinson, 15th Edition
- Medical Microbiology, Jawetz, Melnick & Adelberg, 27th Edition

**Online Resources:**

- [www.cdc.gov](http://www.cdc.gov)

**Library resources**

- Foundations in Microbiology 10th edition Kathleen Talaro, Barry Chess

**Microbiology Practical****Learning Outcomes:**

At the end of third block, the student of 3<sup>rd</sup> year MBBS should be able to interpret reports of stool, urine and blood C/S and correlate with the disease process.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Interpret stool R/E report and Identify ova/cyst in stool on microscopy	Practical/ SGD	Dr. Hajira Aziz	Must Know

**Learning Outcomes:**

- Identify ova/cysts of various intestinal parasites based on their morphology, on microscopic examination of a stool sample.

**Assessment strategy:**

OSPE				
2.	Interpret urine R/E Report	Practical/ SGD	Dr Fareena Asim	Must Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Interpret the report of urine R/E based on the physical, chemical and microbiological findings of a urine sample and correlate it with the underlying pathology.</li> </ul> <b>Assessment strategy:</b> <ul style="list-style-type: none"> <li>OSPE</li> </ul>				
3.	Interpret C/S of selected bacteria	Practical	Sen. Lec. Dr. Anika Shoukat	Must Know
<b>Learning Outcomes:</b> Interpret the C/S pattern of selected bacteria and advise accordingly. <b>Assessment strategy:</b> OSPE				

### References/ Learning resources:

- Review of Medical Microbiology and Immunology, Warren Levinson, 15th Edition
- Medical Microbiology, Jawetz, Melnick & Adelberg, 27th Edition
- District Laboratory Practice in Tropical Countries Part 2, Second Edition, Monica Cheesbrough

## Pathology Case-Based Learning

### CBL 1: Watery Diarrhea

#### Case Scenario:

**HISTORY:** A 30-year-old woman presented to hospital with 10 hours of sudden onset of voluminous diarrhea and vomiting. Since onset, the patient had experienced seven episodes of diarrhea and two episodes of vomiting. She has ingested approximately 2 liters of oral rehydration solution at home. She had not urinated since the onset of illness. The family would often drink unboiled tap water stored in open large containers and share a toilet with approximately 20 other families.

The patient's past medical history was unremarkable.

#### EXAMINATION:

On examination, the patient was lethargic, had sunken eyes, dry buccal mucosa, reduced skin turgor, rapid breathing, and a feeble pulse. Other systemic examination findings were normal.

#### INVESTIGATIONS:

Stool was taken for culture and routine examination. On direct microscopy, rapidly motile organisms were seen. Culture was done on a special medium.

#### Learning Outcomes

- Analyze the mentioned case to reach the provisional diagnosis.
- Enlist other organisms causing acute diarrhea.
- Describe the characteristic features of the causative organism in context to its growth.

4. Explain the pathogenesis of the above asked disease.
5. Identify the transport media for stool specimens of the above patient.
6. Enlist the culture media used to identify the organism.
7. Outline the methods of identification and confirmation of the organism in the lab.
  8. Analyze the treatment strategies of the above asked disease.
9. Explain the measures which can be taken in preventing the above asked disease.

## **CBL 2: Typhoid**

### **Case Scenario:**

#### **HISTORY:**

A 20-year-old student residing in a hostel is admitted to the hospital with a history of fever for the last seven days. The fever was low grade initially becoming high grade later. It was accompanied with headache and malaise.

#### **EXAMINATION:**

Examination revealed slower pulse rate as compared to the body temperature, coated tongue and fine red colored spots on the upper body. Liver and spleen were mildly enlarged.

#### **INVESTIGATIONS:**

Blood was collected for complete picture, culture, liver function tests and serology (Typhidot test.)

#### **TREATMENT:**

After collection of the samples he was provisionally put on tablet ciprofloxacin-500mg twice daily (BD), to be reconsidered after sensitivity results.

#### **RESULTS OF INVESTIGATIONS:**

Typhidot test was positive for IgM. The blood culture yielded growth of non-lactose fermenting, motile bacteria producing H<sub>2</sub>S. It was found to possess a Vi antigen. The isolate showed following antibiogram

AMP, SXT, CAP..... Resistant,                      CIP, OFX, CRO, AZM..... Sensitive  
 (AMP- Ampicillin, SXT- Trimethoprim-sulfamethoxazole, CAP- Chloramphenicol,  
 CIP- Ciprofloxacin, OFX-Ofloxacin, CRO- Ceftriaxone, AZM- Azithromycin)

#### **Learning outcomes:**

1. Analyze the scenario to conclude the provisional diagnosis. Justify other differential diagnoses which come to your mind.
2. Explain the above symptoms and signs. (Type of fever and red spots)
3. Enlist the specimens and their appropriate time for culture to confirm the diagnosis.
4. Enumerate the selective media for the cultural identification of this organism.
5. Describe the findings when TSI is inoculated and incubated for 24 hours by this organism.
6. Discuss the findings of Typhidot in the above patient.
7. Justify the statement “the patient was provisionally put on one antibiotic and to be reconsidered after sensitivity results.”

#### **Learning Resources:**

##### **1. Reference Books**

- Review of Medical Microbiology and Immunology, Warren Levinson, 15th Edition
- Medical Microbiology, Jawetz, Melnick & Adelberg, 27th Edition

##### **2. Online resources**

[www.cdc.gov](http://www.cdc.gov)

### 3. Library resources

- Foundations in Microbiology 10th edition Kathleen Talaro, Barry Chess

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## Forensic Medicine

### Subject Learning Outcomes (SLO):

At the end of the academic year the students should be able to:

1. Evaluate the role of FM & Toxicology in relationship to public, state and judiciary.
2. Analyze the cause, manner, mode and mechanism of death and differentiate them from general cases.
3. Interpret the laws related to medical man and explain relevant legal / court procedures applicable to medico legal / medical practice.
4. Analyze the autopsy findings to uncover the cause of death and write the comprehensive medico legal report.
5. Differentiate the forensic importance of biological specimens (blood, semen, saliva, etc.) and collect, preserve and dispatch these specimens to forensic science Lab for necessary examination.
6. Plan to manage the toxicological cases in acute and chronic exposure and interpret it in living and dead cases in relationship to law.
7. Apply ethical principles of forensic medicines according to the expectations of the community and maintain the dignity and honor of the medical profession.

### Block Learning Outcomes (BLO):

At the end of 3rd module, the student of 3rd year MBBS should be able to:

**BLO: 1** Relate the cases of toxicology to its related laws, plan to manage toxicological cases and know important concepts of toxicology.

(SLO3,4,5,6)

**BLO 2:** Describe medico legal aspects, and other signs, symptom, treatment plan of poisons. (SLO4,5,6)

Sr#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1	<b>Specific Poisons</b>	LGIS	Dr.M.Iqbal	Good to know
<ul style="list-style-type: none"> <li>● Organic, vegetable, metallic , non-metallic, animal, mechanical, somniferous, agrichemical, fuels, deliriant, peripheral nerve, asphyxiants, analgesics, antipyretics, stimulant poisons.</li> </ul> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>● Discuss the effects of specific poisons/drugs prevailing in our society along with medico legal aspects. (SEQ,MCQ)</li> <li>● Discuss signs, symptoms and treatment plan of specific poisons. (SEQ,MCQ)</li> </ul>				
2.	<b>Specific Poisons-</b> Sedatives and Hypnotics, Spinal poisons	LGIS	Dr. Misbah Amanat	Good to know
<p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>● Discuss the effects of specific poisons/drugs prevailing in our society along with medico legal aspects. (SEQ,MCQ)</li> <li>● Discuss signs, symptoms and treatment plan of specific poisons. (SEQ,MCQ)</li> </ul>				
	<b>Specific Poisons-</b> Cardiac poisons	LGIS	Dr.M.Kashif	Good to know
<b>Learning Outcomes:</b>				

- Discuss the effects of specific poisons/drugs prevailing in our society along with medico legal aspects. (SEQ,MCQ)
- Discuss signs, symptoms and treatment plan of specific poisons. (SEQ,MCQ)

	<b>Specific Poisons- Inebriant poisons</b>	LGIS	Dr.M.Usman	Good to know
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**Learning Outcomes:**

- Discuss the effects of specific poisons/drugs prevailing in our society along with medico legal aspects. (SEQ,MCQ)
- Discuss signs, symptoms and treatment plan of specific poisons. (SEQ,MCQ)

**Practical Work**

**Block Learning Outcomes:**

After completion of block, students should be able to:

- Explain the certificate of death according to WHO guidelines.
- Identify the causes, manner, mode, mechanisms, medico legal aspects and indicators of death from an observed/given scenario.
- Diagnose the manner of death ( suicidal, homicidal and accidental) from a observed/given scenario.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1	Visits to THQ hospital Taxila for orientation to Mortuary/autopsy room and visits of different wards.	Demonstration	All faculty	Must Know

**Learning Outcomes:**

- Explain the autopsy protocol and assessment of fatal period and postmortem interval. (Viva/OSPE)

2	Visits to THQ hospital Taxila and discusses Important points in handling a ML case and examination of injured persons.	Demonstration	All faculty	Must Know
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**Learning Outcomes:**

- Discuss important aspects in examination of an injured person.(VIVA/OSPE)

3	Visits to THQ hospital Taxila and discuss types of autopsy, objectives, rules, techniques and describe the procedure for postmortem.	Demonstration	All faculty	Good to know
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**Learning Outcomes:**

- Explain the various parameters of an ideal autopsy and procedure for selection and preservation, labeling and dispatch of biological and non-biological materials for laboratory examination .(VIVA/OSPE)

## Learning Resources:

### 1. Reference Books

- Parikh's textbook of Forensic medicine and Toxicology Dr C.K parikh.
- Principles and practice of forensic medicine by Prof Dr Naseeb R Awan.
- Simpson's Forensic Medicine Richard Shepherd.

### 2. Online resources

- <https://youtube.com/C/DRJAVEDIQBALKHOKHARLECTURESFORENSICMEDICIN>

### 1. Library resources

- Parikh's textbook of Forensic medicine and Toxicology Dr C.K parikh
- Principles and practice of forensic medicine by Prof Dr Naseeb R Awan
- Simpson's Forensic Medicine Richard Shepherd

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## Community Medicine

### Community Medicine for 3<sup>rd</sup> Year Students

#### Subject Learning Outcomes

- Recommend measures for prevention, protection and education about the common community health problems. (PLO 1,3,5,6,7,8).

#### Block Learning Outcomes

- Apply epidemiology of common communicable diseases in the global and local context for control and prevention of diseases. (SLO 1, 2)

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Parasitology	LGIS	Lecturer Dr. Qandeel Zahid	Must know

#### Learning Outcomes with Assessment strategy

The students will be able to:

- Define and differentiate between terms used in medical Parasitology
- Explain mode of transmission and recommend prevention and control measures for parasites of medical importance

#### Assessment strategy: MCQ, SEQ, OSPE, Viva

2.	Prevention of Typhoid, Cholera, Amoebiasis, Giardiasis, and Diarrheal diseases	Flipped classroom	Assistant Prof Dr. Sadia Nadeem	Must know
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#### Learning Outcomes with Assessment strategy

The students will be able to:

- Compare and contrast the epidemiological determinants, mode of transmission, spectrum, clinical presentations and investigations of gastrointestinal diseases.
- Suggest strategies for disease control and prevention for every specific disease and in different scenarios.
- Recommend control measures for the related vectors in the disease scenarios.

#### Assessment strategy: MCQ, SEQ, OSPE, Viva

#### Learning Resources:

##### 1. Text Books

- Park's Textbook of Preventive and Social Medicine
- Public Health and Community Medicine (Shah, Ilyas, Ansari, Irfan's)

##### 2. Reference Books

- Lucas, Short Textbook of Public Health Medicine for the Tropics
- Davidson Principles and Practice of Medicine

##### 3. Online resources

## Parasitology

### 4. Library resources

- Notes/Handouts by Faculty
- G classroom

### Teaching Faculty:

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## Surgery

Sr No.	Topics	Educational strategies	Name of instructor	Importance (Must Know Good to Know Nice to Know)
1.	<b>Abdominal Injury</b>	LGIS/ PBL/ Video clips	Assoc. Prof. Dr. Naeem Akhtar	
<p><b>Learning Outcome:</b></p> <ul style="list-style-type: none"> <li>Elaborate upon abdominal/ genitourinary injuries reference to causes, signs, symptoms diagnosis, management predisposing factor, complications and preventions.</li> </ul> <p><b>Assessment tool Formative assessment</b></p>				
2.	Acute abdomen	LGIS/ PBL/ Video clips	Prof. Brig (R). Dr. Muhammad Parvez	
<p><b>Learning Outcome:</b></p> <ul style="list-style-type: none"> <li>Describe the symptoms, signs, and differential diagnosis for patients presenting with an acute abdomen.</li> </ul> <p><b>Assessment tool Formative assessment</b></p>				
3.	<b>Procedures</b>	Real Patient/ skill lab		
<p><b>Learning Outcome:</b></p> <ul style="list-style-type: none"> <li>Assist Passage of Nasogastric Tube</li> </ul> <p><b>Assessment tool Formative assessment</b></p>				
4.	<b>Ward visits</b>	Bedside teaching/ CBL		
<p><b>Learning Outcome:</b></p> <ul style="list-style-type: none"> <li>Take history and perform examination of the patients with relevant disorders</li> </ul>				

## 9. Structured Summary of Y3B-IX M- XX Multisystem Module – I (Neoplasia)

BLOCKS		BLOCK – IX
<b>Module</b>	<b>MODULE- XX Multisystem Module – I (Neoplasia)</b>	
<b>DURATION</b>	<b>04 weeks</b>	
<b>Prerequisite Module</b>	2 <sup>nd</sup> Prof. Exam	
<b>Pharmacology</b>	Endocrinology & Chemotherapy-I	
<b>Pathology</b>	Correlation of pathogenesis of Neoplasia with clinical manifestations and laboratory investigations. Role of oncogenic microorganisms	
<b>Forensic Medicine</b>	Medical Ethics, Consent and Negligence	
<b>Community Medicine</b>	Cancer causes and prevention CA Breast and Cervix	

## 10. Course content

### Pharmacology

#### Subject Learning Outcomes (SLO)

After completion of the course of Pharmacology & Therapeutics, the students would be able to:

1. Correlate the core concepts of pharmacokinetic and pharmacodynamic parameters of drugs to their therapeutic relevance. (PLO -1, 2, 6)
2. Rationalize the drug treatment strategies for common diseases in our community. (PLO -1,2,5,6)
3. Identify and report the potential adverse drug reactions (ADR), drug- drug interactions during polypharmacy. (PLO-5,6)
4. Demonstrate the foundation skills for safe and effective treatment by prescribing rational generic drugs for a given disease condition. (PLO-1,2, 5, 6)
5. Counsel the patient effectively on the proper use of prescription drugs. (PLO-1,2, 5, 6)
6. Interpret the data of studies designed to observe the effects of various drugs. (PLO-6)

#### Block Learning Outcomes (BLO):

**BLO-2:** Correlate the pathophysiological basis of pituitary, thyroid, pancreatic, adrenal and gonadal hormones to their therapeutics. (SLO-2,3,4,5)

**BLO-3:** Recognize the principles of cancer chemotherapy (SLO-2,3)

S#	Topic	Educational Strategy	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Cancer Chemotherapy	Flipped Classroom/LGIS	Dr Ayesha Afzal (Assoc. Prof)	Nice to know
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>● Appraise the principles of cancer chemotherapy in relation to its current therapeutic modalities. (BLO-3) <i>MCQ/ Assignment (F)</i></li> <li>● Classify various anticancer drugs on the basis of their mode of action.</li> </ul>				
2.	Hormonal Contraceptives	LGIS, CBL	Prof. Maj (R) Dr Khalida Ajmal	Good to know
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>● Discuss the pharmacological role, clinical indications, adverse effects &amp; drug interactions of various formulations of hormonal contraceptives. (BLO-2) <i>MCQ (S/F)</i></li> </ul>				
3.	Thyroid & Anti-thyroid drugs	LGIS	Dr. Saima, (Asst. Prof)	Good to know
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>● Evaluate the pharmacological role of thyroxine preparations &amp; antithyroid drugs in the management of thyroid disorders. (BLO-2) <i>MCQ/ SEQ (S/F)</i></li> </ul>				



4.	Antidiabetic drugs	LGIS, CBL	Prof. Maj (R) Dr Khalida Ajmal	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Justify different treatment modalities for all types of diabetes mellitus. (BLO-2) <i>MCQ/ SEQ (S/F)</i></li> </ul>				
5.	Drugs affecting the bone mineral metabolism	LGIS	Dr. Abeera (Asst. Prof)	Good to Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Signify the pharmacological role of drugs affecting bone mineral metabolism in treatment of osteoporosis. (BLO-2) <i>MCQ/ SEQ (S/F)</i></li> </ul>				
6.	Chemotherapy for sexually transmitted diseases (STDs)	LGIS	Dr. Abeera (Asst. Prof)	Good to Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Validate different treatment modalities for sexually transmitted diseases (STDs). (BLO-2) <i>MCQ/ Assignment(F)</i></li> </ul>				
7.	Drug therapy in children, elderly, pregnancy, lactation and disease states	LGIS	Dr. Batool Jahan (Lecturer)	Must know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Rationalize the drug therapy in children, elderly, pregnancy, lactation and disease states. (BLO-2) <i>MCQ/ Assignment(F)</i></li> </ul>				
8.	Adrenocorticosteroids & antagonists	Flipped classroom/LGIS	Dr Ayesha Afzal (Assoc. Prof)	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Correlate the pharmacological effects of adrenocorticosteroids &amp; antagonists to their adverse outcomes &amp; therapeutics. (BLO-2) <i>MCQ/ SEQ (S/F)</i></li> </ul>				

## Practical Work

**Block Learning Outcomes:** After completion of block, students should be able to:

- Justify the selection of priority drugs for certain indications and prescribe medicine accordingly.
- Counsel the patient on the use/adverse effects of administered drugs.

S.#	Topic	Educational Strategy	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	<b>Prescription writing for newly diagnosed Type-II diabetes</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof) All Lecturers	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Write a suitable prescription for newly diagnosed Type-II diabetes.</li> <li>Counsel the patient regarding route of administration, dose &amp; adverse effects of drugs. <i>Observed OSPE (F &amp; S)</i></li> </ul>				

2.	<b>Prescription writing for Hypothyroidism</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof) All Lecturers	Must Know
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>• Write a suitable prescription for treatment of a patient with hypothyroidism.</li> <li>• Counsel the patient regarding route of administration, dose &amp; adverse effects of drugs.</li> </ul> <i>Observed OSPE (F &amp; S)</i>				
3.	<b>Prescription writing for Hyperthyroidism</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof) All Lecturers	Must Know
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>• Write a suitable prescription for treatment of a patient with osteoporosis.</li> <li>• Counsel the patient regarding route of administration, dose &amp; adverse effects of drugs.</li> </ul> <i>Observed OSPE (F &amp; S)</i>				

## Case Based Learning (CBLs)

**Time: (1.5 hours)**

**Mode of Assessment: Quiz, MCQs, Theory & viva voce**

**Conducted by: All lecturers & Asst. Professors**

**CBL No: 01 Hormonal Contraceptives**

### **Case Scenario:**

A 28-year-old mother comes to the hospital for spacing out her next pregnancy. She has two kids, the elder one aged 2 years and younger one of 9 months both born by caesarean section. She needs consultation regarding contraception.

### **Learning Outcomes:**

#### **The students should be able to:**

- Discuss the pharmacological role, clinical indications, adverse effects & drug interactions of various formulations of hormonal contraceptives.

**CBL No: 02 Diabetes**

### **Case Scenario:**

An obese male in 65 years of age known diabetic, presents to the Diabetes Center for advice regarding his diabetes treatment. He was initially given metformin but when his control deteriorated, the metformin was stopped and insulin treatment initiated. The patient was taking 50 units of insulin glargine and 25 units of insulin aspartate pre-meals. On examination, his weight is 132 kg (BMI: 39.5); blood pressure is 145/71; and signs of mild peripheral neuropathy are present. Laboratory tests reveal HbA1c 8.1% with albuminuria.

### **Learning Outcomes:**

#### **The students should be able to:**

- Justify different treatment modalities for all types of diabetes mellitus.

**CBL No: 03 Hyperthyroidism**

### **Case Scenario:**

A 33-year-old woman presents to medical OPD with complaints of severe shortness of breath & palpitations. She gives a history of unintentional weight loss, heat intolerance, diarrhea, irritability and nervousness. On examination, HR is 118 bpm, RR 24 bpm and a lump in the neck. Laboratory investigations revealed (TSH) 0.2mU/L (Normal: 0.49 to 4.67 mIU/L) and thyroxine (T4) 2.6 ng/dL (Normal :0.8 to 1.8 ng/dL), Triiodothyronine (T3) 230 ng/dl (Normal:60 to 180 ng/dL).

## Learning Outcomes:

### The students should be able to:

- Evaluate the pharmacological role of antithyroid drugs in the management of hyperthyroidism.

### CBL No: 04 Adrenocorticosteroids

## Case Scenario:

A 56-year-old woman with systemic lupus erythematosus comes for follow-up to hospital. She has been treated with a moderate daily dose of prednisone for 03 months. Now, her disease is finally at the remission stage. Her physician decides to gradually taper the dose and then discontinue the prednisone.

## Learning Outcomes:

### The students should be able to:

- Correlate the pharmacological effects of adrenocorticosteroids to their adverse outcomes & therapeutics.

## Learning Resources:

### Textbook:

- Basic and Clinical Pharmacology by Bertram G Katzung 15<sup>th</sup> Edition

### Reference Books:

- The Pharmacological Basis of Therapeutics by Goodman & Gilman Latest Edition

### 3. Online resources:

- <https://www.youtube.com/>
- Pharmacology lectures by Dr. Najeeb
- Pharmacology lectures by Kaplan
- Pharmacology made easy

### 4. Library resources:

- Tripathy KD, Essentials of Medical Pharmacology, 6<sup>th</sup> Edition.
- Lippincott Illustrated Reviews Pharmacology 7<sup>th</sup> Edition
- Current Medical Diagnosis and treatment- latest Edition
- Oxford Handbook of clinical medicine by J.A. B. Collier-latest edition
- Workbook and Casebook for Goodman and Gilman's The Pharmacological Basis of Therapeutics: latest Edition

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## General Pathology

### Subject Learning Outcomes (SLO):

- Correlate the etiology and morphological changes of prevalent diseases with pathogenesis.
- Devise appropriate plan of lab investigations based on signs & symptoms of patients.
- Correlate cellular responses to stress and toxic insults with clinical presentation and lab reports.
- Interpret the relevant lab procedures required to diagnose common diseases.

### Block Learning Outcomes (BLO):

At the end of this module, the student of 3<sup>rd</sup> year MBBS should be able to:

- Correlate the nomenclature, characteristic, epidemiology, carcinogenesis, genetic basis, and mechanism of metastasis of different cancers with the underlying pathology.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Introduction, Nomenclature, Characteristics of benign and malignant neoplasm. Epidemiology, Cancer genes, Genetic lesions in cancer. Etiology of cancer, Carcinogenic Agents. Carcinogenesis. Mechanism of the spread of Tumor. Clinical Features and Lab Diagnosis of Tumors.	LGIS	Prof Brig(R) Dr Tariq Malik	Must Know

### Learning Outcomes:

- Explain the nomenclature, characteristic, epidemiology, etiology, genetic basis, carcinogenesis, mechanism of metastasis, clinical aspects and lab diagnosis of Neoplasia.

### Assessment strategy:

- MCQ/ SEQ / SAQ/ VIVA VOCE

### References/ Learning resources:

- Robbins & Cotran Pathologic Basis of Diseases 10th Edition.
- Robbins Basic Pathology 10th Edition

# Microbiology

## Block Learning Outcomes:

At the end of third block, the student of 3rd year MBBS should be able to:

Correlate the pathogenesis with clinical manifestations, diagnostic modalities, treatment and preventive strategies of microorganisms causing prevalent systemic infections.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Trematodes	LGIS	Asstt Prof Dr Lubna Ghazal	Must know

### Learning Outcomes:

- Describe general characteristics (shape, class, growth requirements) of above-mentioned parasites.
- Correlate their pathogenesis with clinical manifestations, diagnostic modalities, treatment and preventive strategies

### Assessment strategy:

- MCQ, SEQ/ SAQ/Viva voce

2.	Oncogenic viruses, Hepatitis viruses, HIV	LGIS	Asstt Prof Dr Lubna Ghazal/ Asstt Prof Dr Tahira Tehseen	Must know
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### Learning Outcomes:

- Correlate pathogenesis of above mentioned viruses with clinical manifestations, diagnostic modalities, treatment and preventive strategies

### Assessment strategy:

- MCQ, SEQ/ SAQ/Viva voce

3.	Helicobacter			
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### Learning Outcomes:

- Describe general characteristics (shape, class, growth requirements) of important enteric bacteria.
- Correlate their pathogenesis with clinical manifestations, diagnostic modalities, treatment and preventive strategies

### Assessment strategy:

- MCQ, SEQ/ SAQ/OSPE

## General Pathology Practicals

### Learning Outcomes:

At the end of third block, the student of 3<sup>rd</sup> year MBBS should be able to:

Correlate the histopathological findings of the lesions with the underlying pathology.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Identify slides	Practical	Dr Saba Anwer and all faculty	Must Know

	<ul style="list-style-type: none"> <li>● Lipoma</li> <li>● Leiomyoma</li> </ul>		members	
2.	<ul style="list-style-type: none"> <li>● Identify slides</li> <li>● Basal cell carcinoma</li> <li>● Squamous cell Carcinoma</li> </ul>	Practical	Dr Fareena Asim and all faculty members	Must Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>◆ Correlate the histopathological findings of the lesions with the underlying pathology.</li> </ul> <b>Assessment strategy:</b> <ul style="list-style-type: none"> <li>● OSPE</li> </ul>				
3.	Interpret the report of lipid profile	Practical	Dr Saba Anwer and all faculty members	Good To Know
4.	Interpret the report of Blood CP	Practical	Dr Fareena Asim and all faculty members	Good To Know
<b>Learning Outcomes:</b> <p>Interpret the reports and correlate the findings with the underlying pathology.</p> <b>Assessment strategy:</b> <ul style="list-style-type: none"> <li>● OSPE</li> </ul>				

### General Pathology & Microbiology

#### Case-Based Learning

#### NEOPLASIA

**Case Scenario:** (A patient with malignant tumour – diagnostic approach)

**History:** A 45-year-old female noticed a lump in her left breast during a shower. There was a family history of malignant tumour of the breast in one of her close relatives. She reported to the OPD for advice.

**Examination:** On examination a lump was palpable in the upper outer quadrant of the left breast. It was firm in consistency and was irregular. It was fixed to the underlying breast tissue but not to the chest wall. The other breast was normal and no other viscera were palpable. Lymph nodes in the axilla were not palpable. Ultrasound abdomen and whole body scan were normal

**Investigations:**

Fine needle aspiration (FNA) was performed. Cytological category C-4 breast lesion (suspicious for malignancy) was labeled by cytopathologists and it was advised to have a frozen section of diagnostic biopsy before radical surgery.

Preoperative frozen section was reported as malignant

Radical mastectomy was done with sentinel lymph node biopsy

Breast specimen measured 15x10x08 cm. The resection margins were painted with India ink.

On slicing the upper outer quadrant showed a gray white tumour measuring 4x3x2.5 cm.

Resection margins were grossly clear. Sections were taken for histopathology

The sections showed proliferation of atypical cell forming tubules in 20% areas, nuclear pleomorphism was moderate and 1-2 mitoses per 10 high power fields were found.

**Learning objectives**

- Explain the above-mentioned signs & symptoms.

- Describe the importance of lymph nodes in axilla, USG abdomen and whole-body scan.
- Elaborate FNA, cytological category C-4.
- Analyze the significance of malignant report on frozen section and describe the diagnostic biopsy.
- Describe the concept of Sentinel Lymph node.
- Explain grading and staging of tumors.
- Enlist other Laboratory diagnostic modalities which can be used for diagnosis of cancer.

**Learning Resources:**

**1. Reference Books**

**Learning Resources:**

**2. Reference Books**

- Review of Medical Microbiology and Immunology, Warren Levinson, 15th Edition
- Medical Microbiology, Jawetz, Melnick & Adelberg, 27th Edition
- District Laboratory Practice in Tropical Countries Part 2, Second Edition, Monica Cheesbrough

**Online resources**

- [www.cdc.gov](http://www.cdc.gov)

**Library resources**

- Foundations in Microbiology 10th edition Kathleen Talaro, Barry Chess .

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## Forensic Medicine

### Subject Learning Outcomes (SLO):

At the end of the academic year the students should be able to:

3. Evaluate the role of FM& Toxicology in relationship to public, state and judiciary.
4. Analyze the cause, manner, mode and mechanism of death and differentiate them from general cases.
5. Interpret the laws related to medical man and explain relevant legal / court procedures applicable to medico legal / medical practice.
6. Analyze the autopsy findings to uncover the cause of death and write the comprehensive medico legal report.
7. Differentiate the forensic importance of biological specimens (blood, semen, saliva, etc.) and collect, preserve and dispatch these specimens to forensic science Lab for necessary examination.
8. Plan to manage the toxicological cases in acute and chronic exposure and interpret it in living and dead cases in relationship to law.
9. Apply ethical principles of forensic medicines according to the expectations of the community and maintain the dignity and honor of the medical profession.

### Block Learning Outcomes (BLO):

**BLO1:** Apply ethical principles of medicine as physicians/in their clinical clerkships according to national as well as international code of ethics. **(1, 7)**

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	<b>Medical ethics, consent and negligence</b>	LGIS	Dr.Babur Rashid Chughtai	Must Know

#### Learning Outcomes:

- Describe the power & jurisdiction of courts, procedures for inquest & legal procedure, important legal terms, sections, privileges & obligations. **(MCQ,SEQ)**
- Define role of medical doctor in ML system. Court procedure, court attendance & recording of evidence. **(MCQ,SEQ)**
- Identify the principles of inter professional and patient interaction in clinical practice. **(MCQ,SEQ)**.

### Forensic Medicine and Toxicology Practicals

#### Learning Outcomes:

- Appraise the procedure of performing clinical examination of victim and assailant in case of sexual offense, collect specific specimens.
- Appraise the forensic importance of biological specimens.
- Recognize special techniques like radiology and objective methods of identification.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Discuss the sexual offenses, the medical examination of victim and assailant, collection of	SGD	All faculty	Must Know



	specific specimens and write a required certification.			
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>Describe sexual offense &amp; relevant sections of law (zina &amp; hudood ordinance) and medico legal aspects. (OSPE/VIVA)</li> </ul>				
2.	Identification of different injuries of bones on X-ray and their medico legal aspects	SGD	All faculty	Must Know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>Differentiate among various possible etiologies of regional injuries.(OSPE/VIVA)</li> </ul>				

## Forensic Medicine and Toxicology CBL/PBL-1

### Special toxicology

A male adult, with history of slap on the neck by unknown person, during rush hours in a bazaar, was brought to you in the A & E department. On examination there was edema, swelling and oozing of blood from a needle like puncture. The person was suffering from vertigo, cardiac arrhythmias and convulsions.

- a. Name the substance he has been administered
- b. Describe the treatment & PM findings
- c. Describe its medico-legal importance

#### Learning outcome:

Discuss the effect of specific poison/drug prevailing in our society along with medico legal aspects.

#### Learning Resources:

##### 2. Reference Books

- Parikh's textbook of Forensic medicine and Toxicology Dr C.K parikh.
- Principles and practice of forensic medicine by Prof Dr Naseeb R Awan.
- Simpson's Forensic Medicine Richard Shepherd.

##### 2. Online resources

- <https://youtube.com/C/DRJAVEDIQBALKHOKHARLECTURESFORENSICMEDICIN>

##### 2. Library resources

- Parikh's textbook of Forensic medicine and Toxicology Dr C.K parikh
- Principles and practice of forensic medicine by Prof Dr Naseeb R Awan
- Simpson's Forensic Medicine Richard Shepherd

#### Teaching faculty:

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## Community Medicine

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Cancer causes and prevention CA Breast and Cervix	Flipped classroom	Assoc. Prof Dr. Robina Mushtaq	Must know

### Learning Outcomes with Assessment strategy

1. Identify epidemiological determinants of common neoplastic diseases
2. Suggest preventive measures for these diseases in at-risk individuals and populations
3. Impart health education to prevent these diseases.

**Assessment strategy: MCQ, SEQ, OSPE, Viva**

### Learning Resources:

#### 1. Text Books

- Park's Textbook of Preventive and Social Medicine
- Public Health and Community Medicine (Shah, Ilyas, Ansari, Irfan's)

#### 2. Reference Books

- Text book of Preventive and Social Medicine by Sunder Lal, Pankaj
- Davidson Principles and Practice of Medicine

#### 3. Online resources

[Cancer prevention](#)

#### 4. Library resources

- Notes/Handouts by Faculty
- G classroom

#### 5. Teaching Faculty:

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## Surgery

### Learning Outcome:

Relate the nomenclature, characteristic, carcinogenesis, grading and staging, and mechanism of metastasis for understanding clinical presentations of different cancers.

Sr No.	Topics	Educational strategies	Name of instructor	Importance (Must Know Good to Know Nice to Know)
1	<b>Skin swellings and lumps</b>	LGIS/PBL/ Video clips	Senior Registrar Dr. Saqib	.
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>• Differentiate between benign and malignant tumors</li> <li>• List the principles of diagnosis and management of lumps in skin &amp; subcutaneous tissue.</li> </ul> <b>Assessment tool: Formative assessment</b>				
2	<b>Ward visits</b>	Bedside teaching/ CBL		
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>• Take history and perform examination of the patients with relevant disorders</li> </ul> <b>Assessment tool: Formative assessment</b>				

## 11. Y3B-IX M- XXI Multisystem Module – II (Infectious diseases)

BLOCKS		BLOCK – VII	
<b>Module</b>		MODULE – XXI Multisystem Module – II (Infectious diseases)	
<b>DURATION</b>		<b>04 weeks</b>	
<b>Prerequisite Module</b>		2 <sup>nd</sup> Prof. Exam	
<b>Pharmacology</b>		Chemotherapy-II	
<b>Pathology</b>		Zoonoses, Dermatophytosis, Deep mycoses, Hospital acquired infections, Systemic infections	
<b>Forensic Medicine</b>		Law in relation to medical man	
<b>Community Medicine</b>		Hospital acquired infections Zoonotic diseases (Rabies, Plague, Anthrax, Brucellosis, Salmonellosis) Ticks and Mite related diseases	
<b>Medicine</b>		Acute febrile illness	
<b>Surgery</b>		Sinuses & fistulas	
<b>Gynae</b>		Vaginal discharge, upper and lower genital tract infections	
<b>Peads</b>		Measles, Mumps, Chicken pox, malaria	

## 12. Course content

### Pharmacology

#### Subject Learning Outcomes (SLO)

After completion of the course of Pharmacology & Therapeutics, the students would be able to:

1. Correlate the core concepts of pharmacokinetic and pharmacodynamic parameters of drugs to their therapeutic relevance. (PLO -1, 2, 6)
2. Rationalize the drug treatment strategies for common diseases in our community. (PLO -1,2,5,6)
3. Identify and report the potential adverse drug reactions (ADR), drug- drug interactions during polypharmacy. (PLO-5,6)
4. Demonstrate the foundation skills for safe and effective treatment by prescribing rational generic drugs for a given disease condition. (PLO-1,2, 5, 6)
5. Counsel the patient effectively on the proper use of prescription drugs. (PLO-1,2, 5, 6)
6. Interpret the data of studies designed to observe the effects of various drugs. (PLO-6)

#### Block Learning Outcomes (BLO):

- **BLO-4:** Justify the treatment modalities of various microbes (bacteria, viruses, fungi) according to mode of action, resistance patterns and regional current practices (SLO-2, 3,4,5)

S.#	Topic	Educational Strategy	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Introduction to Chemotherapy	LGIS	Prof Maj (R)Dr. Khalida Ajmal	<b>Must Know</b>
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>● Explain the principles of chemotherapy &amp; mechanisms of resistance by microorganisms in relation to its current therapeutic modalities. (BLO-4)</li> </ul> <i>MCQ/SEQ(S/F)</i>				
2.	Bacterial Cell Wall Inhibitors (Penicillins)	Flipped Class room/ CBL	Prof Maj (R)Dr. Khalida	<b>Must Know</b>
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>● Evaluate the pharmacological role of various penicillins in specific clinical indications. (BLO-4) <i>MCQ/ SEQ (S/F)</i></li> </ul>				
3.	Other beta lactam Antibiotics	Flipped Classroom / CBL	Prof Maj (R)Dr. Khalida	<b>Must Know</b>
<b>Learning outcomes:</b>				

<ul style="list-style-type: none"> <li>Describe MOA, pharmacokinetics, clinical uses &amp; adverse effects of clindamycin, vancomycin, linezolid, daptomycin. (BLO-4) <i>MCQ/SEQ(S/F)</i></li> </ul>				
4.	Cephalosporins	Flipped Classroom / CBL	Dr. Abeera Assist. Prof	<b>Must Know</b>
<p style="text-align: center;"><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Classify cephalosporins. Rationalize their uses &amp; advantages in various clinical conditions. (BLO-4) <i>MCQ/SEQ (S/F)</i></li> </ul>				
5.	Sulphonamides	LGIS	Dr. Saima Assist. Prof	<b>Good to Know</b>
<p style="text-align: center;"><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Classify sulphonamides according to duration of action. Justify combinations of sulphonamides &amp; their clinical uses. (BLO-4) <i>MCQ/SEQ (S/F)</i></li> </ul>				
6.	Macrolides	LGIS	Dr. Ayesha Afzal Assoc. Prof	<b>Must Know</b>
<p style="text-align: center;"><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Enlist macrolides. Relate the pharmacological effects of macrolides with its therapeutics. (BLO-4) <i>MCQ/SEQ (S/F)</i></li> </ul>				
7.	Tetracyclines	LGIS	Dr. Abeera Assist Prof	<b>Should Know</b>
<p style="text-align: center;"><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Classify tetracyclines. Discuss their uses &amp; untoward effects. (BLO-4) <i>MCQ/SEQ (S/F)</i></li> </ul>				
8.	Chloramphenicol, Clindamycin, Streptogramins & oxazolidinones	LGIS	Dr. Saima Assist. Prof	<b>Nice to Know</b>
<p style="text-align: center;"><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Describe MOA, antimicrobial spectrum, clinical uses &amp; adverse effects of chloramphenicol, Clindamycin, Streptogramins &amp; oxazolidinones. (BLO-4) <i>MCQ/SEQ (S/F)</i></li> </ul>				
9.	Aminoglycosides	Flipped classroom	Dr. Ayesha Afzal Assoc. Prof	<b>Must Know</b>
<p style="text-align: center;"><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Justify the administration of aminoglycosides by daily single high dose injection &amp; Combination of penicillin / cephalosporin with aminoglycosides. (BLO-3) <i>MCQ/SEQ (S/F)</i></li> </ul>				
10.	Fluoroquinolones	Flipped classroom	Dr. Ayesha Afzal Assoc. Prof	<b>Must Know</b>

<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Classify quinolones /fluoroquinolones. Signify the importance of fluoroquinolones in various bacterial disorders. (BLO-4) <i>MCQ/SEQ (S/F)</i></li> </ul>				
11.	Anti-Fungal Drugs	LGIS CBL	Dr. Abeera (Asst. Prof)	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Justify the use of antifungal drugs in various fungal infections. (BLO-4) <i>MCQ/SEQ (S/F)</i></li> </ul>				
12.	Anti-Viral Drugs	LGIS CBL	Prof. Maj (R) Dr Khalida Ajmal	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Justify the use of antiviral drugs in different viral infections. (BLO-4) <i>MCQ/SEQ (S/F)</i></li> </ul>				
13.	Locally Acting Drugs	LGIS	Dr. Saima Assist. Prof	Good to Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Justify the use of different dermatological drugs, topical drugs, anti-seborrheic, locally acting enzymes, antiseptics and disinfectants. (BLO-4) <i>MCQ/Assignment (F)</i></li> </ul>				

## Practical Work

**Block Learning Outcomes:** After completion of block, students should be able to:

- Justify the selection of priority drugs for certain indications and prescribe medicine accordingly.
- Counsel the patient on the use/adverse effects of administered drugs.

S.#	Topic	Educational Strategy	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	<b>Prescription writing for acute tonsillitis</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof) All Lecturers	Must Know
<b>Learning outcomes:</b>				
<ul style="list-style-type: none"> <li>Write a suitable prescription for acute tonsillitis after justifying the selection of a P- drug Counsel the patient regarding route of administration, dose &amp; adverse effects of drugs. <i>Observed OSPE (F &amp; S)</i></li> </ul>				
2.	<b>Prescription writing for Enteric Fever</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof) All Lecturers	Must Know

**Learning outcomes:**

- Write a suitable prescription for typhoid after justifying the selection of a P- drug  
Counsel the patient regarding route of administration, dose & adverse effects of drugs.  
*Observed OSPE (F & S)*

3.	<b>Prescription writing for UTI</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof) All Lecturers	Must Know
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**Learning outcomes:**

- Write a suitable prescription for UTI after justifying the selection of a P- drug
- Counsel the patient regarding route of administration, dose & adverse effects of drugs.  
*Observed OSPE (F & S)*

4.	<b>Prescription writing for vaginal candidiasis</b>	Simulation & Role play in SGD	Dr. Saima & Dr. Abeera (Asst Prof) All Lecturers	Must Know
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**Learning outcomes:**

- Write a suitable prescription for vaginal candidiasis after justifying the selection of a P- drug.
- Counsel the patient regarding route of administration, dose & adverse effects of drugs.  
*Observed OSPE (F & S)*

**Case Based Learning (CBLs)****Time: (1.5 hours)****Mode of Assessment: Quiz, MCQs, Theory & viva voce****Conducted by: All lecturers & Asst. Professors****CBL No: 01 Bacterial cell wall inhibitors****Case Scenario:**

Mr. Qasim at 62 years of age is brought to the emergency department in confused & delirious state with H/O high grade fever, nausea, vomiting & severe headache. Gram stain of CSF has revealed G positive diplococci; diagnosis of purulent pneumococcal meningitis is made. The causative organisms are sensitive to penicillin but relatives give H/O rash with ampicillin. The patient is treated with I/V Ceftriaxone & Vancomycin.

**Learning Outcomes:****The students should be able to:**

- Correlate the mode of action and pharmacological effects of bacterial cell wall inhibitors to their therapeutic uses.

**CBL No: 02 Anti-Virals****Case Scenario:**

A 60-year-old-lady has been feeling unwell for the last few weeks. She has vague symptoms of malaise, easy fatigability, and anorexia. On consultation, her physician advised some



investigations. The lab results show positive anti-HCV antibodies. Her history reveals repeated visits to non-qualified dentists.

**Learning Outcomes:**

**The students should be able to:**

- Correlate the pharmacological effects of various anti-viral drugs to its clinical therapeutics.

**CBL No: 03 Antifungals**

**Case Scenario:**

A 28-year-old man complains of having a nail infection of his toes. He is diagnosed with dermatophytes infection. The skin specialist has prescribed him cream to apply locally & itraconazole to take orally. The patient's symptoms improved with this regimen.

**Learning Outcomes:**

**The students should be able to:**

- Justify the use of antifungal drugs in various clinical indications.

**Learning Resources:**

**Textbook:**

- Basic and Clinical Pharmacology by Bertram G Katzung 15<sup>th</sup> Edition

**Reference Books:**

- The Pharmacological Basis of Therapeutics by Goodman & Gilman Latest Edition

**5. Online resources:**

- <https://www.youtube.com/>
- Pharmacology lectures by Dr. Najeeb
- Pharmacology lectures by Kaplan
- Pharmacology made easy

**6. Library resources:**

- Tripathy KD, Essentials of Medical Pharmacology, 6<sup>th</sup> Edition.
- Lippincott Illustrated Reviews Pharmacology 7<sup>th</sup> Edition
- Current Medical Diagnosis and treatment- latest Edition
- Oxford Handbook of clinical medicine by J.A. B. Collier-latest edition
- **Workbook and Casebook for Goodman and Gilman's The Pharmacological Basis of Therapeutics: latest Edition**

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## General Pathology

### Subject Learning Outcomes (SLO):

- Correlate the etiology and morphological changes of prevalent diseases with pathogenesis.
- Devise appropriate plan of lab investigations based on signs & symptoms of patients.
- Correlate cellular responses to stress and toxic insults with clinical presentation and lab reports.
- Interpret the relevant lab procedures required to diagnose common diseases.

### Block Learning Outcomes (BLO):

At the end of this module, the student of 3<sup>rd</sup> year MBBS should be able to:

- Correlate the pathogenesis of common infectious diseases to their diagnostic modalities.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Routes of entry of pathogens Host pathogen interactions Host damage	LGIS	Dr Lubna Ghazal	Must Know

#### Learning Outcomes:

- Correlate the underlying pathology with the causative agents, mode of entry of pathogens, clinic-pathological consequences and preventive measures of common infectious diseases.

#### Assessment strategy

- MCQ, SEQ/SAQ, Viva Voce

### References/ Learning resources:

- Robbins & Cotran Pathological Basis of Diseases 10<sup>th</sup> Edition.
- Robbins Basic Pathology 10<sup>th</sup> Edition

## Microbiology

At the end of this module, the student of 3<sup>rd</sup> year MBBS should be able to:

- Correlate the pathogenesis with clinical manifestations, diagnostic modalities, treatment and preventive strategies of microorganisms

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Zoonoses caused by Brucella, Pasturella, Yersinia pestis, Rabies	LGIS	Asstt Prof Dr Lubna Ghazal, Asstt Prof Dr Tahira Tehseen	Must Know

#### Learning Outcomes:

- Correlate the pathogenesis with clinical manifestations, diagnostic modalities, treatment and preventive strategies of microorganisms causing zoonoses

<b>Assessment strategy:</b> MCQ, SEQ/ SAQ/ Viva voce			
2.	Clostridium species, Actinomyces, Nocardia, Pseudomonas	LGIS	Asstt Prof Dr Lubna Ghazal Must Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Correlate the pathogenesis of above-mentioned bacteria with clinical manifestations, diagnostic modalities, treatment and preventive strategies</li> </ul>			
<b>Assessment strategy:</b> MCQ, SEQ/ SAQ/ Viva voce			
3.	Leptospira, Borrelia	LGIS	Asstt Prof Dr Lubna Ghazal Must Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Correlate the pathogenesis of above-mentioned bacteria with clinical manifestations, diagnostic modalities, treatment and preventive strategies</li> </ul>			
<b>Assessment strategy:</b> MCQ, SEQ/ SAQ/ Viva voce			
4.	Dermatophytosis, Deep Mycoses	LGIS	Asstt Prof Dr Tahira Tehseen Must Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Correlate the pathogenesis of dermatophytes and fungi causing systemic infections with clinical manifestations, diagnostic modalities, treatment and preventive strategies.</li> </ul>			
<b>Assessment strategy:</b> <ul style="list-style-type: none"> <li>MCQ, SEQ/ SAQ/ Viva voce</li> </ul>			
5.	Respiratory tract infections, Meningitis, Pneumonias, Sexually transmitted infections. Skin and Soft tissue infections, Hospital Acquired Infections	LGIS	Asstt Prof Dr Tahira Tehseen/ Asstt Prof Dr Lubna Ghazal Must Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Correlate the pathogenesis of microorganisms causing prevalent systemic infections with their clinical manifestations, diagnostic modalities, treatment and preventive strategies.</li> </ul>			
<b>Assessment strategy:</b> <ul style="list-style-type: none"> <li>MCQ, SEQ/ SAQ/ Viva voce</li> </ul>			

**References/ Learning resources:**

- Review of Medical Microbiology and Immunology, Warren Levinson, 15th Edition
- Medical Microbiology, Jawetz, Melnick & Adelberg, 27th Edition
- District Laboratory Practice in Tropical Countries Part 2, Second Edition, Monica Cheesbrough

## Microbiology Practicals

### Learning Outcomes:

Practical Application of protective measures against environmental diseases.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Observe the steps in management of spills of fluid/blood	Practical	Sen. Lec. Dr. Aniq Shoukat	Good to Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Comprehend the management of spills of fluid/blood by keenly observing each step.</li> </ul>				
2.	Interpret ELISA report for HIV, hepatitis B & C	Practical	Lec. Dr. Hajira Aziz	Good to Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Interpret the reports and correlate the findings with the underlying pathology.</li> </ul> <b>Assessment strategy: OSPE</b>				
3.	Identification of fungi and yeast	Practical	Sen. Lec. Dr. Saba Anwar	Good to Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Identify the fungi and yeast on microscopy and correlate the findings with the underlying pathology.</li> </ul> <b>Assessment strategy: OSPE</b>				

### Pathology Case-Based Learning

#### CBL: Known Case of HIV/AIDS presents with fever

#### Case Scenario:

History: A 34-year-old known case of HIV has presented with fever, shortness of breath, bilateral chest pain and non-productive cough. His CD4 count is below 200 cells/ cm<sup>3</sup>. His chest X ray shows diffuse interstitial/alveolar infiltrates.

#### Learning Objectives:

- Interpret the scenario to conclude the most probable diagnosis.
- Describe the diagnostic modalities and treatment of this case.
- Enlist other infections which are common in AIDS patients with CD4 count below 200 cells/ cm<sup>3</sup>.
- Enumerate the common complications in an AIDS patient with CD4 count below 100 cells/ cm<sup>3</sup>.
- Explain acute retroviral syndrome (ARV).

#### Learning Resources:

##### 1. Reference Books

Manual of Clinical Microbiology, 12th Edition

- District Laboratory Practice in Tropical Countries Part 2, Second Edition, Monica Cheesbrough
- Greenwood Medical Microbiology, 18th Edition

##### 2. Online resources

[www.cdc.gov](http://www.cdc.gov)

### 3. Library resources

- Foundations in Microbiology 10th edition Kathleen Talaro, Barry Chess

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## Forensic Medicine

### Subject Learning Outcomes (SLO):

At the end of the academic year the students should be able to:

1. Evaluate the role of FM & Toxicology in relationship to public, state and judiciary.
2. Analyze the cause, manner, mode and mechanism of death and differentiate them from general cases.
3. Interpret the laws related to medical man and explain relevant legal / court procedures applicable to medico legal / medical practice.
4. Analyze the autopsy findings to uncover the cause of death and write the comprehensive medico legal report.
5. Differentiate the forensic importance of biological specimens (blood, semen, saliva, etc.) and collect, preserve and dispatch these specimens to forensic science Lab for necessary examination.
6. Plan to manage the toxicological cases in acute and chronic exposure and interpret it in living and dead cases in relationship to law.
7. Apply ethical principles of forensic medicines according to the expectations of the community and maintain the dignity and honor of the medical profession.

### Block Learning Outcomes (BLO):

**BLO 1.** Define role of medical doctor in ML system. Court procedure, court attendance & recording of evidence. (SLO1, 3,7 )

**BLO 2:** Identify the principles of inter professional and patient interaction in clinical practice. (SLO1, 3,7 )

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Law related to medical man	LGIS	Dr.Babur Rashid Chughtai	Must Know

#### Learning Outcomes

- Describe the power & jurisdiction of courts, procedures for inquest & legal procedure, important legal terms, sections, privileges & obligations. (MCQ,SEQ)
- Discuss the Role of doctor in the medico legal system and legal procedures (MCQ,SEQ)

### Forensic Medicine and Toxicology Practicals

#### Learning Outcomes:

- Discuss the scope of toxicology's forensic aspect and medico legal importance.
- Discuss management plan of toxicological cases.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
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1.	Prepare & interpret the chemical examiner report with collection, preservation & dispatch of specimens.	SGD	All faculty	Must Know
<b>Learning Outcomes:</b>				
● Interpret acute and chronic cases of poisoning in living and dead. (OSPE/Viva)				
2.	Discuss the different treatments. Techniques like emesis, gastric lavage, rehydration, catharsis & other methods used for treatment of poisoning.	SGD	All faculty	Must Know
<b>Learning Outcomes:</b>				
● Discuss treatment plan of different poisons and their medico legal aspects (VIVA/OSPE)				

## Forensic Medicine and Toxicology Case-Based Learning

### Learning Resources:

#### 3. Reference Books

- Parikh's textbook of Forensic medicine and Toxicology Dr C.K parikh.
- Principles and practice of forensic medicine by Prof Dr Naseeb R Awan.
- Simpson's Forensic Medicine Richard Shepherd.

#### 2. Online resources

- <https://youtube.com/C/DRJAVEDIQBALKHOKHARLECTURESF0RENSICMEDICIN>

#### 3. Library resources

- Parikh's textbook of Forensic medicine and Toxicology Dr C.K parikh
- Principles and practice of forensic medicine by Prof Dr Naseeb R Awan
- Simpson's Forensic Medicine Richard Shepherd

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## Community Medicine

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Hospital acquired infections	Flipped classroom	Prof. Dr. S Sabah Imran	Must know
<p><b>Learning Outcomes with Assessment strategy</b></p> <p>1. Explain nosocomial infections, factors causing it and control measures. 2. Communicate effectively regarding prevention of nosocomial infections</p> <p><b>Assessment strategy: MCQ, SEQ, OSPE, Viva</b></p>				
2.	Zoonotic diseases (Rabies, Plague, Anthrax, Brucellosis, Salmonellosis)	LGIS	Lecturer Dr. Fatima Faud	Must know
<p><b>Learning Outcomes with Assessment strategy</b></p> <p>1. Compare and contrast the epidemiological determinants, mode of transmission, spectrum, clinical presentations and investigations of Zoonotic diseases. 2. Suggest strategies for disease control and prevention for every specific disease and in different scenarios. 3. Recommend control measures for the related vectors in the disease scenarios.</p> <p><b>Assessment strategy: MCQ, SEQ, OSPE, Viva</b></p>				
3.	Ticks and Mite related diseases	Flipped classroom	Assistant Prof Dr. Sadia Nadeem	Must know
<p><b>Learning Outcomes with Assessment strategy</b></p> <p>1. Compare and contrast the epidemiological determinants, mode of transmission, spectrum, clinical presentations and investigations of Ticks and Mite related diseases. 2. Suggest strategies for disease control and prevention for every specific disease and in different scenarios. 3. Recommend control measures for the related vectors in the disease scenarios.</p> <p><b>Assessment strategy: MCQ, SEQ, OSPE, Viva</b></p>				

### Learning Resources:

#### 1. Text Books

- Park's Textbook of Preventive and Social Medicine
- Public Health and Community Medicine (Shah, Ilyas, Ansari, Irfan's)

#### 2. Reference Books

- Text book of Preventive and Social Medicine by Sunder Lal, Pankaj
- Davidson Principles and Practice of Medicine

#### 3. Online resources

[Prevention of zoonotic diseases](#)

#### 4. Library resources

- Notes/Handouts by Faculty
- G classroom



**Teaching Faculty:**

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**Research Module/Evidence-Based Medicine****Learning Outcomes for 3<sup>rd</sup> Year Students****Subject Learning Outcomes**

- Apply relevant statistics to conduct a household survey and a mini research project. (PLO 3,4,6,7,8)

**Block Learning Outcomes**

- Apply relevant statistics to write synopsis for a mini research project. (SLO 4,5)

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Contextual importance of evidence-based medicine (EBM)	LGIS/SGD	Assistant Prof. Dr. Ambreen Ansar	Good to know

**Learning Outcomes with Assessment strategy**

- Identify the importance of EBM in practicing medicine
- Formulate clinically relevant, answerable questions using the Patient Intervention Comparison Outcome (PICO) framework

**Assessment strategy: MCQ/SAQ**

2.	Identifying relevant evidence	LGIS/SGD	Assistant Prof. Dr. Ambreen Ansar	Good to know
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**Learning Outcomes with Assessment strategy**

The students will be able to:

- Perform systematic literature search to identify relevant evidence.

**Assessment strategy: OSPE**

3.	Critically appraising the evidence	LGIS/SGD	Assistant Prof. Dr. Ambreen Ansar	Good to know
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**Learning Outcomes with Assessment strategy**

The students will be able to:

- Identify the importance of assessing the quality and validity of evidence by critically appraising the literature
- Identify the levels of evidence provided by different study designs.
- Find new evidence in clinical practice for common clinical problems.

**Assessment strategy: MCQ/SEQ**

4.	Synopsis writing	SGD	All faculty	Must know
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**Learning Outcomes with Assessment strategy**

The students will be able to:

- Write synopsis according to guidelines

## Assessment strategy: Report writing.

### Learning Resources:

#### 1. Text Books

- Park's Textbook of Preventive and Social Medicine
- Public Health and Community Medicine (Shah, Ilyas, Ansari, Irfan's)

#### 2. Reference Books

- Basic Methods of Medical Research (Indrayan)
- Basic statistic for the Health Sciences (Jan. W. Kuzma)
- How to design & evaluate research in education (Jack R. Fraenkel)

#### 3. Online resources

#### [Steps for synopsis writing](#)

#### 4. Library resources

- Notes/Handouts by Faculty
- G classroom

### Teaching Faculty:

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## Surgery

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	<b>Sinuses and fistulas</b>	LGIS/PBL/ Video clips	Senior Registrar Dr. Huda	
<p><b><u>Learning outcomes</u></b> List the principles of diagnosis and management of sinuses and fistula on the basis of its etiology.</p> <ul style="list-style-type: none"> <li>● Formative assessment</li> </ul>				
2.	<b>Wound infections</b>	LGIS/PBL/ Video clips	Asstt. Prof. Dr. Munawar Latif	
<p><b><u>Learning outcomes</u></b> ● Wound infections classification, management, prevention.</p> <p><b>Assessment strategy</b> <b>OSCE</b></p>				
3.	<b>Ward visits</b>	Bedside teaching/ CBL		
<p><b><u>Learning outcomes</u></b> ● Take history and perform examinations of the patients with relevant disorders.</p> <p><b>Assessment strategy</b> Formative assessment</p>				
4.	<b>Procedures</b>	Real Patient/ skill lab	Asstt. Prof. Dr. Munawar Latif	
<p><b><u>Learning outcomes</u></b> Perform under direct supervision</p> <ul style="list-style-type: none"> <li>● Intramuscular Injection (10)</li> <li>● Subcutaneous Injection (5)</li> </ul>				

## Medicine

### Subject Learning Outcomes:

- Diagnose common Medical conditions, suggest and formulate appropriate investigations, rationalize treatment plan and if appropriate, refer patient for specialist opinion/ management.
- Suggest preventive measures for the common Public Health Problem in the community.
- Perform relevant bedside procedures.
- Convey relevant information and explanations accurately to patients, families, colleagues and other professionals.
- Understand medical ethics and its application pertaining to medicine and maintain the confidentiality of the patient.
- Adapt research findings appropriately to the individual patient situation or relevant patient population

### Block Learning outcomes:

At the end of this block, third year student should be able to

- Assess and outline management plans for patients with diarrhea in the given scenario.
- Discuss the causes, pathophysiology and management plan of jaundice.
- Analyze the clinical aspects of neoplasia.
- Relate the pathophysiology of AIDS to its clinical presentation and list various diagnostic modalities and treatment options
- Discuss the risk factors, pathophysiology and management plan of Bronchial Asthma.
- Evaluate clinically and make differential diagnosis of patients presenting with fever in a given scenario.
- Describe the pathophysiology, clinical features and mode of transmission of acute viral hepatitis.

S. No	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
At the end of lecture, third year student should be able to :				
1.	Approach to patient with acute diarrhea	LGIS	Dr. Jamila Khan	Must know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>● Differentiate between acute and chronic diarrhea on the basis of its etiology</li> <li>● Outline risk factors of acute diarrhea</li> <li>● Elaborate the causative organisms</li> <li>● Asses the patient on basis of signs and symptoms</li> <li>● Describe the differential diagnosis for patients presenting with acute diarrhea</li> <li>● Outline the investigations and management plan</li> </ul>				
2.	Approach to patient with jaundice	LGIS	Prof. Muzamil Jamil	Should Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>● Discuss pathophysiology, etiology &amp; differential diagnosis of jaundice</li> </ul>				

	<ul style="list-style-type: none"> <li>Identify and correlate the clinical features to etiology of jaundice in a given scenario</li> <li>Identify warning signs in patients with jaundice</li> <li>List the relevant investigations</li> <li>Outline the management plan</li> </ul>			
3.	Approach to patient with chronic diarrhea	LGIS	Dr. Jamila Khan	Should Know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>Differentiate between acute and chronic diarrhea on the basis of its etiology</li> <li>Asses the patient on basis of signs and symptoms</li> <li>Describe the differential diagnosis for patients presenting with chronic diarrhea</li> <li>Outline the investigations and management plan</li> </ul>				
4.	Approach to patient with suspected malignancy	LGIS	Dr. Sadia Babu	Could Know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>Analyze the clinical aspects of neoplasia</li> </ul>				
5.	HIV/AIDS	LGIS	Dr. Wajahat Sultan Baig	Could Know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>Relate the pathophysiology of immunodeficiency syndrome to its clinical presentation</li> <li>Identify the mode of transmission and individuals susceptible to disease</li> <li>Evaluate various diagnostic modalities and treatment options</li> </ul>				
6.	Bronchial Asthma, Clinical features and diagnosis	LGIS	Dr. Abidain Haider	Must know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>Relate abnormalities of physiology of ventilation and respiration to obstructive pulmonary diseases</li> <li>Identify the clinical features of asthma in a given scenario</li> <li>Discuss the incidence, etiology and risk factors associated with asthma</li> <li>Correlate the clinical features with pathophysiology of asthma</li> <li>Enlist the investigations</li> <li>Outline drugs used for treatment of asthma</li> </ul>				
7.	Enteric fever, clinical features and diagnosis	LGIS	Dr. Rifat Yasmin	Should Know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>Discuss the etiology and enumerate the symptoms and signs of Enteric fever</li> <li>Elaborate modes of transmission and the causative organism</li> <li>Diagnose complications of Enteric fever based on clinical and characteristic features</li> <li>Suggest diagnostic modalities and treatment options</li> <li>Elaborate complications and preventive measures of Enteric fever</li> </ul>				
8.	Approach to patient with PUO	LGIS	Dr. Sadia Fatima	Should Know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>Identify clinical presentation of fever from the given scenario</li> <li>Take relevant history</li> <li>Correlate clinical features to its etiology and pathophysiology.</li> </ul>				

	<ul style="list-style-type: none"> <li>Develop differential diagnosis of fever</li> <li>Enlist the investigations</li> </ul>			
9.	Dengue fever	LGIS	Dr. Farhat ul Ain	Should Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Discuss the etiology and enumerate the symptoms and signs of dengue fever</li> <li>Elaborate modes of transmission and the causative organism</li> <li>Diagnose complications of dengue fever based on clinical and characteristic features</li> <li>Suggest diagnostic modalities and treatment options</li> <li>Propose prevention options including vaccination</li> </ul>				
10.	Malaria	LGIS	Dr. Ayesha Rani	Should know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Discuss the etiology and enumerate the symptoms and signs of Malaria</li> <li>Elaborate modes of transmission and the causative organism</li> <li>Enumerate complications of malaria</li> <li>outline diagnostic modalities and treatment options</li> <li>Propose prevention options including vaccination</li> </ul>				
11.	Acute viral hepatitis, clinical features and diagnosis	LGIS	Dr. Noreen Adil	Should Know
<b>Learning Outcomes:</b> <ul style="list-style-type: none"> <li>Classify viral hepatitis</li> <li>Identify causative organisms of acute viral hepatitis</li> <li>Discuss their modes of transmission</li> <li>Interpret investigations for diagnosis of acute viral hepatitis</li> <li>Outline treatment plan</li> <li>List the Complications</li> </ul>				

### Learning resources:

#### 1. Reference Books

- Davidson's Principles and practice of Medicine
- Kumar and Clarks Clinical Medicine
- Macleod' Clinical Examination
- Hutchison's clinical methods

#### 2. Online resources

- www. Medscape.com

#### 3. Library resources

- Harrison's Principals of Internal Medicine 20<sup>th</sup> Edition (2018). McGraw Hill Education

### Teaching faculty and Student hours

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### Assessment formats

Assessment strategies (Formative)	Assessment strategies (Summative)
MCQs/SEQs	MCQs/SEQs

## Pediatrics

### Subject Learning Outcomes (SLO):

Pediatrics								
Program Learning Outcomes	1	2	3	4	5	6	7	8
Subject learning Outcomes								
1. Apply the principles of evidence based medicine for health promotion, disease prevention, infection control management of common diseases in children & neonates.(PLO 1,5)								
2. Demonstrate clinical skills of history taking & physical examination of children and neonates.(PLO 1 ,2,6)								
3. Perform basic pediatric procedures to handle common pediatric emergencies under supervision. (PLO 2)								
4. Display a compassionate and ethical attitude toward the patient and parents (PLO 3,7)								

### Block Learning Outcomes (BLO):

By the end of Y3B3, students shall be able to:

- Classify anemias and outline management plan.
- Diagnose and manage common pediatric GIT illnesses.
- Identify complications, list preventive measures and discuss prognosis of GIT illnesses.
- Diagnose, investigate and plan management of infectious diseases.

Sr#	TOPIC	Teaching Strategy	Instructor	Importance (Must Know Should Know Could Know)
1	Anemias	LGIS	Dr. Kiran israr Shah	Must know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>• Explain classification and causes of anemias in children</li> <li>• List investigations and outline management of anemias in children</li> </ul>				
2	Acute Diarrhea in children	LGIS	Dr. Tahir Mahmood	Should know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>• Define acute / Chronic &amp; persistent diarrhea</li> <li>• List organisms causing diarrhea</li> <li>• Classify dehydration</li> <li>• Identify signs and symptoms of dehydration</li> </ul>				
3	IMCI Diarrhea	LGIS	Dr. Qurat ul Ain	Should know

**Learning Outcomes:**

- Classify and enumerate steps of treatment of child with diarrhea

4	Chronic Diarrhea / Malabsorption syndrome	LGIS	Dr. Kiran Israr Shah	Should know
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**Learning Outcomes:**

- Identify the clinical presentation of malabsorption.
- Identify the signs and symptoms of gluten enteropathy/ celiac disease.
- List investigations and outline management steps of celiac disease/giardiasis.
- List the cause of chronic diarrhea
- Identify the clinical presentation of chronic diarrhea causes
- Discuss prognosis

5	Measles, Mumps, Chicken Pox	LGIS	Dr. Saba Mushtaq	Must know
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**Learning Outcomes:**

- Identify signs & symptoms of Measles, Mumps & chicken pox
- Plan investigations & discuss treatment of these infections
- Discuss complications
- Discuss preventive measures & prognosis

6	PUO, Malaria, Enteric fever	LGIS	Dr. Sundus Khan	Must know
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**Learning Outcomes:**

- List differential diagnosis of PUO
- Plan investigations & outline management of PUO
- Plan investigations & discuss treatment of these infections
- Discuss complications
- Discuss preventive measures & prognosis

**Learning Resource:**

## 1. Reference Books:

- Basis of Pediatrics by [Parvez Akbar Khan](#)

## 2. Online resources:

[Google class room](#)

## 3. Library Resources:

- Textbook of Pediatrics by PPA
- Current Pediatric Diagnosis & Treatment
- Harriet & Lane Handbook of Pediatrics
- Pediatrics illustrated text book by Tom Lissauer

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## Gynecology

### Subject Learning Outcomes (SLO):

The student of Gynaecology & Obstetrics is expected to achieve these subject learning outcomes at the end of 3 years teaching while demonstrating professionalism and observing the principles of medical ethics in all academic activities.

1. Triage /refer women with **OBGYN** problems to the appropriate facility of care.
2. Manage common obstetrics & gynaecological illnesses of women with evidence-based care.
3. Assist in management of critical obstetric and gynaecological cases as a member of health care team
4. Suggest preventive measures for the common public health problem related to Gynae & Obs
5. Counsel women and families effectively about the related OBGYN condition & its possible management taking into account their personal beliefs, socio-economic and cultural background.

### Block learning outcomes

In this block 3<sup>rd</sup> year students will be given knowledge about the gynecological causes and management of acute pelvic pain.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	Acute abdomen- pelvic pain (Ectopic pregnancy)	LGIS	Dr. Ruqaiya Azhar	Good to know
<b>Learning Outcomes with Assessment strategy</b> <ul style="list-style-type: none"> <li>● List gynecological causes of acute pelvic pain</li> <li>● Describe presentation and management of acute pelvic pain</li> <li>● Define ectopic pregnancy</li> <li>● Name the investigations to diagnose ectopic.</li> <li>● Select diagnostic criteria for medical and surgical management of ectopic pregnancy.</li> </ul>				
2.	Fibroid Uterus	LGIS	Dr. Sadia Ijaz	Nice to know
<b>Learning Outcomes with Assessment strategy</b> <ul style="list-style-type: none"> <li>● Describe etiology and clinical presentation</li> <li>● Classify fibroid</li> <li>● Defined medical and surgical management of fibroid uterus</li> </ul>				
3.	Benign Ovarian tumour	LGIS	Dr. Ayesha Irfan	Nice to know
<b>Learning Outcomes with Assessment strategy</b> <ul style="list-style-type: none"> <li>● List gynecological causes of acute pelvic pain</li> <li>● Describe presentation and management of acute pelvic pain</li> <li>● Classify benign ovarian tumor</li> <li>● Differentiate between a simple cyst and ovarian torsion</li> </ul>				

<ul style="list-style-type: none"> <li>Recognize the importance of surgery in case of ovarian torsion</li> </ul>				
4.	Lower genital tract infection	LGIS	Dr. Irum Mushtaq	Good to know
<b>Learning Outcomes with Assessment strategy</b> <ul style="list-style-type: none"> <li>Outline important points in sexual history and importance of contact tracing.</li> <li>Summarize the methods of diagnosis of various types of vaginal discharge</li> <li>Select diagnostic tests for STI</li> <li>List name of organism causing STI.</li> </ul>				
5.	Upper genital tract infection	LGIS	Dr. Sidra Khan	Nice to know
<b>Learning Outcomes with Assessment strategy</b> <ul style="list-style-type: none"> <li>Recognize the presentation of acute PID.</li> <li>Name causative the organism of PID</li> <li>Explain sequel of PID</li> </ul>				

### Learning Resources:

#### Reference books:

- Obstetrics by ten teachers 20th edition
- Gynaecology by ten teachers 20th edition

#### Recommended Readings:

- Hacker and Moore's essential obstetrics 6th edition
- High risk pregnancy 5th edition
- Shaw's textbook of gynaecology 17th edition

### Teaching faculty:

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Dr. Iram Mushtaq	<a href="mailto:irmushtaq80@gmail.com">irmushtaq80@gmail.com</a>
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Dr. Ayesha Irfan	<a href="mailto:nazayesha2021@gmail.com">nazayesha2021@gmail.com</a>
Dr. Sidra Khan	<a href="mailto:doctorsidrakhan@gmail.com">doctorsidrakhan@gmail.com</a>
Dr. Ruqaiya Azhar	<a href="mailto:ruqaeya@yahoo.com">ruqaeya@yahoo.com</a>

## Ophthalmology

### Subject Learning Outcomes (SLO):

To equip doctors with essential knowledge, skills and attitude in order to enable them to:

1. Provide primary eye care for various ophthalmic diseases including emergencies and if required, refer the patients to appropriate centers (PLO 1,6)
2. Perform various ophthalmic examination methods essential for all Practitioners (PLO 1,2,6)
3. Communicate effectively with the patient, family and community regarding eye diseases and their related issues (PLO 1,2,6)
4. Perform essential minor surgical procedures (PLO 1,2)
5. Apply principles of medical ethics pertaining to Ophthalmology (PLO 3)
6. Provide awareness regarding prevention of common public ophthalmic health problems (PLO 5)

### Block Learning Outcomes (BLO):

At the end of block-3 the students of 3<sup>rd</sup> year MBBS should be able to:

- Describe the anatomical and physiological basis of the retina. (SLO 2,3,5,6)
- Correlate the anatomy of extra ocular muscles with its pathophysiology. (SLO 2,3,5,6)
- Classify different ocular injuries. (SLO 2,3,5,6)
- Identify common ophthalmic conditions and discuss their etiology. (SLO 2,3,5,6)

Sr. No.	Topic	Educational Strategy	Faculty Name	Importance (Must Know Good to Know Nice to Know)
1.	<b>Retina</b>	LGIS	Dr. Yaseen Lodhi	Must know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>● Describe the anatomical and physiological basis of retinal structure and function.</li> <li>● Describe the histology of the retina.</li> <li>● Illustrate the visual cycle.</li> </ul>				
2.	<b>Strabismus</b>	LGIS	Prof. M. Akmal Khan	Must know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>● Recall the anatomy of extra ocular muscles.</li> <li>● Explain different physiological phenomena in binocular muscular balance.</li> </ul>				
3.	<b>Ocular Trauma</b>	LGIS	Dr. Marrium Shafi	Must know
<b>Learning Outcomes:</b>				
<ul style="list-style-type: none"> <li>● Classify different types of ocular injuries.</li> <li>● Describe different clinical presentations of ocular trauma.</li> </ul>				

4.	<b>Common ophthalmic conditions</b>	LGIS	Dr. Asma Aftab	Must Know
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**Learning Outcomes:**

- Identify common ophthalmic conditions and discuss their etiology.

**Learning Resources:**

**1. Text books:**

- Clinical Ophthalmology, Jatoi S M
- Basic Ophthalmology, Jogi R

**2. Reference Books:**

- General Ophthalmology, Vaughan and Asbury
- Kanski's Clinical Ophthalmology A Systematic approach, Bowling

**3. Online resources:**

- <https://www.medscape.com/ophthalmology>

**4. Library resources:**

- Basic Ophthalmology, Jogi R
- General Ophthalmology, Vaughan and Asbury
- Clinical Ophthalmology, Jatoi S M
- Parson's Diseases of the eye, Sihota R
- Kanski's Clinical Ophthalmology A Systematic approach, Bowling

**Teaching faculty:**

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Prof. M. Akmal Khan	<a href="mailto:drakmal2002@wahmedicalcollege.edu.pk">drakmal2002@wahmedicalcollege.edu.pk</a>
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Dr. Marrium Shafi	<a href="mailto:drmarrum@wahmedicalcollege.edu.pk">drmarrum@wahmedicalcollege.edu.pk</a>
Dr. Maj. Haroon Sarfraz	<a href="mailto:drharoon@wahmedicalcollege.edu.pk">drharoon@wahmedicalcollege.edu.pk</a>

**Assessment formats:**

Assessment Strategies (Formative)	Assessment Strategies (Summative)
Quiz, Class discussion	

# ENT

## Learning Outcomes:

- Should be able to recall the applied anatomy & physiology of oral cavity & pharynx. larynx and oesophagus.

S. #	Topic	Educational Strategies	Instructor	Importance (Must Know Should Know Could Know)
1.	Anatomy of Oesophagus	LGIS	Dr M. Asad Chughati	Must Know
<b><u>Learning Outcomes:</u></b>				
<ul style="list-style-type: none"> <li>● At the end of lecture, students should be able to describe the applied anatomy of Oesophagus: its extent, length, parts, relation , blood, nerve supply and lymphoid .</li> </ul>				
2.	Waldeyer Ring , Cervical Lymph Nodes	LGIS	Dr Anum Ajmal	
<b><u>Learning Outcomes:</u></b>				
<ul style="list-style-type: none"> <li>● Explain the Pathophysiology of cervical lymphadenopathy</li> <li>● Recognise the anatomical arrangements of lymphoid tissue of pharynx</li> </ul>				
3.	Radiology in ENT	LGIS	Dr M. Asad Chughati	
<b><u>Learning Outcomes:</u></b>				
<ul style="list-style-type: none"> <li>● To suggest relevant radiological views used in ENT diagnosis.</li> <li>● Be able to describe basic plain films, CT-Scan and MRI interpretation used in Otorhinolaryngology</li> </ul>				
4.	Anatomy of Neck Spaces	LGIS	Dr Anum Ajmal	
<b><u>Learning Outcomes:</u></b>				
<ul style="list-style-type: none"> <li>● To describe the anatomy of the different compartments of Neck along with their relation.</li> </ul>				

## Learning Resources:

### Reference Books:

1. Diseases of Ear, Nose, and Throat Head and Neck Surgery by PL Dhingra. Shruti Dhingra 8th Edition.
2. Logan Turner's Diseases of the Nose Throat and Ear Head and Neck Surgery by S. Musheer Hussain 11th Edition.
3. Essentias of ENT Examination by JT Shah

### Text books:

1. Ballenger's Otorhinolaryngology, Head & Neck Surgery 17th edition.
2. Scott Brown's Otorhinolaryngology 8th edition.

### Teaching Faculty:

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### Assessment formats:

Assessment tools (Formative)	Assessment Strategies (Summative)
MCQs, Home assignments, SEQs	MCQs, SEQs, OSPE, Viva

# P-CMILE

## Subject Learning Outcome

**At the end of content, the student will be able to:**

1. Identify factors associated with Infection transmission in healthcare.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Good to Know Nice to Know)
1.	<b>management of exposure to blood-borne pathogens</b>	LGIS/SGD	Dr. Ayesha Afzal	
<b>Learning Outcomes with Assessment strategy</b> <b>By the end of this teaching session the students should be able to:</b> <ul style="list-style-type: none"> <li>● Describe the ways by which a healthcare worker is exposed to bloodborne pathogens on the job</li> <li>● Discuss the methods to protect them and enumerate the steps to be taken if one is exposed.</li> <li>● Give an exposure control plan for a healthcare worker.</li> </ul>				
2.	<b>Environmental cleaning</b>	LGIS/SGD	Pharma	
<b>Learning Outcomes with Assessment strategy</b> <ul style="list-style-type: none"> <li>● Discuss the importance and need of environmental cleaning in health care settings.</li> <li>● Discuss the significance of the environment in contamination.</li> <li>● Discuss the High touch and low touch surfaces.</li> <li>● Describe the Cleaning methods and material required.</li> <li>● Demonstrate the Spill management.</li> <li>● Discuss the Monitoring of cleanliness</li> </ul>				
3.	<ul style="list-style-type: none"> <li>● Decontamination policy</li> <li>● Decontaminated surgical equipment &amp; Endoscopes</li> </ul>	LGIS	Surgery	
<b>Learning Outcomes with Assessment strategy</b> <ul style="list-style-type: none"> <li>● Define the term decontamination and its encompassing components.</li> <li>● Explain the Spaulding's classification of equipment decontamination.</li> <li>● List Dangers of reusing single-use items.</li> <li>● Illustrate the Sinner cycle for cleaning of instruments.</li> <li>● Discuss in detail the methods of sterilization; Dry &amp; wet heat methods, temperatures required for various levels of cleaning</li> </ul>				

## Learning Resources:

### Online resources

1. [https://www.nih.org.pk/wp-content/uploads/2020/04/Complete\\_IPC\\_Guideliens.pdf](https://www.nih.org.pk/wp-content/uploads/2020/04/Complete_IPC_Guideliens.pdf)
2. Genetics and ethics: a possible and necessary dialogue
3. Ethical issues concerning the relationships between medical practitioners and the pharmaceutical industry
4. Admitting mistakes: ethics says yes, instinct says no
5. How to engage in effective client counseling - iPleaders
6. Types of consent

### Teaching Faculty:

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## **13. Rules & regulations:**

### **I. Student's code of conduct**

The Student Code of Conduct sets out the standards of conduct expected of students. It holds individuals and groups responsible for the consequences of their actions. Failure to fulfill these responsibilities may result in the withdrawal of privileges or the imposition of sanctions.

Wah Medical College is a community of students, faculty and staff involved in learning, teaching, research and other activities. All members of WMC community are expected to conduct themselves in a manner that contributes positively to an environment in which respect, civility, diversity, opportunity and inclusiveness are valued, so as to assure the success of both the individual and the community. The Student Code of Conduct reflects a concern for these values and tries to ensure that members of the WMC can make use of and enjoy the activities, facilities and benefits of WMC without undue interference from others.

### **WMC STUDENT CODE OF CONDUCT**

- Discipline
- Decent dress
- Good Manners
- Smart Turn Out
- Healthy Activities
- No smoking
- No Abusive Language
- Cooperative Attitude
- Respect for All

## **i. Attendance policy**

- a. Students are required to mark attendance for every class.
- b. The attendance is compiled by respective department and submitted to student affairs by the 10<sup>th</sup> of each month.
- c. Students Affairs Department will compile the absent report and fine of Rs. 500/- for a lecture or for the whole day will be imposed on absent students. It is pertinent to mention here that fine is imposed on students to compel them to attend classes regularly and not to generate the funds.
- d. A compiled attendance state of all students along with those having attendance less than 75% duly highlighted will be submitted to the Students Affairs Department on monthly as well as quarterly basis by the concerned departments.
- e. At the end of academic year, a consolidated state of attendance of students will be submitted to Students Affairs Department.
- f. Departments will submit the list of those students having attendance less than 75% at the end of academic year.
- g. Admission forms of students having attendance less than 75% will NOT be submitted to NUMS for appearing in Annual University Exams.

## 14. Study tips

Dear Students,

Becoming a doctor is a tough job, but you can make it easier for yourself by adopting some time-tested techniques or habits. It's never too early – or too late – to develop good study habits. The sooner you get into a good self-study pattern, the easier everything will be and the more your chances of getting good marks will improve. Here are our top tips for getting the most out of your self-directed study time. And remember **Perseverance is the Key to Success!**



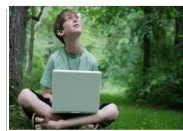
Review the material regularly, create a study schedule

Write it down



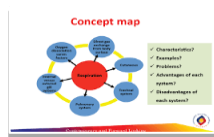
Test yourself

Find an effective learning environment with limited distractions and some fresh air



Improve memorization with Mnemonics

Incorporate auditory methods; use online podcasts



Use visuals, images, concept maps & illustration charts

Consider forming a study group or find an accountability buddy



TAKE A STUDY BREAK!

Take strategic breaks

## 15. Feedback on the Study Guide

We value your feedback and will use it for improvement of this Study guide. Kindly provide feedback for this study guide. At the email: [dme@wahmedicalcollege.edu.pk](mailto:dme@wahmedicalcollege.edu.pk)  
[dmewahmedicalcollege@gmail.com](mailto:dmewahmedicalcollege@gmail.com)

## 16. References:

HARDEN, J.M. LAIDLAW, E.A. HESKETH, R. M. (1999). AMEE Medical Education Guide No 16: Study guides-their use and preparation. *Medical Teacher*, 21(3), 248–265.  
<https://doi.org/10.1080/01421599979491>.

# 17. Time Table Template:

Date & Time		Monday	Tuesday	Wednesday	Thursday	Friday
8:00-08:50	Pathology	Pharma	Pharma	Pharma	Pharma	Pharma
	LGIS	LGIS	LGIS	LGIS	LGIS	LGIS
8:50-9:40	Pharma	Pharma	Pharma	Pharma	Pharma	Pharma
	LGIS	LGIS	LGIS	LGIS	LGIS	LGIS
9:40-10:30	Medicine	Medicine	Medicine	Medicine	Medicine	Medicine
	LGIS	LGIS	LGIS	LGIS	LGIS	LGIS
Break 10:30-10:45						
10:45 - 12:30	Practical Pathology: Batch-I	Practical Pathology: Batch-I	Practical Pathology: Batch-I	Practical Pathology: Batch-I	Practical Pathology: Batch-I	Practical Pathology: Batch-I
	Pharma: Batch-II	Pharma: Batch-II	Pharma: Batch-II	Pharma: Batch-II	Pharma: Batch-II	Pharma: Batch-II
12:30-03:00	F. Medicine: Batch-III	F. Medicine: Batch-III	F. Medicine: Batch-III	F. Medicine: Batch-III	F. Medicine: Batch-III	F. Medicine: Batch-III
	Clinical Rotation X 6 Weeks	Clinical Rotation X 6 Weeks	Clinical Rotation X 6 Weeks	Clinical Rotation X 6 Weeks	Clinical Rotation X 6 Weeks	Clinical Rotation X 6 Weeks
08:00-08:50	ENT/EYE	ENT/EYE	ENT/EYE	ENT/EYE	ENT/EYE	ENT/EYE
	SDI	SDI	SDI	SDI	SDI	SDI
8:50-9:40	Pathology	Pathology	Pathology	Pathology	Pathology	Pathology
	LGIS	LGIS	LGIS	LGIS	LGIS	LGIS
9:40-10:30	Pharmacology	Pharmacology	Pharmacology	Pharmacology	Pharmacology	Pharmacology
	SDI	SDI	SDI	SDI	SDI	SDI
10:30-11:20	Community Medicine	Community Medicine	Community Medicine	Community Medicine	Community Medicine	Community Medicine
	SDI	SDI	SDI	SDI	SDI	SDI
11:20-12:10	Pathology	Pathology	Pathology	Pathology	Pathology	Pathology
	SDI	SDI	SDI	SDI	SDI	SDI
12:10-13:00	Pathology	Pathology	Pathology	Pathology	Pathology	Pathology
	CBL	CBL	CBL	CBL	CBL	CBL
Prayer 1:15-2:00						
2:00-3:00	BS/IC	BS/IC	BS/IC	BS/IC	BS/IC	BS/IC



Theme: \_\_\_\_\_

Wah Medical College  
3rd Year MBBS Session -2023  
Time Table From \_\_\_\_\_

Course Code: V2B1  
Academic Week: \_\_\_\_\_

Professor  
Sing (R) Dr. Tariq Masood Khan  
Chairperson Block Committee V2B1

Professor  
Dr. Babur Razaie Chughtai  
Coordinator Pre-Clinical Dept

Prof. Dr. Munir Razaie  
Dean / Vice Principal  
Wah Medical College Wah Cantt