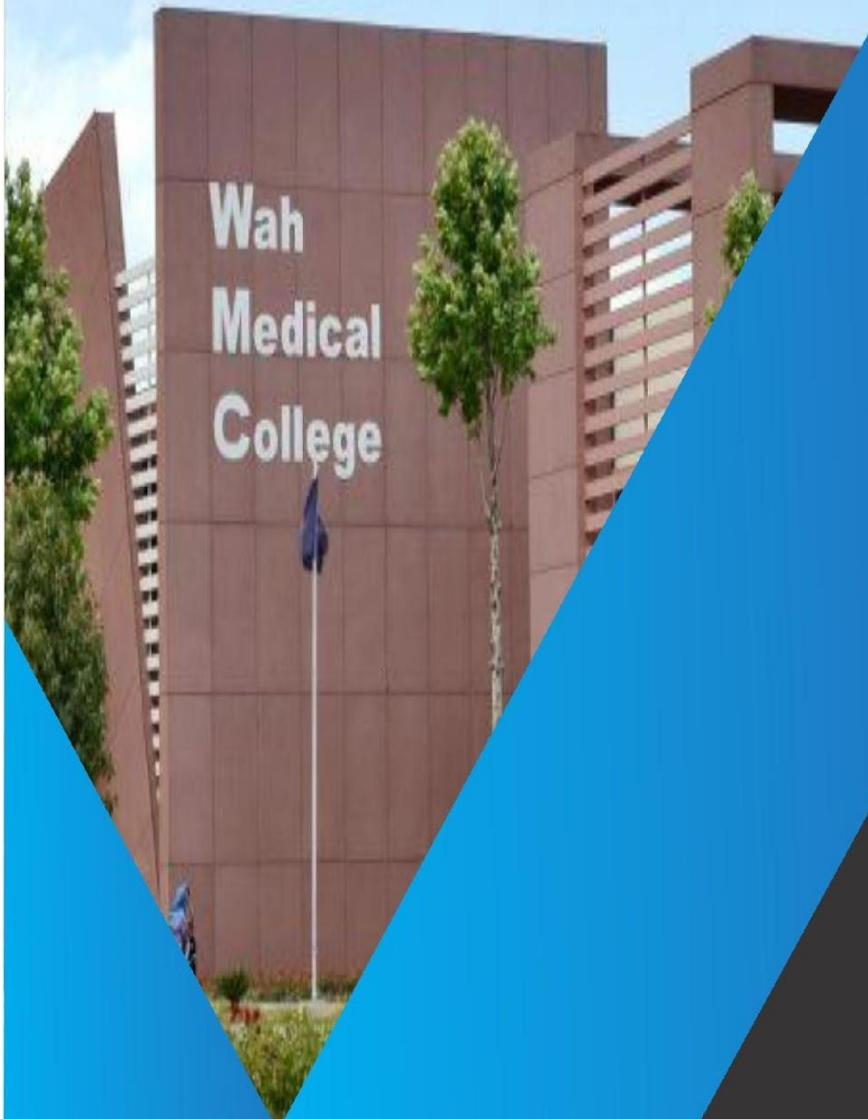
WAH MEDICAL COLLEGE

2023-2027



Department of Medical Education

STUDY GUIDE
4th YEAR MBBS
Y4BX

2023-2027

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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.

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. Outcomes of WMC MBBS Program:

At the end of our five-year MBBS program, the graduates should be able to:
1. Independently manage common, non-critical clinical problems.
2. Assist in the management of critically ill patients & demonstrate competency in life saving procedures.
3. Exhibit the attributes of an ethical professional.
4. Conduct research which brings relevance to health care practices.
5. Act as an efficient community health promoter.
6. Exhibit scientific knowledge in all professional activities.
7. Demonstrate clear and efficient written & verbal communication skills.
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.

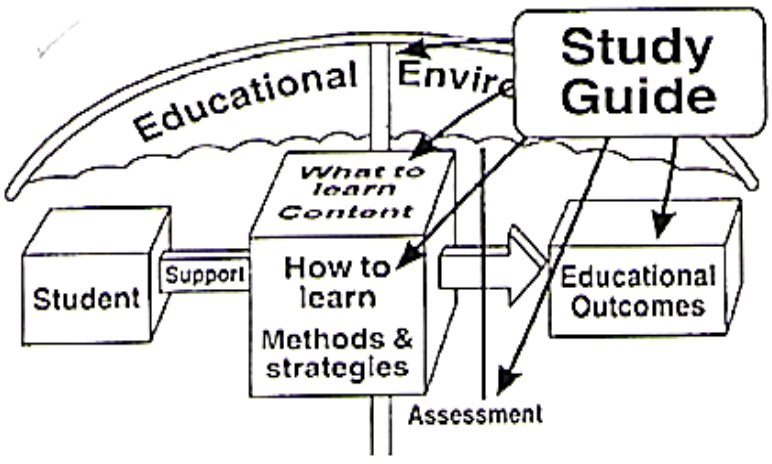


Figure 1. Objectives of the study Guide(HARDEN, J.M. LAIDLAW, E.A. HESKETH, 1999)

II. Commonly used abbreviations & Logos in the study guide

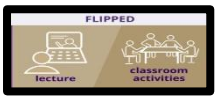
Learning Outcomes:

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 cases, 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.

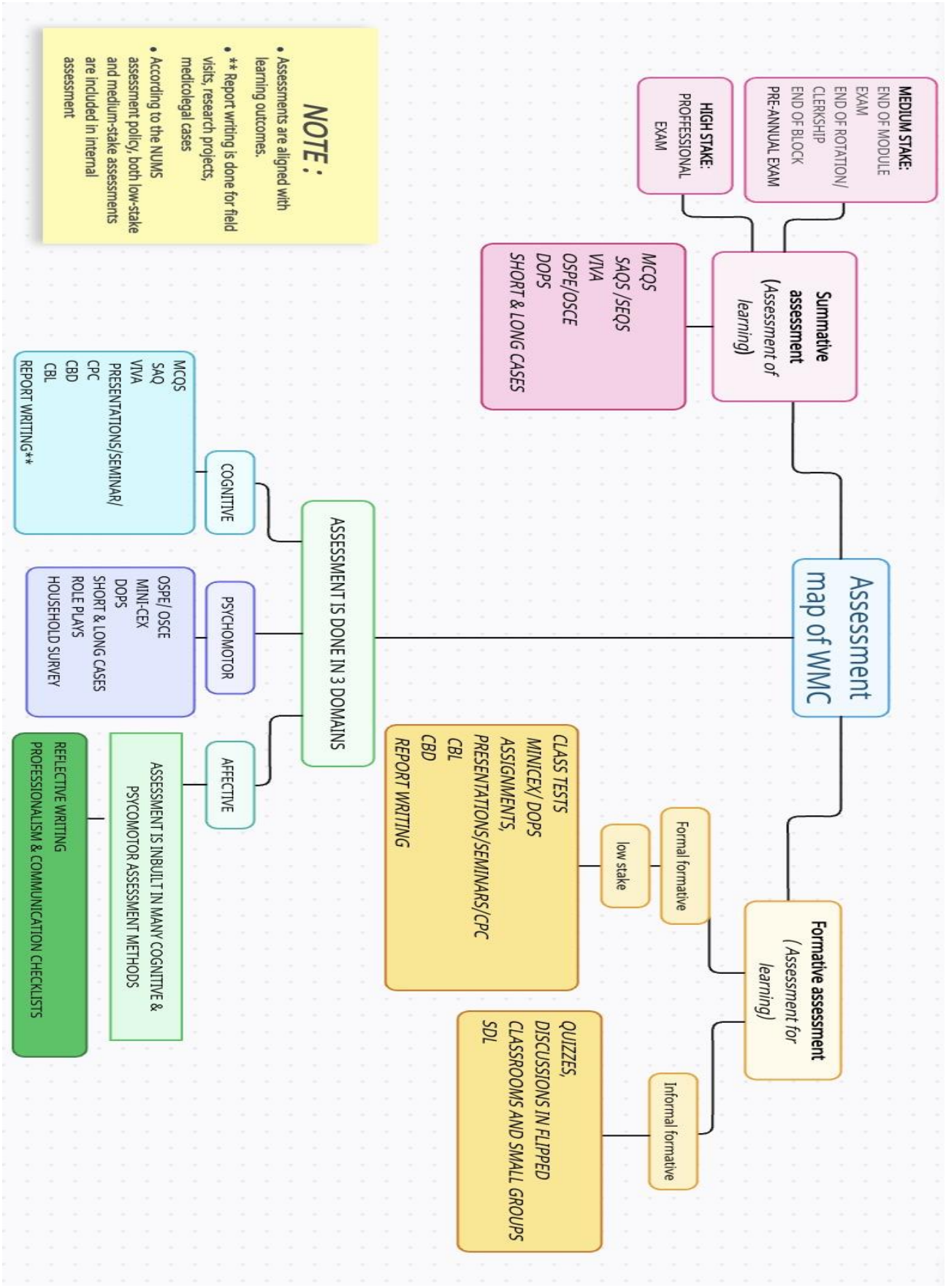
Self-Directed Study

Students assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from the 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 under supervision.

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



i. Internal Assessment.

During the block the students will be continually formatively assessed. The weightage of internal assessment will be 20 % in final professional MBBS Examination. There will be two EOB and one pre-annual examination. There will also be end of rotation exams at the end of each clinical rotation. The scores of the EOB assessment, clinical rotation assessment and pre-annual examination will be used for calculation of the internal assessment. It is mandatory for MBBS students to appear and pass the pre-annual exam with at least 33% marks in each subject as per PMC rules, failing which student is not eligible to appear in the university exam.

ii. Annual Professional Examination.

The University will take the 4th professional Examination as per PMC guidelines at the end of the academic year. Annual Theory & Practical Examination will be of 300 marks each in Special Pathology & Community Medicine & 200 marks each in ENT & Ophthalmology. The pass score will be 50% in theory and practical separately. However, in clinical subjects, students should pass in clinical exams / OSCE (with 50% marks) and unobserved stations (with 50% marks) separately.

Scheme of Assessment

SPECIAL PATHOLOGY, COMMUNITY MEDICINE

Marks of theory paper = 120
Time Allowed = 3 hours
Total Marks = MCQs:40% (60 marks) +SEQs:40% (60 Marks) +IA:20% (30 Marks) = 150
Pass Marks = 75

Paper-1:

80 MCQs, Time =80 min
*Marks of MCQ components shall be rationalized to 40% weightage out of 150.
*If a candidate obtains 70 marks is MCQs it will be rationalized as: (70/80*60=52.50)

Paper-2:

9x SEQs: 7 questions x 6 Marks each + 2 questions x9 Marks each= 60 Marks
Time = 100 min

ENT & EYE

Marks of theory paper = 80 marks, Internal Assessment = 20 marks
Time Allowed = 3 hours
Total Marks= MCQs:40% (40 marks) +SEQs:40% (40 marks) +IA:20%(20 marks)
Pass Marks = 50
Paper-1: 60 MCQs = 40 marks
Time = 60 min
*Marks of MCQ components shall be rationalized to 40% weightage. *If a candidate obtains 50 marks is MCQs it will be rationalized as: (50/60*40=33.33)
Paper-2:
Time = 120 min
8x SEQs = 05 Marks Each = 40 Marks

Internal Assessment (Theory) – MBBS Year IV

(Pathology/ Com Med & Public Health)

Criteria	Percentage	Blocks I / II/ III
Continuous assessment : (Average score of class tests/ quizzes etc)	03 %	Marks obtained* 3 / Total Marks
EOB Exam; For each discipline	05 %	Marks obtained* 5 / Total Marks
Attendance	02 %	▪ 95 % = 02 ▪ 90- 94 % = 1.5 ▪ 85 - 89 % = 01
Pre annual Exam : Theory Paper I, II & III	10 %	Marks obtained*10 /Total Marks
▪ Final IA	20%	

Internal Assessment (Practical) – MBBS Year IV

(Pathology/ Com Med & Public Health)

Criteria	% age	Blocks I / II/ III
Continuous assessment (EOB)	05%	Marks obtained * 5/Total Marks
Attendance	02 %	▪ 95 % = 02 ▪ 90- 94 % = 1.5 ▪ 85 - 89 % = 01
Practical books/Logbooks	01%	Obtained marks * 01 / Total marks
Discipline/Attitude, Responsibility & Teamwork	02 %	Obtained marks* 02 / Total marks
Pre Annual Practicals	10%	Marks obtained* 10 /Total Marks
Final IA	20%	

Internal Assessment Theory (ENT, Eye)

Assessment Tool	Final IA (20%)
Continuous Assessment (Periodical Class Tests)	03%
EOB	05%

Pre Annual Exam	10%
Attendance Criteria	▪ 95 % = 02 ▪ 90- 94 % = 1.5 ▪ 85 - 89 % = 01

Internal Assessment Practical (ENT, Eye)

Assessment Tool	Final IA (20%)
a. EOR Exam (Ward Test + OSCE Viva of EOB)	06%
b. Logbooks /Portfolio, Discipline / Attitude, Responsibility and Teamwork	02%
Pre annual Exam (OSCE/Viva)	10%
Attendance	▪ 95 % = 02 ▪ 90- 94 % = 1.5 ▪ 85 - 89 % = 01

4. Structured Summary of Y4BX

Name	Y4BX
Duration	**11+1 =12 weeks**
Prerequisite Block	3rd Professional exam
Community Medicine	General epidemiology, Infectious disease epidemiology, Biostatistics, Concept of health and disease, Health care delivery system, Screening, Respiratory infections, Community water supply, Hospital waste management, HMIS and Census, research
Special Pathology	• Cardiovascular system, Respiratory system, Gastrointestinal system, Hepatobiliary system, and Pancreas.
Ophthalmology (EYE)	• Orientation session: Introduction to ophthalmology and medical ethics, Eye Lid- Anatomy & Physiology, Margin diseases, Ptosis, benign and malignant tumors, Dry Eye, Lacrimal System, Conjunctiva: Introduction to conjunctival diseases, Conjunctivitis, Allergic conjunctivitis, Miscellaneous diseases, Episcleral and Sclera, Orbit: Clinical Features, Orbital infections, Thyroid Eye Disease, Proptosis and its differentials, Refractive Errors and Presbyopia- Pathophysiology, Management, Refractive surgery.
Gynecology	• Medical complications of pregnancy (Hypertension, cardiac diseases, liver disorders, obstetric cholestasis and venous thromboembolism), Normal labour, preterm labour, preterm prelabour rupture of membranes (PPROM) and multiple pregnancies, Antenatal care, prenatal diagnosis, Common perinatal infections.
Surgery	• Basic principles of cardiovascular surgery • Principles of Management of Surgical Gastrointestinal Pathologies • Principles of Management of orthopedics Trauma and Pathologies • Principles & type of Anaesthesia
Medicine	• Congenital Heart Disease, Hypertension, CCF, Approach to Patient with Chest Pain, Ischemic heart disease Angina & Unstable Angina, Acute coronary syndrome MI, Acute Rheumatic Fever, Acute pericarditis & Pericardial
Family Medicine	• Introduction to Family Medicine • Respiratory System (Common Ailments) • GIT (Common Ailments)

Pediatrics	● CVS, GIT, Respiration

5. Block Development Committee

Chairperson	Prof. Dr. Musarat Ramzan
Block In-charge	**Prof. Shezadi Sabah Imran**
Members/ Resource persons	Community Medicine : Prof. Shezadi Sabah Imran Pathology : Prof. Jamila ENT : Lt. Col (R) Prof. M Asad Chughtai Ophthalmology : Dr. Yaseen Lodhi Surgery : Prof. M. Naeem Ashraf Medicine : Dr. Sohaib Ahmed Gynecology : Dr. Khair un Nisa Pediatrics : Dr. Tahir Mehmood
Study guide developed by	Department of Medical Education Wah Medical College under Supervision of Prof. Dr. Musarat Ramzan
Resource person for Study Guide	**Brig. Dr. Abdul Waheeh Khan (Retd)**

6. Course content

Community Medicine

Subject Learning Outcomes

At the end of fourth year MBBS program the student will be able to:

1. Apply knowledge of statistics to measure all health problems affecting people at individual and community levels, right from birth to death, considering research and ethical approaches. (PLO 2,3,4,6,7).
2. Recommend measures for prevention, protection and education about the common community health problems. (PLO 1,3,5,6,7).
3. Evaluate the existing service for its suitability to cater for needs of the people and recommend modifications needfully. (PLO 6).
4. Apply relevant statistic to conduct a house hold survey and a mini research project. (PLO 3,4,6,7)
5. Demonstrate professionalism and leadership in all situations involving individuals and community. (PLO 3, 7)
6. Describe composition, functions and programs of various international health agencies for national and international health care. (PLO 6)

Block Learning Outcomes

At the end of block X, the student of 4th year MBBS will be able to:

1. Assess health and disease status of the community using indicators to promote health and prevent disease. (SLO1,3,4)
2. Relate the role of public health in providing relevant individual and community healthcare. (SLO1,3,4)
3. Apply relevant statistics to conduct a house hold survey. (SLO 4,5)
4. Describe health system of the country by applying concepts of Primary Health Care and Leadership. (SLO 2,3)
5. Apply epidemiology of common communicable and non-communicable diseases in the global and local context for control and prevention of diseases. (SLO 1, 2)
6. Recommend appropriate interventions for control and prevention of common environmental health problems at house hold and community level. (SLO 1,2)
7. Demonstrate computing and soft skills. (SLO 2,4,5)
8. Write comprehensive report on assigned tasks. (SLO 2,4,5)
9. Demonstrate professional behavior in all learning activities. (SLO 5)

S.#	Topic	Educational Strategies	Name of Instructor	Importance: Must Know Should Know Could Know
1.	**General Epidemiology**	Flipped classroom	Prof Dr. Musarat Ramzan	Must know
Learning Outcomes: ● Calculate various measures of morbidity, mortality and association. ● Describe uses and limitations of various measures of mortality and morbidity. ● Interpret comparison of mortality at different places. ● Differentiate individual and population-based study designs ● Select the design for confirming associations on the basis of its advantages and disadvantages. ● Differentiate types of errors in research ● Justify the criteria of association and causation in the given situations.				
2.	**Biostatistics**	LGIS/SGD	Prof Dr. S. Sabah Dr. Robina Mushtaq	Must know
Learning Outcomes: ● Identify various types of data, data presentation, distributions, sampling techniques and probable errors in research. ● Calculate measures of central tendency, dispersion and ranges of normally distributed data. ● Generalize results of a sample over the population by using appropriate test of significance ● Differentiate various sampling techniques. ● Select relevant sampling technique for a given situation ● Apply steps of hypothesis testing for a given research question				
3.	**Concept of health and disease**	Flipped Class Room	Dr. Robina Mushtaq	Must know
Learning Outcomes: ● Apply concept of causation, natural history and disease spectrum in the given situations ● Calculate health indicators. ● Interpret type of agent, levels of prevention and intervention measures in the given scenarios				
4.	**Infectious disease epidemiology**	Flipped class room	Prof Dr. Musarat Ramzan	Must know
Learning Outcomes: ● Differentiate between the terms used to describe a disease. ● Relate relevant levels of prevention with the stages of a disease. ● Interpret patterns of disease distribution in time, place and person. ● Rationalize steps taken to investigate an epidemic. ● Extrapolate control measures for diseases in any affected area.				

5.	**Screening**	Flipped class room	Prof. Dr. S. Sabah Imran	Must know
Learning Outcomes: ● Compare and contrast screening and diagnostic test ● Correlate favorable characteristics of a disease that make screening useful and relevant for the disease. ● Select an ideal screening test on the basis of its characteristics and ethics. ● Interpret calculated values of the Sensitivity, Specificity, PPV, NPV, False positive and False negative rate and accuracy of the test ● Recognize the effect of changes in the cut off value on sensitivity, specificity, false positives, false negative, true positive and true negatives rates. ● Relate validity with precision of a screening test ● Interpret likely errors in screening. ● Explain methods of evaluation of screening program				
6.	**Community water supply**	LGIS	Assoc Prof Dr Robina Rizvi	Must know
Learning Outcomes: ● Describe the functions of slow and rapid sand filters ● Relate different health hazards with water pollution/contamination ● Explain modifications for the prevention of water related problems ● Infer effects of physical environment on human health ● Suggest control measures for different physical environmental problems.				
7.	**Hospital waste management**	Flipped classroom	Assoc. Prof dr Khola Waheed Khan	Must know
Learning Outcomes: ● Classify health care waste ● List sources of health care waste ● Suggest Color of the container according to the types of waste ● Explain various methods for waste disposal				
8.	**HMIS and CENSUS**	Flipped classroom	Assoc. Prof dr Khola Waheed Khan	Must know
Learning Outcomes: ● Explain the elements, components, uses, and causes of failure of HMIS in Pakistan ● Describe sources of statistical data. ● Suggest ways which can improve HMIS in Pakistan. ● Calculate intercensus population in various scenarios				
9.	**Respiratory infections**	Flipped classroom	Dr Sadia Nadeem	Must know
Learning Outcomes:				

	• Compare and contrast the epidemiological determinants, mode of transmission, spectrum, clinical presentations, and investigations of respiratory infections. • Suggest strategies for disease control and prevention for every specific disease and in different scenarios.			
10.	**Health care Delivery System in Pakistan**	Flipped classroom	Dr. S. Sabah Imran	Must know
Learning Outcomes: • Explain the rationale of the devolution of power and the problems of health care system in Pakistan • Identify deficiencies in different healthcare facilities • Differentiate different sectors of the health system and functioning • Recommend improvement in healthcare delivery in Pakistan				

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**
   - Epidemiology by Leon Gordis
   - Linnen field- Screening
   - Handouts/SDL prepared by faculty
3. **Online resources**
   - Types of data
   - Graphical presentation
   - Concept of hypothesis testing
   - HMIS
   - SDGs
   - Study designs
4. **Teaching Faculty:**

Name	Email address
Prof. Dr. Musarat Ramzan	dean@wahmedicalcollege.edu.pk
Prof. Dr. S. Sabah Imran	sabahimran@wahmedicalcollege.edu.pk
Dr. Robina Mushtaq Rizvi	robinamushtaq@wahmedicalcollege.edu.pk
Dr. Khola Waheed Khan	kholawaheed@wahmedicalcollege.edu.pk
Dr. Sadia Nadeem	sadianadeem@wahmedicalcollege.edu.pk
Dr. Saleh Ahmed	s.ahmed.2345@gmail.com

Assessment formats

Assessment tools (Formative)	Assessment Strategies (Summative)
MCQs, Home assignments, SAQs, class discussion, quiz using google forms	MCQs, SEQs, OSPE, Viva

Clerkship

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
		Week 1		
1.	Rural & Urban health	SDL	Dr. Shiza	Should know
	• Differentiate between rural and urban health • Recommend measures to prevent Rural & Urban health problems			
2.	Press cutting **	SGD	Batch Mentor	Must know
3.	National Programs of Pakistan	SDL	Dr. Khola Dr. Areeba	Must know
	• Describe various Health programs of Pakistan and their components • Recognize the significance of various health problems by participating in international days celebration.			
4.	Sustainable Development Goals	SDL	Dr. Khola Dr. Areeba	Must know
	• Describe the Sustainable Development Goals (SDGs) • Relate national health programs and developmental outcomes with the SDGs			
5.	Levels of Prevention	SDL	Dr. Areeba	Must know
	• Interpret levels of prevention and intervention measures in the given scenarios			
6.	Press cutting **	SGD	Batch Mentor	Must know
7.	Personal Hygiene	SDL	Dr. Shiza	Must know
	• Relate personal hygiene with communicable diseases			
8.	Unsafe Injection	SDL	Dr. Shiza	Must know
	• Relate unsafe injection practices with communicable diseases			
9.	Press cutting **	SGD	Batch Mentor	
10.	Air and ventilation	SDL	Dr. Saleh Dr. Areeba	Must know
	• Infer effects of air pollution and inadequate ventilation on human health. • Suggest measures to prevent and control these problems.			
11.	Dental health	SDL	Dr. Qandeel	Must know
	• Identify various dental health problems • Recommend preventive and control measures for maintenance of Dental Health			
12.	Housing and Radiation	SDL	Dr. Robina Dr. Shiza	Must know
	• Explain criteria and standards of healthful housing. • List health hazards of bad house environment and radiation • Recommend measures to prevent hazards related to bad housing and radiation.			
		Week 2		
13.	Microsoft word	Hands on training***	Waleeja	Must know

14.	Visit to HMIS and Incinerator	Field Visit *	Dr. Qandeel Dr. Shiza	Must know
15.	International health agencies	SDL	Dr. Saleh Dr. Qandeel	Should know
● Describe functions of national and international health agencies.				
16.	Respiratory Diseases	SDL	Dr. Areeba Dr. Shiza	Must know
● Compare and contrast the epidemiological determinants, mode of transmission, spectrum, clinical presentations and investigations of respiratory diseases. ● Suggest strategies for disease control and prevention for every specific disease and in different scenarios.				
17.	Measures of Morbidity and mortality	Team Based Learning	Dr. Khola and all lecturers	Must know
● Identify the morbidity and mortality rates to be computed from the given data ● Calculate the morbidity and mortality rates from the given data				
18.	Temperature	SDL	Dr. Saleh Dr. Areeba	Must know
● Infer effects of temperature variation on human health ● Suggest control measures for temperature related health problems.				
19.	Respiratory Diseases	CBL	Dr. Areeba Dr. Shiza	Must know
20.	Visit to Medical Center Gudwal BMI, Anemia, Dehydration, MUAC and Growth monitoring	Hands on training***	All Lecturers	Must know
Week 3				
21.	Gastrointestinal Diseases	CBL	Dr. Shiza	Must know
22.	Family planning	SGD	Dr. Sadia	Must know
● Recommend contraceptive methods according to the given situation. ● Calculate failure rate of contraceptive methods (Pearl's Index).				
23.	Visit to Family planning center & EPI center in Wah General Hospital	Field visit *	Dr. Qandeel Dr. Areeba	Must know
24.	Health Day Celebration Breast Cancer Prevention	Group Activity	Batch Mentor	Must know
Week 4				
25.	Emerging and reemerging Diseases	SDL	Dr. Sabah Dr. Qandeel	Must know
● Differentiate between emerging and re-emerging diseases ● Suggest control measures against emerging and re-emerging diseases				
26.	Zoonotic Diseases	SDL	Dr. Qandeel	Must know

● Compare and contrast the epidemiological determinants, mode of transmission, spectrum, clinical presentations and investigations of zoonotic diseases. ● Suggest strategies for disease control and prevention for every specific disease and in different scenarios.				
27.	Journal Club	Group activity	Batch Mentor	Must know
● Present research findings clearly and concisely to peers and mentors ● Engage in scholarly discussions and provide constructive feedback. ● Foster a habit of regularly reviewing and updating knowledge through current literature.				
28.	Leadership	SDL	Dr. Khola Dr. Areeba	Must know
● Distinguish various theories of leadership and different styles of leadership.				
29.	Hand washing	Hands on training ***	Dr. Areeba Dr. Shiza	Must know
30.	Zoonotic Diseases	CBL	Dr. Sadia Dr. Qandeel	Must know
31.	School Health Services	SGD	Dr. Qandeel	Must know
● Describe components of School Health, responsibilities of the school Health team members and functions of School Health program				
32.	Investigation of Epidemic	Workshop	Dr. Sabah/ Dr Robina	Must know
● Rationalize steps taken to investigate an epidemic				
33.	Visit to school	Field visit *	Dr. Areeba Dr. Shiza	Must know
Week 5				
34.	Water	SDL	Dr. Robina Dr. Shiza	Must know
● Describe the functions of slow and rapid sand filter. ● Relate different health hazards with water pollution/contamination ● Explain modifications for prevention of water related problems				
35.	EPI Skills	Hands on training ***	Dr. Shiza Dr. Areeba	Must know
36.	Non-communicable diseases	Communication Skills ***	Dr. Aimen Dr. Qandeel	Must know
37.	Sewage treatment	SDL	Dr. Sadia	Should know
● Describe the importance and ways of excreta disposal in sewered and unsewered areas ● Interpret the values of BOD, COD & suspended solids				
38.	Water source and supply	Field visit*	Dr. Qandeel	Must know
39.	Sewage Treatment plant	Field visit*	Dr. Sadia	Should know

			Mr. Saad	
40.	Visit to BHU	Field visit*	Dr. Qandeel Dr. Shiza	Must know
Final Week				
41.	Genetics	SDL	Dr. Qandeel	Should know
● Describe the mechanisms of chromosomal abnormalities ● Classify the genetic disorders ● Recommend preventive and social measures				
42.	Pressure and noise	SDL	Dr. Areeba	Should know
● Recognize the hazards related to pressure and noise to human health ● Devise preventive methods for these hazards				
43.	Non-communicable diseases	Seminar by students	Dr. Robina Dr. Shiza	Must know
● Identify epidemiological determinants of common non-communicable diseases ● Suggest preventive measures for these diseases in at-risk individuals and populations				
44.	Reflection	Reflective writing	Batch Mentor	Must know
45.	Journal Compilation and Final Assessment	-	Batch Mentor	-

Learning Outcomes of Field Visits:*

Field Visits will enable the students to:

- Identify the working organization/place of visit.
- Assess critically the existing problems in the observed circumstances of the place of visit and the prevailing condition to which the people are exposed while at work.
- Analyze these problems in the backdrop of whole scenario.
- Apply their theoretical and technical knowledge pertaining to the given situation to formulate purposeful practice and comprehensive suggestions to solve the problems and hence improving the overall situation.

Learning Outcomes of Press Cuttings:**

Press cutting will enable the students to:

- Focus on current health & related problems such as re-emerging infections, newer epidemics, disasters etc.
- Summarize identified problems by highlighting the related determinants.
- Suggest possible alterations for provision of health care to rectify the identified problems.

- Give recommendations for the change of health policy & health care delivery system to ensure better equity & appropriate technology.

Learning Outcomes of Skills/hands on training:***

By the end of the activity the student will be able to independently and accurately:

- Demonstrate the ability to educate the:
  - Individuals about prevention of hypertension, diabetes, obesity, cancer, snake bite, accidents
  - Mother for dietary management of PEM, breast feeding, weaning, preparation and administration of ORS (homemade / packet).
  - Individuals to quit smoking
  - Industrial workers and owners about prevention of occupational diseases
  - Individuals/communities on promoting environmental measures to maintain good health
  - Individuals / administration on prevention of nosocomial infections
  - Travelers to prevent the travel related problems
  - Women regarding antenatal care in the given scenario
- Categorize the calculated BMI following the given protocol.
- Perform SPSS analysis
- Perform assign commands on Microsoft Word.
- Demonstrate steps of hand washing
- Identify the given vaccine & the compartment of Refrigerator for its storage.
- Administer Polio vaccine following the protocol.
- Advise mothers for vaccination in different situations
- Demonstrate the site administration of vaccine, recapping & cutting technique of syringe.
- Recognize efficacy of a vaccine on basis of the Vaccine Vial Monitor
- Plot the given parameters on a growth chart
- Interpret growth variations visible on the chart in light of the parameters provided
- Assess anemia and dehydration in children
- Use the Mendeley software for referencing

Research

Subject Learning Outcomes

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

- Apply knowledge of statistics to measure all health problems affecting people at individual and community levels, right from birth to death, considering research and ethical approaches. (PLO 4).

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1.	**Guidelines for medical writing**	SGD	Dr S. Sabah Imran Dr Robina Rizvi Dr Khola Waheed Dr Sadia Nadeem Dr Saleh Ahmed	Must know
Learning Outcomes: ● Write manuscript according to guidelines				
2.	**Literature Search & Literature Review**	SGD	Dr S. Sabah Imran Dr Robina Rizvi Dr Khola Waheed Dr Sadia Nadeem Dr Saleh Ahmed	Must know
Learning Outcomes: ● Write a review after scientific literature search on the selected topic.				
3.	**Data Collection**	SGD	Dr S. Sabah Imran Dr Robina Rizvi Dr Khola Waheed Dr Sadia Nadeem Dr Saleh Ahmed	Must know
Learning Outcomes: ● Collect data from the target population				

Teaching Faculty:

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Dr. Sadia Nadeem	sadianadeem@wahmedicalcollege.edu.pk
Dr. Saleh Ahmed	s.ahmed.2345@gmail.com

Assessment format

Research project

Patient Safety

Subject Learning Outcomes

At the end of fourth year MBBS program the student will be able to:

S.#	Topic/department	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1.	**Introduction to patient safety / BS**	LGIS	Mr. Muhammad Saad ul Hassan	Must Know
Learning Outcomes: ● Recognize the role of patient safety in safe health-care delivery. ● Discuss the harms caused by health-care errors and system failures.				
2.	**Impact of health system complexity on patient care/ BS**	LGIS	Mr. Muhammad Saad ul Hassan	Must Know
Learning Outcomes: ● Explain system and "complex system" in relation to health-care. ● Differentiate systems approach from traditional approach to patient safety Describe the elements of a safe health-care system.				
3.	**Case studies/ Surgery**	LGIS	Prof. Dr Naeem Ashraf	
Learning Outcomes: ● This case study highlights the importance of continuity of care.				
4.	**Role of human factors in patient safety/ Com Med**	LGIS	Dr Sadia Nadeem	Must know
Learning Outcomes: ● Explain the relationship between human factors and patient safety. ● Describe the Importance of Human Factors in Patient Safety				
5.	**Case studies**	LGIS	Prof. Dr Naeem Ashraf	
Learning Outcomes: ● This case illustrates the importance of using checklists and listening to patients.				
6.	**Managing clinical risk/ Surgery**	LGIS	Prof. Dr Naeem Ashraf	
Learning Outcomes:				

● Identify, assess & Report the known risks or hazards in the workplace- Discuss incident monitoring. ● Respond appropriately to patients & families after an adverse event				
7.	**Effective team player/ BS**	LGIS	Mr. Muhammad Saad ul Hassan	Should Know
Learning Outcomes: ● Discuss different types of teams in health care ● Discuss characteristics of an effective team ● Discuss the role of a patient in the team				
8.	**Medical Errors**	LGIS	Behavioral sciences	
Learning Outcomes: ●				
9.	**Inform constant on research**	LGIS	C-Medicine	
10.	**Inform constant in Medical practice**	LGIS	Prof. Dr Naeem Ashraf	
11.	**Introduction to quality improvement methods/ DME**	LGIS	Brig. Abdul Waheed Khan (R)	**Nice to Know**
Learning Outcomes: ● Explain **1.** the science of improvement **2.** the quality improvement model- PDSA **3.** Identify tools of TQM – Flowcharts, cause & effect diagrams, pareto charts, run charts				

Pathology

Subject Learning Outcomes

At the end of the program, students of 4th year MBBS WMC should be able to:

1. Correlate etiology and morphological changes of prevalent diseases with pathogenesis. (1,2,6)
2. Devise appropriate plan of lab investigations based on signs and symptoms of the patient. (1,2,6)
3. Correlate cellular responses to stress and toxic insults with clinical presentation and laboratory reports. (1,2,6)
4. Counsel the patients on pre-test preparation and lab reports. (1,2,3,6,7)

Block Learning Outcomes:

At the end block X, the student of 4th year MBBS should be able to:

- Correlate the etiology, clinical features, pathogenesis, laboratory findings, morphological features and clinico-pathologic consequences of major diseases related to the
  - Cardiovascular system,
  - Respiratory system,
  - Gastrointestinal system,
  - Hepatobiliary system and
  - Pancreas. (SLO 1, 2, 3, 4)

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1.	**Congenital Heart Diseases**	LGIS	Asst. Prof. Dr. Fauzia Noreen	**Should Know**
Learning Outcomes ● Enumerate relative frequency of different congenital malformations. ● From left to right, list the common characteristics of congenital cardiac abnormalities, including ASD, VSD, and PDA. ● Differentiate between right to left and left to right shunts and resulting morphological abnormalities. ● Explain the malformations associated with obstructive lesions.				
2.	**Hypertensive vascular diseases & cardiac failure**	LGIS	Asst. Prof. Dr. Fauzia Noreen	**Should Know**
Learning Outcomes ● Describe the pathogenesis of hypertensive disease and cardiac failure. ● Differentiate between clinical presentation, pathogenesis and morphological features of systemic and pulmonary vascular disease. ● Enumerate predisposing conditions of systemic and pulmonary vascular diseases.				

● Describe the clinical presentation, causes, functional patterns, related cardiomyopathies, gross and microscopic features of heart failure.				
3.	**Atherosclerosis**	LGIS/ Practical	Asst. Prof. Dr. Fauzia Noreen	**Should Know**
Learning Outcomes ● Define 'arteriosclerosis' and 'atherosclerosis'. ● Describe basic structure of an atheromatous plaque. ● List modifiable and non-modifiable risk factors of Atherosclerosis. ● Describe the pathogenesis and response to injury in atherogenesis. ● Enumerate the morphological features of fatty streaks and atheromatous plaque. ● Describe the clinicopathologic consequences of atherosclerosis.				
4.	**Vasculitidis / Raynaud's Phenomenon**	LGIS	Asst. Prof. Dr. Fauzia Noreen	**Should Know**
Learning Outcomes ● Define vasculitis and describe two most important pathogenetic mechanisms. ● List the primary forms of vasculitis. ● Differentiate between different forms of non-infectious vasculitis on the basis of sites of involvement and microscopic features. ● Describe the clinical features according to the site of involvement and relevant laboratory findings.				
5.	**Vascular Aneurysms**	LGIS	Asst. Prof. Dr. Fauzia Noreen	**Should Know**
Learning Outcomes ● Define vascular aneurysms. ● Differentiate between true and false aneurysms and arterial dissection. ● List the most important predisposing conditions and describe the pathogenesis of vascular aneurysm formation. ● Describe the clinical consequences of abdominal and thoracic aneurysms. ● Enumerate the gross and microscopic morphological features of thoracic and abdominal aneurysms.				
6.	**Ischemic Heart Disease**	LGIS / Practical	Asst. Prof. Dr. Fauzia Noreen	**Should Know**
Learning Outcomes ● Identify the spectrum of ischemic heart disease. ● Describe the pathogenesis and elements contributing to development and sequential progression to ischemia. ● Define myocardial infarction (MI) and describe its pathogenesis. ● Identify the clinical features and laboratory findings.				

● Describe the factors affecting the patterns of infarction, evolution of gross and microscopic morphological features of MI. ● Describe the consequences and complications of MI.				
7.	**Valvular Heart Disease (RF & RHD)**	LGIS / Practical	Asst. Prof. Dr. Fauzia Noreen	**Should Know**
Class Learning Outcomes ● Enumerate different etiologies of acquired valvular heart disease. ● Identify the specific pathogenesis of Rheumatic valvular disease. ● Enumerate the common clinical features, laboratory findings and gross and microscopic features of rheumatic valvular disease.				
8.	**Cardiomyopathies &Pericardial Diseases / Bacterial endocarditis**	LGIS	Asst. Prof. Dr. Fauzia Noreen	**Should Know**
Learning Outcomes ● Identify the clinical presentation, causes and functional patterns of cardiomyopathies. ● Differentiate between hypertrophic, dilated and restrictive cardiomyopathies with respect to left ventricular ejection fraction, causes and mechanisms of heart failure. ● Elucidate the morphological characteristics and implications of cardiac muscle diseases. ● Define infective endocarditis and describe its pathogenesis in relation to endocardium. ● List the common clinical features and laboratory findings. ● Differentiate between morphological features of infective endocarditis, Rheumatic heart disease, non-bacterial thrombotic endocarditis and Libman- Sacks endocarditis. ● Enumerate types of Pericardial effusions and their common causes. ● Discuss clinical features of Pericarditis and describe the causes and morphological findings.				
9.	**Tumors of the CVS**	LGIS	Asst. Prof. Dr. Noreen	**Should Know**
Learning Outcomes ● Enumerate different primary cardiac tumors. ● Describe the morphological features of most common primary cardiac tumor (atrial myxoma). ● Describe the clinical features related to atrial myxomas. ● Enumerate the cardiac effects of non-cardiac neoplasms				
10.	**Cardiac Biomarkers.**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Must Know**
Learning Outcomes				

● State background scientific information concerning cardiac biomarkers including current and historical markers. ● Explain and justify the medical use and utility of various cardiac biomarkers in diagnosis of cardiovascular disorders. ● Interpret the cardiac biomarkers report. ● Identify possible situations where false positive and false negative cardiac biomarkers results may occur.				
11.	**Lipid and Lipoproteins**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● What are lipids and fatty acids? ○ Apo lipoprotein ○ Lipoprotein ○ Chylomicron ○ Atherosclerosis ● Describe the metabolism of cholesterol and triglyceride ● State the significance of the Apo lipoproteins in health and disease. ● Differentiate the five lipoprotein classes based on chemical makeup and clinical significance. ● List the causes of hyper lipoproteinemias and state the laboratory findings associated with each.				
12.	**ARDS / COPD Emphysema, Ch. Bronchitis)**	LGIS / Practical	Prof Brig(R) Tariq Masood Malik	**Should Know**
Learning Outcomes ● Explain the terms acute respiratory distress syndrome (ARDS) and Diffuse alveolar damage (DAD). ● Describe the pathogenesis, clinical features and morphology of ARDS/DAD. ● Describe the spectrum of obstructive airway diseases. ● Differentiate between Centriacinar, Panacinar and Distal acinar emphysema. ● Describe the pathogenesis, clinical features and morphological features of Emphysema. ● Define Chronic bronchitis and describe its pathogenesis. ● Describe the clinical and morphological features of Chronic bronchitis.				
13.	**COPD (Asthma & Bronchiectasis)**	LGIS / SDL/Practical	Prof Brig(R) Tariq Masood Malik	**Should Know**
Learning Outcomes				

- Define Asthma and describe its pathogenesis.
- Identify the types of Asthma; Atopic asthma, Non-atopic asthma, drug-induced asthma and occupational asthma.
- Describe the morphological changes of asthma.
- Discuss the clinical features of asthma.
- Describe the term Status asthmaticus.
- Define bronchiectasis and describe its predisposing conditions.
- Describe the clinical features, pathogenesis and morphology of bronchiectasis.

14.	**Interstitial Lung Diseases**	LGIS	Prof Brig(R) Tariq Masood Malik	**Should Know**

earning Outcomes

- Describe the spectrum of restrictive/interstitial lung diseases.
- Differentiate between the term's idiopathic pulmonary fibrosis and usual interstitial pneumonia.
- Describe the pathogenesis, clinical features and morphological findings of idiopathic pulmonary fibrosis.
- List Mineral dust-induced interstitial lung diseases.
- Differentiate between clinical and morphological features of coal workers pneumoconiosis, silicosis and asbestosis.

15.	**Pulmonary Vascular Disorders / Granulomatous Diseases Respiratory System**	LGIS / Practical	Prof Brig(R) Tariq Masood Malik	**Should Know**

Learning Outcomes

- Identify the spectrum of granulomatous lung diseases.
- Which regions and populations effected with sarcoidosis.
- Describe the etiological factors and pathogenesis of sarcoidosis.
- Describe the clinical features and prognosis of sarcoidosis.
- Identify the risk factors of Pulmonary embolism, hemorrhage and infarction and describe their clinical and morphological features.
- Describe the pathogenesis and morphological features of Pulmonary hypertension.
- Describe the etiology, pathogenesis, and morphology of viral and bacterial pneumonias.

16.	**Pneumonias**	LGIS / Practical	Prof Brig(R) Tariq Masood Malik	**Must Know**

Learning Outcomes

● Describe the classification, etiology, pathogenesis and morphology of viral and bacterial pneumonias.				
17.	**Lung Tumors - I**	LGIS / Practical	Prof Brig(R) Tariq Masood Malik	**Must Know**
Learning Outcomes ● Categorize Lung cancers. ● Identify the major histologic types of lung carcinomas. ● Differentiate between adenocarcinoma and adenocarcinoma in-situ.				
18.	**Lung Tumors - II**	LGIS	Prof Brig(R) Tariq Masood Malik	**Must Know**
Learning Outcomes ● Describe the major morphological features of squamous cell carcinomas and adenocarcinomas. ● Describe the morphological features of small cell carcinoma of lung and carcinoid tumors.				
19.	**Pleura / Pleural Effusion / Pneumothorax**	LGIS	Prof Brig(R) Tariq Masood Malik	**Should Know**
Learning Outcomes ● List the causes of pleural effusions and pleuritis. ● Describe the etiology and pathogenesis of pneumothorax ● Describe the etiology and morphological features of malignant mesothelioma.				
20.	**Respiratory acidosis & alkalosis**.	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain normal acid-base balance. ● Explain buffers systems in regulation of pH. ● Explain compensatory response to respiratory acid-base disorders. ● Interpret the lab report of ABgs.				
21.	**Oral Cavity (Inflammatory disorders, non-neoplastic/ neoplastic disorders)**	LGIS	Prof Brig(R) Tariq Masood Malik	**Should Know**
Learning Outcomes				

● List the precancerous conditions of the oral cavity. ● Describe the etiology, pathogenesis and morphology of squamous cell carcinoma tongue.				
22.	**Tumors and precancerous conditions of oral cavity**	LGIS / Practical	Prof Brig(R) Tariq Masood Malik	**Should Know**
Learning Outcomes ● List the benign and malignant tumors of the salivary glands. ● Describe the etiology, pathogenesis and morphology of pleomorphic adenoma. ● Describe the morphological features of adenoid cystic carcinoma.				
23.	**Motor Disorders of Esophagus, Esophagitis, Barrett Esophagus**	LGIS/SDL	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
24.	**Tumors of Esophagus**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
25.	**Gastritis / Peptic ulcer disease**	LGIS / Practical	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
26.	**Gastric Polyps & Gastric Tumors**	LGIS / Practical	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				

27.	**Inflammatory Bowel diseases**	LGIS / Practical	Prof. Dr. Jamila	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
28.	**Malabsorption & Celiac Disease /entero-colitis**	LGIS / Practical	Prof. Dr. Jamila	**Could Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
29.	**Malignant Lesions of Small and Large Intestine**	LGIS / Practical	Prof. Dr. Jamila	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
30.	**Appendicitis**	LGIS / Practical	Prof. Dr. Jamila	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
31.	**Introduction to Hepatobiliary System, Jaundice**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Define jaundice and neonatal jaundice. ● Differentiate between physiological and pathological jaundice. ● **D**ifferentiate between hepatic, prehepatic and post hepatic jaundice. ● Develop a diagnostic strategy for every type of jaundice.				
32.	**Hepatitis (Acute & Chronic)**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● List hepatitis viruses transmitted by fecal-oral versus blood and body fluids ● Discuss the causes, transmission, and symptoms of viral hepatitis infections. ● Identify current laboratory testing recommendations for viral hepatitis diagnosis and treatment.				

33.	**Cirrhosis / Varices / Portal hypertension**	LGIS / Practical	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
34.	**Drug Induced and Toxic Liver Injury / Metabolic liver diseases**.	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
35.	**Tumors of the Liver**	LGIS / Practical	Assit. Prof. Dr. Lubna Ehtizaz	**Must Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
36.	**Cholestatic disease / Cholelithiasis**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
37.	**Gall bladder diseases (Acute & chronic)/ Cholecystitis& Tumors of Gall bladder.**	LGIS / Practical	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Explain the etiology of the lesion, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications. ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
38.	**Pancreatitis / Diagnosis of acute pancreatitis.**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes				

● Describe the etiology and pathogenesis of acute and chronic pancreatitis. ● Identify the clinical and morphological features of acute and chronic pancreatitis. ● Interpret the laboratory findings helpful in the diagnosis of acute and chronic pancreatitis. ● Manage patients with acute and chronic pancreatitis.				
39.	**Neoplastic Disorders of Pancreas**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Should Know**
Learning Outcomes ● Identify the genetic causes of different types of pancreatic neoplasms ● Explain the classification, pathogenesis, morphology, treatment, and complications of benign pancreatic tumors ● Describe the incidence, risk factors, pathogenesis, and morphology of pancreatic carcinoma ● Identify morphological changes (macroscopic and microscopic) of the lesion.				
40.	**Liver Function Tests, Diagnosis of Acute & Chronic Hepatitis**	LGIS	Assit. Prof. Dr. Lubna Ehtizaz	**Must Know**
Learning Outcomes ● Justify the importance of various biochemical markers in the diagnosis of hepatic disorders. ● Correlate various biochemical markers with the etiology and disease process. ● Interpret the Liver biomarkers report.				

Special Pathology Practical's

Block Learning Outcomes:

At the end of first block, the student of 4th year MBBS should be able to:

- Establish diagnosis of given slides of Special Pathology lesions included in the block, correlating histopathological findings. (SLO 3, 4)

S. No	Systemic Pathology Learning Outcomes	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1	Identify the histopathological changes in Atherosclerosis	Demonstration / Practical	All Lecturers	**Should Know**
2	Identify the histopathological changes in Rheumatic carditis and Myocardial infarction	Demonstration / Practical	All Lecturers	**Should Know**
3	Identify the histopathological changes in Pulmonary tuberculosis and Bronchiectasis	Demonstration / Practical	All Lecturers	**Should Know**

4	Identify the histopathological changes in Lobar Pneumonia and Broncho Pneumonia	Demonstration / Practical	All Lecturers	**Should Know**
5	Identify the histopathological changes in Chronic Bronchitis and Bronchogenic carcinoma.	Demonstration / Practical	All Lecturers	**Should Know**
6	Identify the histopathological changes in Pleomorphic Adenoma, Chronic gastritis, Peptic ulcer	Demonstration / Practical	All Lecturers	**Should Know**
7	Identify the histopathological changes in Carcinoma stomach, Ulcerative colitis, Crohn's disease, TB intestines	Demonstration / Practical	All Lecturers	**Should Know**
8	Identify the histopathological changes in Cirrhosis, Chronic Viral Hepatitis, Chronic Cholecystitis	Demonstration / Practical	All Lecturers	**Should Know**
9	Identify the histopathological changes in Rectal Polyps and Colorectal carcinoma	Demonstration / Practical	All Lecturers	**Should Know**
10	Identify the histopathological changes in Acute appendicitis, Typhoid, Malabsorption	Demonstration / Practical	All Lecturers	**Should Know**

Learning Resources:

1. **Text Books**
   i. Robbins Basic Pathology, 10th edition
   ii. Robbins & Cotran Pathologic Basis of Disease, 9th/10th Edition
2. **Reference Books**
   i. Hoff brand's Essential Hematology, 9th Edition
   ii. Fundamentals of Clinical Chemistry (Tietz) 7th Edition

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Assessment formats

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

ENT

Subject Learning Outcomes:

1. Diagnose & manage diseases of ear and facial nerve. (PLO1,3,6,7,8)
2. Provide primary ENT care for various Ear diseases including emergencies if required, refer the patient to appropriate center (PLO1,3,6,7,8)
3. Provide awareness regarding prevention of common public ENT health problems (PLO5,7,8)
4. Apply principles of medical ethics pertaining to ENT Enlist recent advances in ENT (PLO6)

Block Learning Outcomes:

Upon completing the first block of the ENT course, students are expected to:

1. Review the anatomy and physiology of hearing.
2. Develop proficiency in history taking, physical examination, and forming differential diagnoses.
3. Distinguish between various categories of hearing loss using clinical findings.
4. Compare different types of vertigo, interpret relevant investigations, and propose treatment or rehabilitation strategies.
5. Formulate management for patients presenting with ear discharge and decide on further investigations where required.
6. Recognize, diagnose, and treat common conditions of the external and middle ear.
7. Identify facial nerve lesions and discuss their etiological factors.
8. Understand traumatic injuries of the ear and suggest appropriate management approaches.
9. Evaluate patients with tinnitus, suggest investigations, and create a suitable management plan.

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1.	Anatomy of the External Ear	LGIS	Prof Dr. Muhammad Asad Chughtai	Must Know
Class Learning Outcomes ● Describe the applied anatomy of the external ear				
2.	Physiology of the Ear	LGIS	Prof Dr. Muhammad Waqar Khan	Must Know
Class Learning Outcomes				

● Describe the applied anatomy of the middle & internal ear ● Understand the Physiology of the auditory and vestibular systems.				
3.	Anatomy of the Ear	LGIS	Prof Dr. Muhammad Asad Chughtai	Must know
Class Learning Outcomes ● Describe the gross anatomy of the external, middle, and inner ear ● Describe the vascular and nervous supply of the ear.				
4.	Diseases of the External Ear	LGIS	Prof Dr. Muhammad Waqar Khan	Must know
Class Learning Outcomes ● Discuss clinical features, differential diagnosis, and relevant clinical & radiological investigations and treatment of diseases of the external ear, ● Describe various Causes of otalgia ● Diagnosis of referred otalgia				
5.	Acute Suppurative otitis media Otitis media with effusion (Glue Ear)	LGIS	Prof Dr. Muhammad Asad Chughtai	Should know
Class Learning Outcomes ● Identify symptoms and signs of acute supportive otitis media & otitis media with effusion. ● Diagnose and describe a management plan for ASOM & OME.				
6.	Chronic suppurative otitis media	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Class Learning Outcomes ● Discuss Chronic Suppurative Otitis Media, cholesteatoma and its clinical features, differential diagnosis, and relevant clinical & radiological investigations and treatment.				
7.	Complications of chronic suppurative otitis media	LGIS	Prof Dr. Muhammad Asad Chughtai	Must know
Class Learning Outcomes ● Identify symptoms of chronic discharging ears ● Discuss various intratemporal and intracranial complications of CSOM ● Take immediate measures to avert life-threatening impact, and advise relevant investigations and referral for safe care.				
8.	Otosclerosis Tinnitus	LGIS	Prof. Dr. Muhammad Waqar Khan	Must Know
Class Learning Outcomes				

● Diagnose a case of otosclerosis based on history and knowledge of etiology, pathology, presentation, investigations, and management, along with counseling. ● Diagnose a case presenting with tinnitus on the basis of signs, symptoms, and appropriate investigations.				
9.	Facial nerve & its disorders	LGIS	Prof Dr. Muhammad Asad Chughtai	Must Know
Class Learning Outcomes ● Explain the nature and components of the facial nerve and its innervations. ● Discuss various nerve lesions topographically in relation to etiology, presentation, and early management to prevent late complications. ● Differentiate Bell's palsy from facial paralysis. ● Advise rehabilitation and proper counseling. ● Differentiate between upper motor neuron and lower motor neuron facial nerve palsies				
10.	Meniere's disease	LGIS	Prof Dr. Muhammad Waqar Khan	Must know
Class Learning Outcomes ● Thorough understanding of pathophysiology, investigation, and management of Meniere's disease.				
11.	Vertigo Vestibular neuronitis BPPV	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Class Learning Outcomes ● Discuss true vertigo & pathophysiology, investigations & management. ● Diagnosis & management of vestibular neuronitis. ● Discuss BPPV & its clinical features, diagnosis & treatment.				
12.	Deaf child	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Class Learning Outcomes ● Name the common tumors of the external ear, middle ear, and mastoid ● Identify symptoms and signs of tumours and relevant investigations.				
13.	Acoustic Neuroma	LGIS	Prof Dr. Muhammad Asad Chughtai	Must know
Class Learning Outcomes ● Discuss acoustic neuroma & the appropriate clinical, audio logical, and imaging studies used in diagnosis and treatment of acoustic neuroma. ● Understanding of the approach to a patient with ear trauma.				
14.	Benign and malignant tumours of the external ear Glomus tumour	Class Test	Prof. Dr. Muhammad Waqar Khan	Should know

	Carcinoma of the middle ear & mastoid			
15.	Otalgia	LGIS	Prof Dr. Muhammad Asad Chughtai	Must know
Class Learning Outcomes ● Identify different causes of otalgia ● Diagnosis referred to otalgia in the absence of primary ear disease				
16.	Ear Trauma	LGIS	Prof Dr. Muhammad Waqar Khan	Must know
Class Learning Outcomes ● List different causes of ear trauma ● Identify and classify different causes of trauma. ● Discuss clinical features of various ear traumas.				
17.	Cochlear implant	LGIS	Prof Dr. Muhammad Asad Chughtai	Must know
Class Learning Outcomes ● Identify different parts of the device ● Discuss indications, contraindications, and complications of cochlear implantation.				
18.	Audiological Investigation	LGIS	Dr. Rahat Mukhtar	Must know
Class Learning Outcomes ● Name common audiological investigations ● Differentiate between conductive and sensorineural hearing loss on the Pure tone Audiogram ● Explain the principles, indications, and interpretation of PTA and tympanogram				

Learning Resources:

TEXT BOOKS:

- Diseases of Ear, Nose, and Throat Head and Neck Surgery by PL Dhingra. Shruti Dhingra 8th Edition.
- Logan Turner's Diseases of the Nose Throat and Ear Head and Neck Surgery by S. Musheer Hussain 11th Edition.

Reference Books

- Ballenger's Otorhinolaryngology, Head & Neck Surgery 17th edition.
- Scott Brown's Otorhinolaryngology 8th edition.
- Essentials of ENT Examination by JT Shah
- Cummings otolaryngology, head & neck surgery

- Oxford Handbook of ENT and Head and Neck Surgery (Oxford Medical Handbooks)

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Assessment formats

Assessment Strategies (Formative)	Assessment Strategies (Summative)
End Block Exam, Bed Side Case Presentation, CBL,	MCQs, SEQs, OSPE & VIVA

Ophthalmology

Subject Learning Outcomes

By the end of ophthalmology course, the MBBS students should be able to:

1. Provide primary eye care for various ophthalmic diseases including emergencies and if required, refer the patients to appropriate centers **(PLO 1,6,7)**
2. Perform various ophthalmic examination methods essential for all practitioners. **(PLO 1,2,6,7)**
3. Communicate effectively with the patient, family and community regarding eye diseases. **(PLO 1,2,6.7)**
4. Assist in pre-operative preparation and post-operative care of ophthalmic surgical procedures. **(PLO 1,2,7)**
5. Apply principles of medical ethics pertaining to Ophthalmology.**(PLO 3,7)**
6. Provide awareness regarding prevention of common public ophthalmic health problems. **(PLO 5,7)**

Block Learning Outcomes

After completion of Ophthalmology course content for Y4BX block, the students should be able to:

1. Diagnose conditions like ptosis, Entropion, Ectropion, lid tumors and benign lesions, etc., based on their clinical assessment and make a referral to ophthalmologist. **(SLO 1,2,3,5)**
2. Diagnose Dry eye and diseases of Nasolacrimal System based upon their clinical assessment and make a referral to ophthalmologist. **(SLO 1,2,3,6)**
3. Diagnose conditions like Conjunctivitis, Pterygium, Pinguecula, episcleritis and scleritis and recognize their systemic associations when present. **(SLO1,3,5,6)**
4. Diagnose proptosis and its common causes like thyroid eye disease, orbital inflammatory diseases and orbital tumors. Advise common investigations required for its evaluation. Summarize various medical and surgical management options. **(SLO: 1,2,3,5,6)**
5. Diagnose different refractive errors and summarize various treatment options. **(SLO 1,2,3,5)**

S.#	Topic	Educational Strategies	Names of Instructor	Importance (Must Know Should Know Could Know)
1.	**Orientation session:**	LGIS	Dr. Marrium Shafi	Should Know

	Introduction to ophthalmology and medical ethics			
Learning Outcomes: ● Recognize the significance of Ophthalmology in clinical practice. ● Explain the principles of medical ethics pertaining to Ophthalmology. ● Revise the anatomy and physiology of eye.				
2.	**Lacrimal System**	LGIS	Dr. Asad Ali Khan	Should Know
Learning Outcomes: ● Explain the anatomy and pathophysiological aspects of nasolacrimal system. ● Recognize clinical presentations of different lacrimal disorders. ● Outline management strategies for nasolacrimal disorders.				
3.	**Dry Eye**	LGIS	Dr. Ryyan Masood	Should Know
Learning Outcomes: ● Classify dry eye according to pathogenesis. ● Outline management plan for dry eyes.				
4.	**Eye Lid- Anatomy & Physiology**	LGIS	Prof. M. Akmal Khan	Must Know
● Explain the anatomy and physiology of eye lids.				
5.	**Eye Lid-Margin diseases**	LGIS	Prof. M. Akmal Khan	Must Know
Learning Outcomes: ● Identify the clinical features of eyelid margin diseases like blepharitis, entropion, ectropion, trichiasis and discuss their management.				
6.	**Eye Lid- Ptosis**	LGIS	Prof. M. Akmal Khan	Should Know
Learning Outcomes: ● Classify ptosis and identify its clinical features ● Discuss management options for different types of ptosis.				
7.	**Eye Lid- benign and malignant tumors**	LGIS	Prof. M. Akmal Khan	Should Know
Learning Outcomes: ● Classify Lid masses. ● Differentiate between clinical features and management strategies of different lid masses.				
8.	**Conjunctiva: Introduction to conjunctival diseases**	Flipped Classroom	Dr. Asma Aftab	Should Know
Learning Outcomes: ● Correlate the anatomical and pathophysiological aspects with clinical presentation of conjunctival diseases.				

	● Classify conjunctival diseases.			
9.	**Conjunctivitis**	Flipped Classroom	Dr. Asma Aftab	Must Know
Learning Outcomes: ● Identify bacterial, viral, and chlamydial conjunctivitis. ● Discuss their treatment options.				
10.	**Conjunctiva- Allergic conjunctivitis**	Flipped Classroom	Dr. Asma Aftab	Must Know
Learning Outcomes: ● Recognize clinical features of Allergic and Vernal keratoconjunctivitis. ● Manage a case of VKC/ allergic conjunctivitis. ● Differentiate between bacterial, viral, allergic and chlamydial conjunctivitis.				
11.	**Conjunctiva- Miscellaneous diseases**	Flipped Classroom	Dr. Asma Aftab	Must Know
Learning Outcomes: ● Recognize miscellaneous conjunctival conditions like Pterygium, Pinguecula. ● Suggest their treatment plan.				
12.	**Episclera and Sclera**	Flipped Classroom	Dr. Asma Aftab	Could Know
Learning Outcomes: ● Identify Episcleritis and Scleritis. ● Recognize the systemic associations. ● Suggest a plan for their management.				
13.	**Orbit:** **Clinical Features**	LGIS	Dr. Marrium Shafi	Must Know
Learning Outcomes: ● Recall and explain the anatomy of orbit. ● Correlate the clinical features of orbital diseases with its pathophysiology.				
14.	**Orbital infections**	LGIS	Dr. Marrium Shafi	Must Know
Learning Outcomes: ● Describe various orbital diseases like orbital infections . ● Differentiate between pre-septal and orbital cellulitis ● Summarize various medical and surgical management options.				
15.	**Orbit- Thyroid Eye Disease**	LGIS	Dr. Marrium Shafi	Must Know
Learning Outcomes: ● Describe different clinical pictures in Thyroid Ophthalmopathy. ● Advise the investigations required for orbital diseases. ● Summarize various medical and surgical management options.				
16.	**Orbit- Proptosis and its differentials**	LGIS	Dr. Marrium Shafi	Must Know

Learning Outcomes: ● Recognize proptosis and its common causes. ● Discuss differential diagnosis of proptosis.				
17.	**Refractive Errors and Presbyopia- Pathophysiology**	LGIS	Dr. Yaseen Lodhi	Must Know
Learning Outcomes: ● Identify common refractive conditions of the eye like myopia, hypermetropia and astigmatism ● Describe various methods to diagnose refractive errors. ● Explain the pathophysiology of presbyopia.				
18.	**Refractive Errors and Presbyopia- Management**	LGIS	Dr. Yaseen Lodhi	Must Know
Learning Outcomes: ● Differentiate between management strategies of different refractive errors and persbyopia.				
19.	**Refractive surgery**	LGIS	Dr. Yaseen Lodhi	Must Know
Learning Outcomes: ● Describe different refractive surgical procedures like excimer, LASIK, LASEK ● and their basis. ● Differentiate between indications, procedural details and potential complications of various refractive surgical procedures.				

References:

Learning Resources:

1. **Text books**
   - General ophthalmology by Vaughan & Asbury, 18th edition.
   - Clinical ophthalmology by Shafi M. Jatoi, 5th Edition.
2. **Reference Books**
   - Basic Ophthalmology, Jogi R
   - Clinical ophthalmology, a systematic approach by Jack J. Kanski, 8th Edition.
3. **Online resources**
   - https://www.medscape.com/ophthalmology
   - Google classroom
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

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ASSESSMENT FORMATS:

Assessment Strategies (Formative)	Assessment Strategies (Summative)
MCQ's, Quiz, Class Test, SAQ's/SEQ's Quiz using Google forms	MCQ's , SAQ's/SEQ's, Viva

Medicine

Block Learning Outcomes:

By the end of this block students should know:

- Identify Clinical features, Correlate pathophysiology, Diagnose, investigate and plan management of common cardiovascular, Gastroenterology, Pulmonology, Dermatology and Psychiatry disorders (SLO1,3, 5,6).
- Recognize complications & advise preventive and safety measures and discuss prognosis of these disorders (SLO1, 2,4, 5).
- Diagnose, investigate and plan management of critically ill patients in A&E department (SLO 1, 3, 4, 5).

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Should Know Could Know)
	CVS			
1.	**Congenial Heart Disease**	LGIS	Dr. Bakht Umar Khan	Should Know
Learning Outcomes: ● Identify common etiologies and risk factors for cyanotic heart defects. ● Diagnose cyanotic heart defects based on clinical manifestations and appropriate diagnostic methods. ● Explain the pathophysiology, manifestations, diagnosis and management of a cyanotic cardiac anomalies. ● Elaborate the pathophysiology, manifestations, diagnosis and management of obstructive congenital anomalies. ● Identify the implications of cardiac anomalies for respiratory care.				
2.	**Hypertension**	LGIS	Dr. Bakht Umar Khan	Must Know
Learning Outcomes: ● Rationalize the need for achieving recommended BP goals in treatment of hypertension. ● Classify anti-hypertensive drugs ● Choose appropriate antihypertensive e drug considering their indications for use. ● Recognize types of hypertensions, hypertensive urgency and emergency ● Define diagnostic criteria for hypertension. ● Provide pathophysiological basis of hypertension. ● Propose Life style modifications and non-pharmacological options for patients with hypertension. ● Diagnose primary hypertension from secondary hypertension				
3.	**CCF**	LGIS	Dr. Bakht Umar Khan	Must Know

Learning Outcomes:

- Define Heart failure
- Provide pathophysiological basis of Heart failure.
- Diagnose Heart failure.
- List complications of Heart failure.
- Analyze the pharmacological management in the treatment of Heart failure

4.	**Approach to Patient with Chest Pain**	LGIS	Dr. Bakht Umar Khan	Must Know

Learning Outcomes:

- Generate differential diagnosis of the patient with chest pain.
- Differentiate between cardiac and non-cardiac chest pain.
- Identify Various causes of life-threatening chest pain.
- Investigations required and their interpretations.
- Outline the emergency management of patient.

5.	**Ischemic heart disease Angina & Unstable Angina**	LGIS	Dr. Bakht Umar Khan	Must Know

Learning Outcomes:

- Define
  - Acute coronary syndrome (ACS)
  - Angina
  - Unstable angina pectoris (UA)
  - Non-ST segment elevation myocardial infarction (NSTE MI)
  - ST segment elevation myocardial infarction
- Provide pathophysiological basis of cardiac ischemia.
- Diagnose ACS and MI.
- List complications of MI
- Analyze the pharmacological management in the treatment of ACS.
- Differentiate between male and female signs and symptoms of ACS.
- Examine ACS modifiable and non-modifiable risk factors.
- Discuss coronary revascularization n procedures and nursing care.

6.	**Acute coronary syndrome MI**	LGIS	Dr. Bakht Umar Khan	Must Know

Learning Outcomes:

- Define
  - Acute coronary syndrome (ACS)
  - Angina
  - Unstable angina pectoris (UA) Non-ST segment elevation myocardial
- infarction(NSTE MI)
  - Identify ST segment elevation in ECG of patient with myocardial
- infarction
  - Provide patho physiological basis of cardiac ischemia.
  - Diagnose ACS and MI.
  - List complications of MI.
  - Analyze the pharmacological management in the treatment of ACS.

- Differentiate between male and female signs and symptoms of ACS.
- Differentiate modifiable and non-modifiable risk factors of ACS.

● • Discuss coronary revascularization procedures and nursing care.

7.	**Acute pericarditis & Pericardial Disease**	LGIS	Dr. Bakht Umar Khan	Should Know

Learning Outcomes:

- Differentiate between types of Pericarditis on the basis of its etiology and pathophysiology
- Identity acute and chronic complications of Pericarditis
- Identify the clinical manifestation of Pericarditis with diagnostic approach of Pericarditis.
- State principles of management of Pericarditis.
- List common causes and understand mechanism of pericardial effusion
- Recognize early signs of pericardial tamponade
- Justify the role of echo cardiography in the diagnosis of pericardial effusion

11	**Infective Endocarditis**	LGIS	Dr. Bakht Umar Khan	Should Know

Learning Outcomes:

- List causes of Infective Endocarditis.
- Describe Etiology, pathogenesis, clinical features and diagnostic criteria of infective Endocarditis.
- Outline management plan.

Gastroenterology				
1.	**GERD**	LGIS	Dr. Noreen Adil	Must Know

Learning Outcomes:

- Identify the causes of Dyspepsia, GERD and Peptic Ulcer
- Generate differential diagnosis of Dyspepsia, GERD and Peptic Ulcer
- Establish definitive diagnosis based on laboratory investigations
- Develop treatment plan for GERD.

2.	**Peptic Ulcer Disease**	LGIS	Dr. Noreen Adil	Must Know

Learning Outcomes:

- Identify the causes of Peptic Ulcer
- Generate differential diagnosis of Dyspepsia, GERD and Peptic Ulcer
- Establish definitive diagnosis based on laboratory investigations Develop treatment plan for Peptic Ulcer
- Evaluate prognosis of the patient of Peptic Ulcer.

3.	**GI Bleeding**	LGIS	Dr. Noreen Adil	Must Know

Learning Outcomes:

- Define upper GI Bleed
- Describe etiology of upper GI Bleed
- Identify its clinical features

- Plan evaluation of case of GI Bleed
- Discuss relevant investigations
- Discuss management

4.	**Diarrheas**	LGIS	Dr. K. Bilal Khan	Must Know

Learning Outcomes:

- Define acute diarrhea
- Describe its Pathophysiology
- Identify its Clinical presentation
- Plan Investigation
- Discuss detailed management plan

5.	**Pancreatitis**	LGIS	Dr. Jamila Khan	Should Know

Learning Outcomes:

- Elaborate the pathophysiology of Acute and Chronic Pancreatitis
- Diagnose the patient on the basis of Signs, symptoms and investigations
- Outline the Treatment plan
- List its Complications

6.	**Acute Viral Hepatitis**	LGIS	Dr. Sohaib Ahmed	Must Know

Learning Outcomes:

- Classify viral Hepatitis
- Differentiate between different types of Hepatitis
- Interpret investigations for diagnosis of Hepatitis B and C
- Discuss their modes of transmission and clinical features
- Outline the treatment plan and prognosis
- List the Complications
- Plan & advice aboutits prevention at individual & community level

7.	**Cirrhosis - Ascites**	LGIS	Dr. Jamila Khan	Must Know

Learning Outcomes:

- Describe the causes, pathology and clinical features of Hepatic Cirrhosis
- Explain the pathogenic mechanism of Hepatic Fibrosis
- Discuss the Management and prognosis of the condition
- Elaborate the causes of Ascites
- Outline the management and prognosis

8.	**Chronic Viral Hepatitis and Cirrhosis - Hepatic Encephalopathy**	LGIS	Dr. Jamila Khan	Must Know

Learning Outcomes:

- Classify viral Hepatitis
- Differentiate between different types of Hepatitis
- Interpret investigations for diagnosis of Hepatitis Band C
- Discuss their modes of transmission

- Outline the treatment plan and prognosis
- List the Complications
- Correlate the causes and pathology of hepatic encephalopathy to its clinical features
- Enlist precipitating causes of encephalopathy
- Outline the management and prognosis

9.	**Inflammatory bowel disease.**	LGIS	Dr. K. Bilal Khan	Must Know

Learning Outcomes:

- Classify Inflammatory bowel disease
- Differentiate between the two types of IBD.
- Interpret investigations for diagnosis of IBD.
- Outline the treatment plan and prognosis
- List the Complications

10.	**Metabolic Liver Disease**	LGIS	Dr. K. Bilal Khan	Should Know

Learning Outcomes:

- Describe the pathophysiology, Clinical features investigations and management of:
  1. Wilson disease
  2. Hemochromatosis
  3. Primary Biliary Cirrhosis.

11.	**Hepatic Cellular Carcinoma**	LGIS	Dr. Noureen Adil	Should Know

Learning Outcomes:

- Describe the pathophysiology, Clinical features investigations and management of HCC

Pulmonolgy

1.	**Bronchial Asthma**	LGIS	Dr Abidain Haider	Must Know

Class Learning Outcomes

- Define bronchial asthma
- Classify it
- Enumerate its precipitating factors
- Explain etiology & pathogenesis
- Identify its clinical features & grade of severity
- Advice appropriate investigations
- Discuss its management plan
- Identify patients with acute severe asthma &manage them
- Recognize brittle asthma

2.	**Pneumothorax**	LGIS	Dr Abidain Haider	Must Know

Class Learning Outcomes

- Define & classify pneumothorax
- Explain about its pathological types

- Describe its clinical features
- Advice appropriate investigations
- Discuss the treatment plan of these patients
- Identify recurrent pneumothorax & its management

3.	**Acute Bacterial Pneumonia and complications**	LGIS	Dr. Izza Abbas	Must Know

- Class Learning Outcomes
- Define Pneumonia
- Classify Pneumonias
- Learn about Community- acquired pneumonia (CAP)
- Enumerate Common organisms and clinical features of community- acquired pneumonia (CAP)
- Enumerate Factors that predispose to pneumonia
- Identify the clinical signs of Consolidation
- Rationalize Investigations and enlist them including Microbiological investigations in patients with CAP
- Enlist Differential diagnosis of pneumonia
- Apply CURB-65 scoring system in assessment of disease severity
- Give management plan of CAP in detail
- Tell names of Vaccines, discharge criteria and follow up policy in patients with CAP

4.	**Bronchiectasis & Lung Abscess**	LGIS	Dr. Sidla Rehman	Must Know

Class Learning Outcomes

- Define Bronchiectasis and lung abscess.
  Enumerate the causes of Bronchiectasis and lung abscess.
- Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology
- Advise relevant investigations
- Devise management plan
- Propose preventive measures and follow up

5.	**Viral Pneumonia, COVID-19**	LGIS	Dr. Izza Abbas	Must Know

Class Learning Outcomes

- Diagnose the patient on the basis of its clinical features and presentation relating to its etiology and pathophysiology
- Advise relevant investigations
- Devise management plan
- Propose preventive measures and follow up

6.	**Pleural Effusion**	LGIS	Dr. Sidla Rehman	Must Know

Class Learning Outcomes

- Define pleural effusion
- Discuss briefly its pathophysiology &etiology

- Differentiate between exudative &transudative effusion clinically & on basis of investigations
- Identify its clinical features
- Advice appropriate investigations
- Make an appropriate management plan according to the etiology

7.	**COPD**	LGIS	Dr Abidain Haider	Must Know

Class Learning Outcomes

- Provide pathophysiological basis of COPD due to various etiological factors.
- Diagnose lung abscess based on clinical presentation
- Generate differential diagnosis based on clinical assessment of patient
- Suggest appropriate lab investigations including chest X ray, sputum examination and hematological studies.

8.	**Pulmonary Tuberculosis**	LGIS	Dr. Izza Abbas	Must Know

Define pulmonary Tuberculosis

- Describe etiology, pathogenesis of Pulmonary Tuberculosis
- Clinical manifestations and complications
- Diagnose pulmonary Tuberculosis
- Give Treatment plan of Pulmonary Tuberculosis
- Differentiate between MDR and XDR Tuberculosis

9.	**Bronchogenic Carcinoma**	LGIS	Dr Abidain Haider	Must Know

Class Learning Outcomes

- Elaborate plan for diagnosis of common types of lung cancers based on clinical presentations and Radiological appearance.
- Describe the grading and staging systems for lung Carcinomas
- Propose plan for chemotherapy, surgical interventions and radiotherapy for management of lung carcinomas
- Suggest alternate treatment modalities like stenting and laser therapy
- Evaluate prognosis and need for palliative care.

10.	**Pulmonary Embolisim**	LGIS	Dr. Sidla Rehman	Must Know

Class Learning Outcomes

- Define Pulmonary Embolisim
  Enumerate the causes leading to Pulmonary Embolisim.
- Diagnose the patient on the basis of its clinical features and presentation relating to
- its etiology and pathophysiology
  - Advise relevant investigations
  - Devise management plan
- Propose preventive measures and follow up

11.	**ARDS & Respiratory Failure**	LGIS	Dr Abidain Haider	Must Know

Class Learning Outcomes

- Define diagnostic criteria of respiratory failure of varied etiology.
- Differentiate between acute, chronic, and postoperative respiratory failure on the basis of pathophysiology
- Recognize the signs and symptoms of respiratory failure.
- Apply alveolar gas equation to evaluate respiratory failure.
- Recognize the changes in blood gases that accompany respiratory failure and other investigations
- Review major treatment strategies for respiratory failure and their monitoring

Dermatology				
12.	**An Introduction to Dermatology**	LGIS	Brig. R Naveed Akhtar	Must Know

Learning Outcomes:

- Apply concepts of anatomy and physiology of skin to clinical dermatology give pathologic basis of skin lesions
- Identify different types of skin lesions
- Differentiate characteristics of various skin lesions

13.	**Common Bacterial Skin Infections**	LGIS	Dr. Maham Amin	Must Know

Learning Outcomes:

- List the types of Bacterial and Mycobacterial Infections
- Give clinical features and symptoms of bacterial and Mycobacterial infections
- Develop management plan to establish diagnosis and treat different infections

14.	**Skin Infestations**	LGIS	Dr. Ameer Shehzad	Must Know

Learning Outcomes:

- Diagnose scabies and pediculosis based on clinical features and investigations
- Recommend specific treatment options for scabies and pediculosis.

15.	**Viral Infections**	LGIS	Brig. R Naveed Akhtar	Should Know

Learning Outcomes:

- List common types of viral infections of skin
- Establish diagnosis of viral skin infections based on clinical features and investigations.
- Elaborate various management modalities of viarl skin infections

Psychiatry				
1.	**Psychiatric Assessment**	LGIS	Dr. Faheem Qasim	Must Know

Learning Outcomes:

- Give overview regarding Phenomenology and Psychiatry disorders

- Classify Psychiatry disorders
- Elaborate epidemiological and etiological basis of psychiatric disorders
- Outline diagnostic plan for Psychiatry disorders

2.	**Anxiety Disorders I, (GAD & Panic Disorder)**	LGIS	Dr. Fatima Amir	Must Know

Learning Outcomes:
- Classify Anxiety Disorders
- Discussthe Management of Anxiety Disorders

3.	**Anxiety Disorders II, (Phobias &OCD)**	LGIS	Dr. Faheem Qasim	Must Know

Learning Outcomes:
- Classify Anxiety Disorders
- Discuss the Management of Anxiety Disorders

4.	**Somatoform Disorders**	LGIS	Dr. Fatima Amir	Should Know

Learning Outcomes:
- Classify Somatoform Disorders
- Discuss the Management of Somatoform Disorders

Emergency Medicine

1.	**Aproach to an unconscious patient.**	LGIS	Dr. Huma Hussain	Must Know

Learning Outcomes:
- Generate differential diagnosis of the unconscious patient
- Identify signs and investigations to determine the cause
- Justify the utility of Glasgow Coma Scale (GCS)
- Outline the emergency management of patient

2.	**Hypothermia**	LGIS	Dr. Tazeen Hina Kazmi	Should Know

Learning Outcomes:
- Correlate pathophysiological basis of various etiological factorstoclinical manifestations of Hypothermia
- Devise plan for diagnosis& management of Hypothermia

3.	**Triaging and approach to a critical patient in emergency**	LGIS	Dr. Huma Hussain	Must Know

Learning Outcomes:
- Correlate severity of patients in ER with the concept of triage.

Learning Resources:

1. **Reference books:**
   a. Davidson's Principals & Practice of Medicine 23th EditionElsevier
   b. Current Medical diagnosis & treatment (Latest Edition 2022)
2. **Online resources**
   a. www.medscape.com
3. **Library resources**

a. Harrison's Principles of Internal Medicine 20th Edition (2018).McGraw Hill Education
b. Marriage

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Assessment formats:

Assessment Strategies (Formative)	Assessment Strategies (Summative)
In class discussions SGD	Practical Clinical Exam (Short & Long Cases) MCQs at the end of block

Surgery

Knowledge-related Learning Outcomes:

At the end of this block, final year students will be able to:

1. Describe the common surgery related cardiovascular diseases and their clinical presentation; and outline the basic principles of their management. (SLO 1,2,3,4)
2. Discuss the common gastrointestinal pathologies and rationalize appropriate management plan. (SLO1,3,4)
3. Diagnose the common and outline the management upper/Lower limb fractures (SLO 2,3,4,5)
4. Describe principles and types Anesthesia.

(Details of skill-related Outcomes can be found in surgery Logbooks)

Theme: Cardiovascular Disorders (CVS) (7)

Sr #	Topic Name	Teaching Strategy	Faculty	Importance (Must Know Should Know Could Know)
1.	Varicose Veins (Vascular)	LGIS	Asstt. Prof. Dr Umair Ahmed Khan	
Learning outcomes • Elaborate clinical presentation, etiology and pathophysiology of varicose veins. • Suggest differential diagnosis based on assessment of patient. • Classify varicose veins. • Rule out the diagnosis of DVT using appropriate investigations. • Suggest conservative or surgical management of varicose veins where indicated.				
2.	Aneurysm (Vascular)	LGIS	Asstt. Prof. Dr Umair Ahmed Khan	
Learning outcomes • Elaborate clinical presentation, etiology and pathophysiology of aneurysms. • Suggest clinical workup and management plan of aneurysms				
3.	Acute limb ischemia (Vascular) I	LGIS	Asstt. Prof. Dr Umair Ahmed Khan	
Learning outcomes • Identify clinical manifestations and etiology of acute and chronic limb ischemia				

- Relate the major risk factors to the etiology and pathophysiology of acute & chronic limb ischemia.
- Elaborate differential diagnosis of acute limb ischemia.
- Suggest appropriate investigations to make the diagnosis.
- Discuss the medical and surgical management of limb ischemia**.**

4.	chronic limb ischemia (Vascular) II	LGIS	Asstt. Prof.. Dr Umair Ahmed Khan	

Learning outcomes

- Define **chronic limb ischemia (CLI)** and differentiate it from **acute limb ischemia**.
- Describe the **etiology and risk factors** of chronic limb ischemia (e.g., atherosclerosis, smoking, diabetes, hypertension).
- Explain the **pathophysiology** and progression of arterial occlusive disease leading to limb ischemia.
- Describe the **clinical stages/classifications** of chronic limb ischemia (e.g., Fontaine or Rutherford).
- Identify the **clinical features** — intermittent claudication, rest pain, trophic changes, ulceration, and gangrene.
- List and interpret relevant **diagnostic investigations**, including:
  - Ankle-Brachial Pressure Index (ABPI)
  - Duplex ultrasound
  - CT/MR angiography and digital subtraction angiography
  - Discuss the **principles of management**:
  - Lifestyle modification and risk factor control
  - Medical therapy (antiplatelets, statins, vasodilators)
  - Surgical and endovascular options (angioplasty, bypass grafting, amputation)
- Recognize **complications** and principles of **prevention** (e.g., foot care, wound care).

5.	Venous ulcer + DVT (Vascular)	LGIS	Asstt. Prof. Dr Umair Ahmed Khan	

Learning outcomes

- Elaborate clinical presentation, etiology and pathophysiology of DVT
- Suggest conservative or surgical management of venous ulcer

6.	Principles of Vascular / Cardiac Bypass Surgery	LGIS	Asstt. Prof. Dr Umair Ahmed Khan	

Learning outcomes

- **Define** the concept of *bypass surgery* and explain its **purpose** in restoring blood flow in vascular and cardiac diseases.
- **Differentiate** between **vascular bypass** and **cardiac (coronary) bypass** procedures.
- **Describe the indications** for vascular bypass surgery (e.g., peripheral arterial disease, aneurysmal disease) and for cardiac bypass surgery (e.g., coronary artery disease).

- **Outline the principles of revascularization**, including selection of appropriate conduit and target vessel.
- **Discuss the types of grafts/conduits** used:
- Autologous vein grafts (e.g., saphenous vein)
- Synthetic grafts (e.g., PTFE, Dacron)
- Arterial grafts (e.g., internal mammary artery)
- **Describe the basic steps** and rationale of:
- Peripheral vascular bypass (e.g., femoral-popliteal bypass)
- Coronary artery bypass grafting (CABG)
- **Explain the role of cardiopulmonary bypass (heart-lung machine)** in cardiac surgery.
- **Discuss potential complications** of bypass surgery — graft occlusion, infection, bleeding, myocardial infarction, stroke.
- **Outline postoperative care principles**, including anticoagulation, wound care, and rehabilitation.
- **Recognize the importance of patient selection and risk factor control** in improving long-term outcomes.

7.	Introduction to trauma/ATLS, Golden hour management	LGIS	Assoc Prof. Dr. M. Ikram	

Learning outcomes

- Define trauma and explain its public health importance and epidemiology.
- Describe the concept and objectives of the Advanced Trauma Life Support (ATLS) approach.
- Explain the "Golden Hour" — its significance and impact on trauma outcomes.
- Outline the priorities of trauma management according to the ATLS protocol:
- Primary Survey (ABCDE):
    - A – Airway maintenance with cervical spine protection
    - B – Breathing and ventilation
    - C – Circulation with hemorrhage control
    - D – Disability (neurological assessment)
    - E – Exposure / Environmental control
- Secondary Survey: head-to-toe evaluation and history (AMPLE).
- Discuss the principles of initial resuscitation, including fluid therapy and control of external bleeding.
- Identify life-threatening conditions that must be recognized and treated during the primary survey (e.g., tension pneumothorax, massive hemothorax, cardiac tamponade).
- Explain triage principles in mass casualty or emergency situations.
- Outline the importance of teamwork and communication in trauma management.
- Describe documentation and medico-legal aspects of trauma care.

8.	Diabetic Foot & Gangrene Ulcer (Vascular complications)	LGIS	Prof. Dr. Naeem Ashraf	

Learning outcomes • Describe the causes , risk factors and clinical presentation of diabetic foot • Formulate the management plan for diabetic foot.				
Theme: Chest Related Disorders				
9.	CA Tongue (Maxillofacial)	LGIS	Asstt. Prof. Dr. Usman ul Haq	
Learning outcomes • Describe cause, Risk factors & clinical presentation of CA Tongue. Formulate investigation & treatment plan				
10.	Introduction to Anesthesia importance present and future	LGIS	Prof. Brig(R). Dr. Imran ul Haq	
Learning outcomes • Introduction • History • Use in different situations				
11.	Local Anesthesia and Pharmacology of Local Anesthesia (Anesthesia)	LGIS	Prof. Brig(R). Dr. Imran ul Haq	
Learning outcomes • Classify local anesthetic drugs, & list the physicochemical properties of local anesthetic drugs • Differentiate the clinical profile of commonly used local anesthetic agents & justify drug choice for different needs • Evaluate & identify patients at high risk for complications from local anesthetics • Justify the choice of a specific local anesthetic and technique for a patient with specific co-morbidities				
12.	Mediastinal Tumors	LGIS	Prof. Brig(R). Dr. M. Parvez	
Learning outcomes: • Describe Differential Diagnosis & Clinical Presentation of Mediastinal Tumors • Formulate investigation & treatment plan.				
13.	Mandible & Maxillary trauma (Maxillofacial)	LGIS	Asstt. Prof. Dr. Usman ul Haq	
Learning outcomes: • Types of fractures(facial)& classification • Etiology, sign & symptoms & clinical features • Radiological diagnosis & treatment				
14.	CA Lungs / Bening	LGIS	Prof. Brig(R). Dr. M. Parvez	
Learning outcomes: • identify the causes and risk factors for lung cancer • Advocate measures and guidelines to decrease risk for developing lung cancer and its screening				

- Discuss the prognostic factors of Ca lung.
- Classify tumours based on types, staging and grading justify the role of radiographic, endoscopic and laboratory evaluation in the diagnosis
- Formulate a management plan using various modalities. Discuss the complications of disease and
- its treatment

15.	Empyema Thorax	LGIS	Prof. Brig(R). Dr. M. Parvez	

Learning outcomes:

- Define empyema thorax and differentiate it from simple and complicated parapneumonic effusions.
- Describe the etiology and pathogenesis of empyema thorax, including common causative organisms.
- Explain the stages of empyema (exudative, fibrinopurulent, and organizing stages).
- Discuss the clinical features and typical course of the disease.
- List and interpret the important investigations, including:
- Chest X-ray
- Ultrasound chest
- CT scan (basic interpretation)
- Pleural fluid analysis (appearance, protein, sugar, cell count, Gram stain, culture).

16.	Zygomatic and naso-orbital complex trauma	LGIS	Asstt. Prof. Dr. Usman ul Haq	

Learning outcomes:
Intro, classification, sign & symptoms, causes, diagnosis, & treatment

17.	Thoracic Surgery - Investigation	LGIS	Prof. Brig(R). Dr. M. Parvez	

Learning outcomes:

- Describe the common indications for investigating thoracic surgical conditions (e.g. lung cancer, pleural disease, mediastinal masses, chest trauma).
- Explain the principles, advantages, limitations, and contraindications of key thoracic investigations

18.	Facial Trauma an introduction (Maxillofacial)	LGIS	Asstt. Prof. Dr. Usman ul Haq	

Learning outcomes:

- Introduction
- Should be able to Classify and describe facial injuries
- Should be able to Emergency management &Referral to appropriate specialty

19.	Thoracic Trauma 1	LGIS	Prof. Brig(R). Dr. M. Parvez	
20.	Thoracic Trauma II	LGIS	Prof. Brig(R). Dr. M. Parvez	

Learning outcomes:

- Define thoracic trauma and classify it into blunt and penetrating injuries.
- Describe the common types of thoracic injuries — rib fractures, flail chest, pneumothorax, hemothorax, pulmonary contusion, and cardiac tamponade.
- Explain the basic pathophysiology and clinical features of major thoracic injuries.
- Outline the initial assessment and management following the ABCDE (ATLS) approach.
- List the essential investigations (CXR, ultrasound, CT scan) used in diagnosis.
- Describe briefly the principles of emergency management, including chest tube drainage and airway support.
- Recognize life-threatening conditions (e.g., tension pneumothorax, massive hemothorax) and know when to refer for surgical care.
- Demonstrate appropriate communication, teamwork, and empathy in managing trauma patients

21.	Salivary Glands	LGIS	Asstt. Prof. Dr. Usman ul Haq	

Learning outcomes:

- Anatomy, pathology, tumor classification, signs & symptoms, clinical features, diagnostic modalities & treatment

22.	I/V Anaesthesia, Induction Agent, General Anaesthesia (Anaesthesia)	LGIS	Prof. Brig(R). Dr. Mubashir	

Learning outcomes:

- Discuss clinical presentation workup for general anesthesia mechanism of action dose, side effects and complications of General Anaesthesia

Theme: GIT

23.	Oeasophaghus I (Mortality Disorders)	LGIS	Prof. Brig(R). Dr. M. Parvez	
24.	Oeasophaghus II (Neoplasm)	LGIS	Prof. Brig(R). Dr. M. Parvez	
25.	Oeasophaghus III (Injuries)		Prof. Brig(R). Dr. M. Parvez	

Learning outcomes:

- Describe the causes, risk factors and clinical presentation of esophageal perforation.
- Formulate the management plan for esophageal perforation

26.	Diseases of Spleen	LGIS	Asst Prof Dr Sadia	

Learning outcomes:

- Diagnose pancreatitis using Ranson and Glasgow criteria
- Enumerate causes of pancreatitis and its predisposing factors
- Elaborate the Diagnosis of pancreatitis based on its signs and symptoms
- Manage pancreatitis and its complications
- Discuss the etiology of Ca Pancreas
- Discuss the Clinical Presentation and diagnostic workup for carcinoma pancreas.

• Plan the surgical management of Ca Pancreas and its complications				
27.	Liver I	LGIS	Assoc. Prof. Dr Azhar	
28.	Liver II	LGIS	Assoc. Prof. Dr Azhar	
Learning outcomes: • Enlist the common causes of liver abscess • Discuss the clinical presentation of liver abscess • Outline the principles of management of liver abscess • Generate differential diagnosis of SOL Liver • Develop plan for diagnosis, treatment and prevention of SOL liver and its complications • Generate differential diagnosis of SOL Liver • Develop plan for diagnosis, treatment and prevention of SOL liver and its complications				
29.	Stomach & Duodenum I	LGIS	Assoc. Prof. Dr .Naeem Akhtar	
30.	Stomach & Duodenum II	LGIS	Assoc. Prof. Dr .Naeem Akhtar	
Learning outcomes: • Discuss the causes of Ca stomach • Discuss the warning signs which lead to the diagnosis of Ca stomach • Discuss the presenting complaints of Ca stomach • list the investigations needed to diagnose the case • Describe the staging and grading of cancer. • Describe the management plan for a patient with Ca stomach				
31.	Small Intestine	LGIS	Assoc. Prof. Dr .Naeem Akhtar	
Learning outcomes: • Describe the anatomy of the small intestine — including its parts (duodenum, jejunum, ileum), blood supply, lymphatic drainage, and nerve supply. • Explain the physiology and functions of the small intestine in digestion and absorption. • List the common congenital and acquired disorders of the small intestine (e.g., atresia, obstruction, Meckel's diverticulum, Crohn's disease, tuberculosis, tumors). • Describe the clinical features and pathophysiology of small intestinal obstruction and perforation. • Outline the diagnostic approach — including relevant history, examination findings, and investigations (X-ray, ultrasound, CT). • Discuss briefly the principles of management of common surgical conditions of the small intestine (obstruction, perforation, ischemia, tumors). • Recognize the signs of acute abdomen due to small intestinal pathology and know when to refer for surgery.				

• Demonstrate appropriate communication, teamwork, and professional behavior while managing patients with small intestinal diseases.				
32.	Colon	LGIS	Prof. Dr. Naeem Ashraf	
Learning outcomes: • Describe the anatomy and blood supply of the colon. • Explain the physiology and functions of the colon. • List common colonic disorders (obstruction, volvulus, diverticulosis, IBD, colorectal cancer). • Recognize clinical features of major colonic diseases. • Outline the diagnostic approach — history, examination, and basic investigations (X-ray, colonoscopy, CT). • Understand principles of management (medical and surgical) of colonic diseases. • Identify acute colonic emergencies and know when to refer. • Demonstrate professional communication and teamwork in patient care.				
P-CMILE				
1.	P-CMILE (Case Study)	LGIS	Prof. Dr. Naeem Ashraf	
Learning outcomes: • Discuss patient's safety training in clinical practice.				
2.	P-CMILE (Managing Clinical Risks)	LGIS	Prof. Dr Naeem Ashraf	
Learning outcomes: • Discuss patient's safety issue and protocol in clinical practices				

Learning Resources:

1. **Reference Books**
   - Bailey & Loves, Norman brows, clinical methods, Essential Orthopaeidcs (including Clinical method & Anesthesia for medical students
2. **Online Resources**
   - Zoom
   - G- Class Room
   - Flipped Class Room
3. **Library resources**

Teaching Faculty:

Name	Email Address
Prof. Brig (R). Dr. Muhammad Parvez	dr_m_parvez@yahoo.com
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Asstt. Prof. Dr. Usman ul Haq	usman.mkq2010@gmail.com
Prof. Brig Imran-ul-Haq	Imr59us81@hotmail.com

Gynecology

Subject Learning Outcomes:

1. Triage and refer women to the appropriate facility of care.
2. Conservatively manage common illnesses.
3. Assist in management of critical cases.
4. Counsel patients and their attendants regarding management options and preventive measures.

Block Learning Outcomes:

1. Identify the clinical presentation, diagnose and plan management of women with medical complications of pregnancy (Hypertension, cardiac diseases, liver disorders, obstetric cholestasis and venous thromboembolism) and recognizes limitations and escalate care to senior colleagues and other specialties when appropriate.
2. Appraise the risk factors and manage patients in normal labour, pre-term labour, preterm prelabour rupture of membranes (PPROM) and having multiple pregnancy.
3. Formulate a plan for antenatal care, prenatal diagnosis and is able to assess fetal well-being.
4. Identify and manage patients with common perinatal infections.

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1	**Hypertensive disorders of pregnancy**	**LGIS**	**Dr. Shabana Kalsoom**	**Must Know**
Learning Outcomes: ● List and define types of hypertensive disorders in pregnancy ● Describe etiology & pathophysiology of pre-eclampsia ● Interpret investigations to diagnose pre-eclampsia ● Manage a patient of PIH and pre-eclampsia				
2	**Cardiac diseases in pregnancy**	**LGIS**	**Prof. Dr. Kinza Alam**	**Should Know**
Learning Outcomes: ● Discuss Pre-pregnancy counselling of patients with heart diseases ● Describe antenatal management of patients with cardiac disease in pregnancy ● Identify high risk cardiac conditions & comprehend NHYA classification of cardiac patients ● Review a general management plan of labour& delivery of cardiac patients				

● Outline management of heart failure and specific conditions i.e., IHD, Mitral & aortic stenosis, Marfan syndrome & pulmonary hypertension				
3	**Hypertensive disorders of pregnancy**	LGIS	**Dr. KhairunNisa**	**Must Know**
Learning Outcomes: ● Define eclampsia and HELLP syndrome ● Describe risk factors and pathophysiology of eclampsia and HELLP syndrome ● Interpret investigations for eclampsia and HELLP syndrome ● Formulate a management plan for eclampsia and HELLP syndrome				
4	**Antenatal care**	LGIS	**Dr. Ruqaiya Azhar**	**Must Know**
Learning Outcomes: ● Discuss the aims & importance of antenatal care ● Describe the antenatal booking visit, Booking history &examination ● Discuss investigations done at booking visit & their importance ● Explain follow up visits & routine antenatal care in pregnancy				
5	**Assessment of fetal wellbeing and prenatal diagnosis**	LGIS	**Dr. Ayesha Irfan**	**Must Know**
Learning Outcomes: ● Discuss the clinical application of ultrasound and scanning schedule in pregnancy ● Discuss ultrasound assessment of fetal wellbeing, biophysical profile and its importance ● Explain the Doppler investigations done to assess fetal well being ● List conditions that can be diagnosed in pre-natal period and describe method ● Describe indications, contraindications and complications of chorionic villus sampling, amniocentesis and cordocentesis ● Discuss Down's syndrome screening				
6	**Preterm labour&PPROM**	LGIS	**Dr. Mamoona Riaz**	**Must Know**
Learning Outcomes: ● Describe preterm labour, its frequency, pathogenesis and consequence of preterm labour ● Review the Modifiable and non-modifiable risks for Preterm labour ● Plan management of a patient in Preterm labor ● Discuss the etiology of preterm prelabour rupture of membranes (PPROM) ● Diagnose a case of preterm prelabour rupture of membranes ● Formulate a management plan for patients having preterm prelabour rupture of membranes				
7	**Liver disorders in pregnancy & obstetric cholestasis**	LGIS	**Dr. Khair-Un-Nisa**	**Should Know**

Learning Outcomes: ● Discuss viral hepatitis, its effects on pregnancy, risk of perinatal transmission and management during pregnancy ● Describe obstetric cholestasis, its etiology, fetal risks and management of pregnancy ● Discuss management of women with cholelithiasis during pregnancy				
8	**Multiple pregnancy**	LGIS	**Dr. GulwishSalahuddin**	**Must Know**
Learning Outcomes: ● Review the incidence, predisposing factors and types of twin pregnancy ● Discuss the antenatal, intrapartum and postpartum complications of multiple pregnancy ● Describe complications specific to monochorionic twin pregnancy ● Formulate a management plan for antenatal and intrapartum care of multiple pregnancy				
9	**Antenatal obstetric complications (Minor ailments of pregnancy & Venous thromboembolism)**	LGIS	**Lt Col Zaib un Nisa**	**Should Know**
Learning Outcomes: ● Review musculoskeletal problems, common gastrointestinal problem hyperemesis gravidarum, hemorrhoids and their management ● Describe etiology and management of varicose veins and edema in pregnancy ● Discuss the incidence and clinical presentation of DVT and pulmonary embolism. ● Select and interpret investigations for DVT and pulmonary embolism. ● Manage a patient with DVT and pulmonary embolism in pregnancy ● Suggest preventive measures for VTE in pregnancy				
10	**Normal labour& its management**	LGIS	**Dr. Iram Mushtaq**	**Must Know**
Learning Outcomes: ● Identify changes in uterus, cervix and hormonal factors that occurs during labor & Diagnose onset of labor ● Explain stages of labour. ● Describe the diameters of normal gynaecoid pelvis, the anatomy and diameters of fetal skull ● Critically appraise the mechanism of normal delivery ● Discuss on admission history taking, general physical examination, abdominal examination and vaginal examination ● Outline management of first, second and third stage of labour				
11	**Subfertility**	LGIS	**Dr. Khairun Nisa**	**Must Know**
Learning Outcomes:				

- Differentiate between primary and secondary subfertility
- Discuss the common causes of subfertility
- Identify women at risk of tubal damage
- Appraise the general principles of investigations & treatment of subfertile couple
- Discuss indications and procedures of the types of ART available
- Take targeted history of subfertility
- Interpret HSG X-ray film
- Counsel a couple with subfertility

Learning Resources:

1. **Reference Books**
   - Obstetrics by ten teachers 20th edition
   - Gynaecology by ten teachers 20th edition
2. **Library resources**
   - Hacker and Moore's essential obstetrics 6th edition
   - High Risk pregnancy 5th edition
   - Shaw's text book of gynaecology 17th edition
3. **Teaching faculty:**

Name	Email address
Prof Kinza Alam	drkinzairfan@gmail.com
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Dr. MaimoonaRiaz	drmamoonariaz@gmail.com
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Lt Col Zaib un Nisa	Zaibsg@yahoo.com
Dr. RuqaiyaAzhar	ruqaeyasaqib@gmail.com

Assessment formats :

Assessment Strategies (Formative)	Assessment Strategies (Summative)
SEQ, MCQ	SEQ, MCQ, OSPE

Family Medicine

Subject Learning Outcomes:

The students should be able to

- Demonstrate a systemic approach to common ailments
- Develop differential diagnosis for common symptoms
- Identify red flags and appropriate referrals
- Perform focussed history taking, physical examination and develop management plans
- Practice patient cantered approach and ensure continuity of care through regular follow ups.
- Counseling regarding chronic disease

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
		CVS		
1.	Orientation and Family medicine basics	LGIS	Dr Gulnaz Sharjeel	Must Know
Learning Outcomes: ● Comprehend the role of family medicine in community ● Describe main domains of consultation i.e. data gathering, examination, counseling and management ● Counsel the patient while breaking bad news				
2.	**Chest infections**	OPD , SKILLS LAB	Dr Gulnaz Sharjeel	Must Know
Learning Outcomes: ● Approach to chest infections in family medicine ● Identify red flags and criteria for referral ● Describe the evaluation through history, physical examination and investigations ● Give iv / im injections ● Insert cannula ● Interpret common x-ray findings ● Counsel for inhaler technique ● Demonstrate the use of peak flow meter for prognosis of asthma in clinical setting				
3.	**Diarrhea/constipation**	Opd , BST	Dr Gulnaz Sharjeel	Must Know
Learning Outcomes: ● Approach to diarrhea and constipation in family medicine ● Identify red flags for referral ● Outline investigations, enumerate management steps				

- **Reference Books**
  - Oxford handbook of family medicine
- **Online resources**
  YOUTUBE EDUCATIONAL VIDEOS
- **Other Resources**
  - Textbook of family medicine 9th edition
  - Swansons review of family medicine
  - Step up to family medicine
- **Teaching faculty & Student's hours:**

Name	Email address
Dr Gul naz	gulnazsharjeel1988@gmail.com

- **Assessment formats:**

Assessment Strategies (Formative)	Assessment Strategies (Summative)
360 evaluation Quiz at the end of the rotation Osce 2 x stations at the end of rotation	**8 mcqs (1 each in medicine , Surgery , obs n gynae and paeds)** **4 osce stations (same)**

Pediatrics

Subject Learning Outcomes:

The students should be able to

- Diagnose, investigate and plan management of common cardiovascular disorders in children
- Recognize complications & preventive measures and discuss prognosis of pediatric cardiovascular disorders.
- Diagnose, investigate and plan management plan of common GIT disorders.
- Diagnose, investigate and plan management of acute and chronic respiratory illnesses.
- List complications, preventive measures and discuss prognosis of diseases causing respiratory illnesses.

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
	CVS			
4.	Child with Cyanosis	LGIS	Dr Tahir Mahmood	Must Know
Learning Outcomes: ● Define cyanosis ● Describe the basics of cyanosis ● List Differential Diagnosis of cyanosis in a child ● Differentiate between central and peripheral cyanosis ● Discuss key areas in history & Ex relevant to children presenting with cyanosis ● List investigations and outline management plan of cyanosis				
5.	**Cyanotic Congenital Heart Disease**	LGIS	Dr Faiqa Taj	Must Know
Learning Outcomes: ● Define murmur ● List common congenital heart defects causing cyanosis & murmur. ● Describe the evaluation through history, physical examination and investigations ● Explain the management options for different cyanotic heart diseases and their prognosis ● Discuss pathophysiology, clinical manifestations and complications of Eisenmenger's syndrome				
6.	**Acyanotic Congenital Heart Disease**	LGIS	Prof Sohail Ashraf	Must Know
Learning Outcomes: ● List common congenital heart defects producing murmur without cyanosis. ● Describe the clinical features of left to right shunts causing volume overload				

● Recognize clinical features of common lesions causing pressure overload ● Discuss difference between small and large left to right shunts ● Outline investigations, enumerate management steps and prognosis				
GIT				
7.	**Recurrent Abdominal pain**	LGIS	Dr Kiran Shah	Must Know
Learning Outcomes: ● Cause of recurrent abdominal pain ● Identify common associated signs & symptoms. ● Differentiation b/w organic & inorganic causes ● Plan diagnostic work up ● Outline management startegies				
8.	**Chronic Liver Disease**	LGIS	Dr Sobia Noor	Must Know
Learning Outcomes: ● Define Chronic liver disease ● Pathophysiology of liver diseases ● Identify signs & symptoms of CLD ● List investigations and outline management steps of CLD ● List complications. ● Discuss prognosis.				
9.	**Jaundice / Acute Hepatitis**	LGIS	Dr Saba Mushtaq	Must Know
Learning Outcomes: ● Definition of acute & chronic hepatitis ● Describe aetiology of acute hepatitis ● Discuss features of hepatotropic viruses. ● List complications of hepatitis & outline management. ● List investigations and outline management steps ● Identify clinical features, list investigations and outline management steps of Wilson disease. ● Discuss prognosis.				
10.	**Constipation / Encoperesis**	LGIS	Dr Qurat ulAin	Must Know
Learning Outcomes: ● Describe pathophysiology of abd pain, vomiting and constipation. ● List causes of vomiting and constipation in neonates, infants and children. ● Discuss the organic causes of constipation. ● List investigations and outline management of a child with vomiting & constipation.				
RESPIRATION				
11.	**ARI / IMCI - Cough**	LGIS	Dr Tahir Mehmood	Must Know
Learning Outcomes: ● List differential diagnosis of child with breathing difficulty ● IMCI chart for cough ● Approach to a child with cough & breathing difficulty				

	• Enlist danger signs • Classification & Treatment & Home remedies for cough • Discuss prognosis			
12.	**Asthma in Children**	LGIS	Prof Sohail Ashraf	Must Know
Learning Outcomes: • Definition of asthma • Epidemiology of asthma & allergies in Pakistan • Clinical Presentation of Asthma & other allergic disorders • Pathophysiology of asthma • Severity of asthma (classification) • Management of asthma & Preventive measures Discuss prognosis.				
13.	Tuberculosis in children	LGIS	Prof Sohail Ashraf	Must Know
Learning Outcomes: • Definition of TB • Epidemiology of TB in Pakistan • Identify the clinical presentation of TB. • List investigations and outline management steps of TB. • List complications. • Vaccination & Prevention • Discuss prognosis.				

Learning Resources:

1. Reference Books
   - Basis of Pediatrics by Parvez Akbar Khan
2. Online resources
   - drtahirnoor@hotmail.com
3. Library resources
   - Textbook of Pediatrics by PPA
   - Current Pediatric Diagnosis & Treatment
   - Harriet & Lane Handbook of Pediatrics
   - Pediatrics illustrated text book by Tom Lissauer

- **Teaching faculty & Student's hours:**

Name	Email address
Dr Sohail Ashraf	drsohail@wahmedicalcollege.edu.pk
Dr Tahir Mahmood	drtahir@wahmedicalcollege.edu.pk

- **Assessment formats:**

Assessment Strategies (Formative)	Assessment Strategies (Summative)
MCQ, SEQ, Mini CEX	**MCQ, SEQ, Long case, short case**

7. 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.

ii. 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

iii. 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 10th of each month.
c. Students Affair 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 Affair 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.

8. 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

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 strategic breaks

9. 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

dmewahmedicalcollege@gmail.com

10. 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

11. Time Table Template

Theme:

Wah Medical College
4th Year MBBS Session 2022-2023
Time Table From: 23-01-2023 To 27-01-2023
(17th Batch)

Course Code: Y4B1
Academic Week: 7

Days /Date	8:00-11:00		11:15-12:05		12:05-12:55		12:55-1:45			2:00-3:00	
Monday 23-01-2023	3rd Clinical Rotation C - Medicine 1 D - Medicine 2 A - Surgery 1 B - Surgery 2 G - Gynae H - Peads E - Comm Med F - Pathology	Break 11:00-11:15	Com.med	Flipped Class Room	Medicine	LGIS	Pathology	LGIS	Break 1:45-2:00	Peadr	LGIS
				Lect #4		Lect #4		Lect #4			Lect #4
Tuesday 24-01-2023			Pathology	LGIS	ETE	LGIS	Medicine	LGIS		Com.med	SGD
				Lect #4		Lect #4		Lect #4		Mentors	Lect #4
Wednesday 25-01-2023			Com.med	Flipped Class Room	ENT	LGIS	Surgery	LGIS		Pathology	SGD
				Lect #4		Lect #4		Lec #4			Lect #4
Thursday 26-01-2023			Pathology	LGIS	Com.med (12:05 - 1:00)	Field Visit (E,F,G,H)	Pathology (12:05-1:05)	(Practical) (A, B, C, D)		P-CMILE	LGIS
				Lect #4				Lect #4			Lect #4

Friday 27-01-2023	8:00-08:45		8:45-09:30		9:30-10:15		10:15-11:05			11:20-12:10		12:10-1:00			1:30-2:15	2:15-3:00	1:30-3:00	
	Medicine	LGIS	Surgery	LGIS	Surgery	LGIS	Gynae-Obs		Break 11:05-11:20	Com.med	LGIS	Pathology	LGIS	Juma Break 1:00-1:30	Com.med	SGD (A,B,C,D)	Pathology (Practical) (E,F,G,H)	
		ect #		Lect #4		Lect #4		Lect #4			Lect #4		Lect #4			Lect#5		Lect #4

Professor
Dr. S. Sabah Imran
4th year / In charge Y4B1

Professor. Dr. Musarat Ramzan
Dean/ Vice Principal
Wah Medical College, Wah Cantt