WAH MEDICAL COLLEGE

2023-2027

Department of Medical Education

STUDY GUIDE
4th YEAR MBBS
Y4BXI

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.

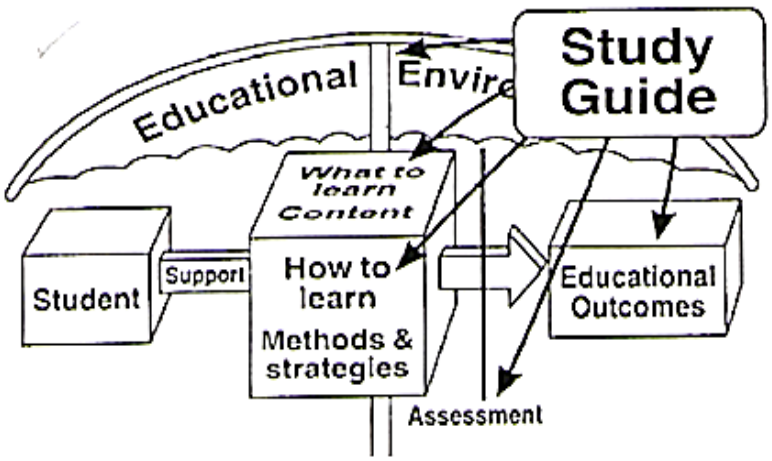


Figure 1. Objectives of the study Guide(HARDEN, J.M. LAIDLAW, E.A. HESKETH, 1999)

II. Commonly used abbreviations & Logos in the study guide

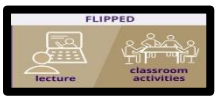
Learning Outcomes:

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.

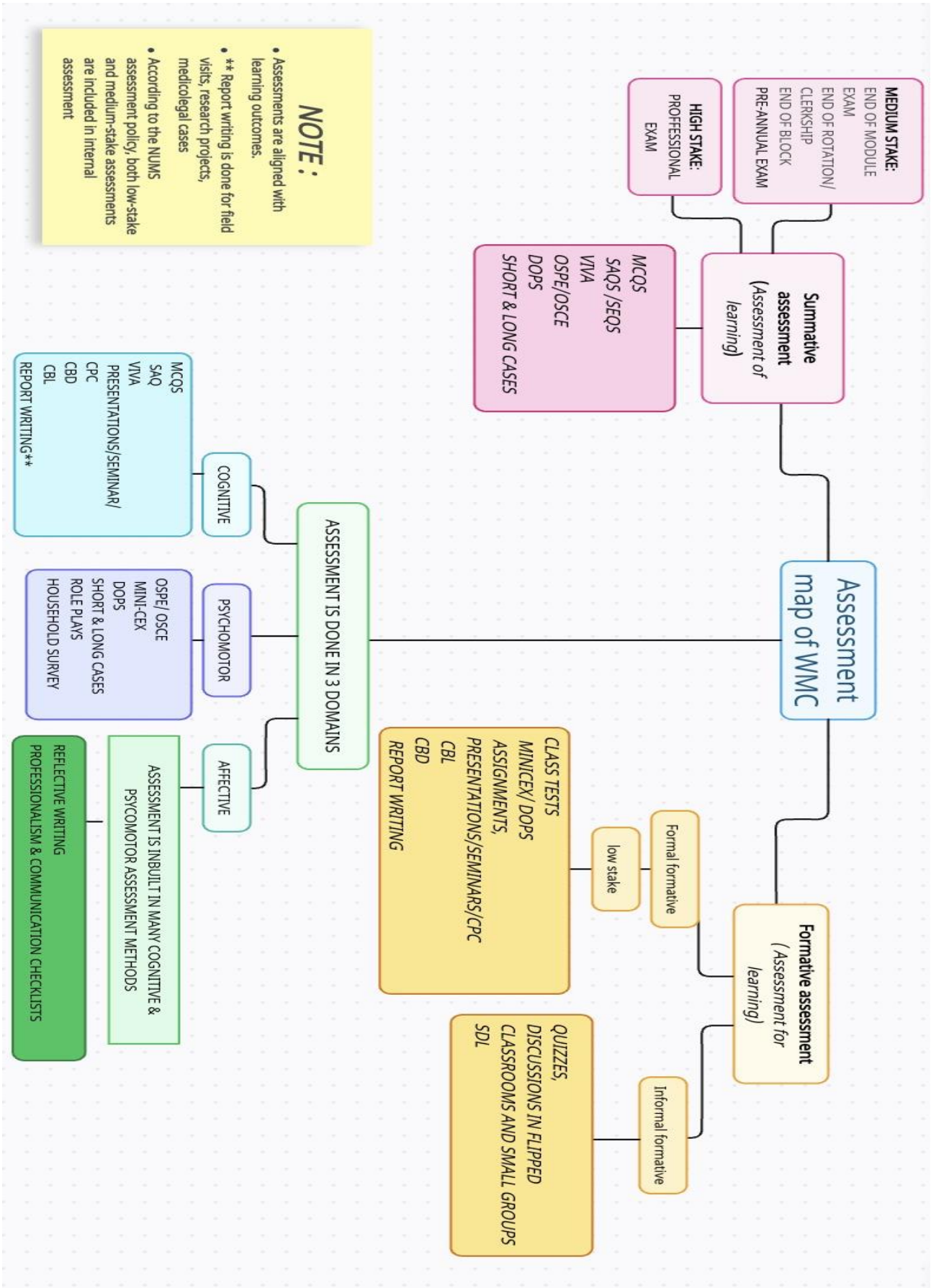
Self-Directed Study

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 Y4BXI

Name	Y4BXI
Duration	10 weeks
Prerequisite Block	Y4BX
Special Pathology	• Common diseases and malignancies of Urinary System, Male & Female genital tract, Breast, Bone/Joints/Soft tissue & Skin.
Gynecology	• Urinary incontinence, Medical disorders in pregnancy: Renal diseases, Autoimmune diseases (SLE, APS), Epilepsy, Benign and malignant conditions of uterus, cervix and ovary, Endometriosis and chronic pelvic pain
Peads	• Nephrology, Genitourinary, Bone & Skin
Surgery	• Urology diseases, Surgical diseases & breast pathologies, Orthopedics trauma and pathologies, Anesthesia
Medicine	• Common Nephrology, Rheumatology, Dermatology and Psychiatry disorders, Critically ill patients in A&E department
Community Medicine	• Demography, Communicable diseases including Entomology, Nutrition, Health Planning & Policy, Community Water Supply, Sterilization & Disinfection
ENT	• Congenital conditions of nose, Diseases of external nose, Facial trauma, Inflammatory conditions of the nose. Diseases of nasal septum and nasal cavities, Epistaxis, Nasal Allergy, Vasomotor Rhinitis & nasal polypi. Sinusitis, Neoplasm of nose and paranasal sinuses
Ophthalmology (EYE)	• Cornea, Lens, Glaucoma, Uveitis

5. Block Development Committee

Chairperson	Brig (R)Prof. Dr. Tariq Masood Malik
Block In-charge	Prof. Jamila
Members/ Resource persons	Community Medicine: Dr. Robina Mushtaq Pathology: Prof. Jamila ENT: Col(R)Prof. Muhammad Asad Ophthalmology: Dr. Asma Aftab Surgery: Prof. Dr. 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 the supervision of Prof. Dr. Musarat Ramzan
Resource person for Study Guide	**Dr. Memoona Masoor**

6. Course content

Community Medicine

Subject Learning Outcomes

After completion of Community Medicine Y4BXI the students would 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 2,3,4,6,7,8).
2. Recommend measures for prevention, protection and education about the common community health problems. (PLO 1,3,5,6,7,8).

Block Learning Outcomes

At the end of Y4BXI the students will be able to:

1. Interpret changes in population and disease patterns for modifying health services. (SLO 1)
2. Describe health system of the country by applying concepts of Primary Health Care and Leadership. (SLO 3)
3. Apply epidemiology of common communicable diseases in the global and local context for control and prevention of diseases. (SLO 1, 2)
4. Recommend appropriate intervention for control and prevention of common nutritional health issues at household and community levels. (SLO 1,2)
5. Write comprehensive report on assigned tasks. (SLO 2,4,5)
6. Demonstrate professional behaviour in all learning activities. (SLO 5)

S#	Topic	Educational Strategies	Names of Instructor	Importance (Must Know Should Know Could Know)
1.	**Demography**	Flipped class room	Prof Dr. Musarat Ramzan	Must Know
Learning Outcomes: The students would be able to: • Associate various factors affecting child bearing practices. • Interpret population change upon calculation. • Interpret graphic structures of populations. • Recommend public health measures on population structure Correlate demographic transition with epidemiological transition				
2.	**Primary Health Care**	Flipped class room	Prof Dr. Musarat	Must Know

			Ramzan	
	Learning Outcomes: • Infer the difference between the approach of Primary Health Care and previous health care • Apply the principles and elements of PHC with the real-life situations. • Conceptualize planning and implementation of PHC • Differentiate between comprehensive and selective primary health care. • Infer the factors constraining the implementation of PHC in Pakistan			
3.	**Communicable diseases including Entomology**	Flipped class room, LGIS	Dr. S. Sabah Imran, Dr. Khola Waheed,	Must Know
Class Learning Outcomes: The students would be able to: • Compare and contrast the epidemiological determinants, mode of transmission, spectrum, clinical presentations and investigations of communicable diseases. • Suggest strategies for disease control and prevention for every specific disease and in different scenarios. • Recommend control measures for the related vectors in the disease scenarios				
4.	**Sterilization & Disinfection**	LGIS	Dr. Sadia Nadeem	Must Know
Class Learning Outcomes: The students would be able to: • Differentiate between Sterilization & Disinfection • Recommend appropriate Sterilization and Disinfection methods for the given situations				
5.	**Nutrition**	Flipped class room	Dr. Robina Mushtaq	Must know
Class Learning Outcomes: The students would be able to: • Differentiate major nutritional problems of public health importance • Recommend preventive and corrective measures against nutritional problems • Educate community regarding dietary preventive measures and food safety • Assess nutritional status of the community • Identify various food practices and food borne diseases				

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/ Library resources**
    - Davidson Principles and Practice of Medicine
    - Lucas, Short Textbook of Public Health Medicine for the Tropics
    - Population Reference Bureau's Population Handbook
    - An Introduction to Medical Demography & Population Studies By Mohd. Aslam Chaudhry & Ali Mohammad Mir
    - Handouts/SDL prepared by faculty/Google class
3. **Online resources**
    - Seasonal Awareness & Alert Letter, NIH
    - Communicable diseases in Pakistan-WHO report
    - Population Statistics of Pakistan

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

Assessment formats:

Assessment tools (Formative)	Assessment Strategies (Summative)
MCQs, Home assignments, SAQs/SEQs, CBL, Viva, Class discussion, quiz using Google forms	**MCQs, SAQs/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. Qandeel 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. 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. 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 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. 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
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	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	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	Must know
Learning Outcomes: ● Collect data from the target population				

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Dr. Khola Waheed Khan	kholawaheed@wahmedicalcollege.edu.pk
Dr. Sadia Nadeem	sadianadeem@wahmedicalcollege.edu.pk

Assessment format

Research project

Pathology

Subject Learning Outcomes (SLO):

- Correlate the etiology and morphological changes of prevalent diseases with pathogenesis.
- Devise appropriate plan of lab investigations based on signs & symptoms of patients.
- Interpret the relevant lab procedures required to diagnose common diseases.
- Counsel the patients on pre-test preparation and lab reports.

Block Learning Outcomes (BLO):

At the end of this module, the students of 4th year MBBS should be able to

- Correlate the etiology, morphological features and clinicopathologic consequences of major diseases of the Urinary System, Male & Female genital tract, Breast, Bone /Joints/ Soft tissue and Skin with the pathogenesis. (SLO 1).
- Recommend appropriate investigations for the signs & symptoms of the diseases related to the Urinary System, Male & Female genital tract, Breast, Bone /Joints/ Soft tissue and Skin (SLO 2).
- Interpret the laboratory finding reports of the major diseases related to the Urinary System, Male & Female genital tract, Breast, Bone /Joints/ Soft tissue and Skin (SLO 3,4).

S. No	Topics	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Nice to Know)
1.	**Urinary System.**	**LGIS/ **Practical**	**Prof. Dr. Sami Saeed **All faculty**	**Should Know**
Learning Outcomes: ● Congenital & developmental anomalies of kidney ● Vascular disorders. ● Glomerular diseases. ● Tubulointerstitial diseases. ● Obstructive uropathy & Urolithiasis Cystic diseases of the kidney. ● Neoplasms of kidney ● Congenital anomalies /Neoplastic Disorders of ureter & urinary bladder. ● **Proteinuria / Nephrotic syndrome. ● **Renal function tests /Fluid & electrolyte disorders.				
2.	**Male genital tract.**	**LGIS**	**Prof Brig(R) Tariq Masood Malik**	**Nice to Know**
Learning Outcomes:				

	● Congenital anomalies of Penis & Testis. ● Tumors of Testis. ● Inflammatory disorders of Prostate Hyperplasia & carcinoma Prostate/ PSA			
3.	**Female genital tract.**	**LGIS & Practical**	**Prof. Dr. Sami saeed /Assoc. Prof. Dr. Lubna Ehtizaz**	**Nice to Know**
Learning Outcomes: ● Female genital system pathology (vulva, vagina, cervix) Cervical tumors and pap smear. ● Endometrium & Myometrium (Endometrial tumors & Hyperplasia) ● Fallopian tubes /Ovaries/Ovarian tumors. ● Gestational and Placental disorders. ● **Diagnosis of Infertility				
4.	**Breast**	**LGIS & Practical**	**Prof. Dr. Jamila**	**Should Know**
Learning Outcomes: ● Benign Epithelial lesions/ Stromal tumors. ● Breast carcinomas/ Stromal tumors. ● Immunohistochemical markers: importance in diagnosis of breast cancers.				
5.	**Bone /Joints/ Soft tissue.**	**LGIS**	**Prof Brig(R) Tariq Masood **Assoct. Prof. Dr. Lubna Ehtizaz**	**Could Know**
Learning Outcomes: ● Bone structure/ Growth. ● Congenital & Acquired disorders of bone & cartilage. ● Defects in metabolic pathway of bone development. ● Bone Fractures, Osteonecrosis and Osteomyelitis. ● Bone Tumors & Tumors like lesions. ● Joints/ Osteoarthritis/ Rheumatoid Arthritis. ● Soft tissue, Tumors of Adipose tissue & Fibrous tissue. ● Smooth & Skeletal muscle tumors/ Tumors of uncertain origin ● **Uric Acid and Gout.				
6.	**Skin.**	**LGIS**	**Asstt. Prof. Dr. Syed. Sarwar Ali**	**Should Know**
Learning Outcomes: ● Pathology of Skin (Disorders of pigmentation & Melanocytes, chronic inflammatory dermatosis, Blistering diseases), Disorders of epidermal appendages. ● Benign epithelial tumors/ Tumors of Dermis/ Pre-malignant & Malignant epidermal tumors/ Melanoma				
7.	Vascular Disorders of Kidneys	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:

- Define nephrosclerosis and describe the morphological findings.
- Differentiate between benign Nephrosclerosis and malignant hypertension,
- clinically and morphologically.
- Identify hyperplastic arteriosclerosis.
- Enlist thrombotic microangiopathies and describe etiological factors and clinical features.

8.	Glomerular diseases.	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:

- Identify the basic difference between Nephrotic syndrome and Nephritic syndrome.
- Enlist primary and secondary glomerular diseases separately.
- Enlist the pathogenetic mechanisms related to kidney disease and injury with respect to glomerular diseases.
- Describe the clinical manifestations, light microscopy, immunofluorescence and electron microscopy findings of major glomerular diseases.

9.	Tubulointerstitial diseases	LGIS & Practical	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:

- Enumerate the causes, clinical features, pathogenesis and morphological findings of Acute pyelonephritis.
- Describe the main finding in Chronic Reflux associated pyelonephritis.
- Describe the pathogenesis, clinical features and Morphology in cases Of Tubulointerstitial nephritis.
- Define acute tubular injury and necrosis and describe its pathogenesis, clinical findings and morphological features.
- Identify histopathological findings of above condition on the given slides.

10.	Cystic diseases of kidney and obstructive uropathy	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:

- Enlist the cystic diseases of the kidney.
- Describe the pathogenesis, morphological findings and genetic changes in Autosomal Dominant and Autosomal recessive kidney disease.
- Enlist medullary disease with cysts and identify gene Loci in Nephronophthisis-medullary cystic disease complex.
- Identify the causes of renal stone formation.
- Define hydronephrosis, enlist its most common causes and describe morphology and clinical features.

11.	Neoplasms of Kidney.	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:

- Enlist different benign and Malignant renal neoplasms.
- Describe the general clinical Manifestations and Gross morphological findings of renal neoplasms.

- Know the specifics about Angiomyolipoma, Oncocytoma, Clear cell renal cell carcinoma, Papillary renal cell carcinoma and Chromophobe renal cell carcinoma in terms of morphology.
- Describe the morphological findings in Wilms tumor and know the age group affected.

12.	Renal function tests and Fluid and electrolyte disorders.	LGIS	Prof. Dr. Sami Saeed / Assoct. Prof. Dr. Lubna Ehtizaz	Should Know

Learning Outcomes:
- Enlist commonly requested renal Function tests.
- Identify the causes related to deranged Renal function tests and their interpretation.

13.	Neoplastic and non-Neoplastic disorders of Urinary bladder.	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:
- Enlist non-neoplastic conditions affecting The Urinary bladder.
- Describe the pathogenesis of Neoplasms of Urinary bladder.
- Describe the morphological Findings of different Urinary bladder neoplasms.

14.	Female genital System (Vulva, Vagina and Cervix).	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:
- Enlist the common non-neoplastic epithelial disorders of Vulva and describe the histological differences.
- Describe the morphological Findings of Condylomas and Extramammary Paget's disease of Vulva.
- Identify the causes of vaginitis.
- Describe the etiology/ Pathogenesis of Cervical neoplasia.
- Classify the precursor lesions of Cervical Squamous cell carcinoma.
- Describe the gross and microscopic findings of Invasive carcinomas of cervix.

15.	Female Genital system (Endometrium, and myometrium).	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:
- Define endometritis, adenomyosis and endometriosis.
- Enlist the theories related to proposed Origins of Endometriosis and describe the clinical and morphological findings.
- Enlist the causes of abnormal uterine Bleeding by age group.
- Classify Endometrial hyperplasia and describe the morphological findings.
- Describe the clinical features, Pathogenesis and Clinical findings of Endometrial carcinomas.

- Identify findings related to Endometrial polyps.
- Describe the clinical manifestations and Morphological findings of Leiomyomas.

16.	Female Genital system (Fallopian tube and Ovary).	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:

- Enlist the common causes of Salpingitis and Pelvic Inflammatory disease.
- Classify ovarian tumors according to Their sites of origin/WHO classification and tabulate the differences between type I and type II tumors.
- Describe the gross and histological findings of Surface Epithelial tumors, Germ cell tumors and Sex-cord stromal tumors.

17.	Gestational and Placental disorders.	LGIS	Prof. Dr. Sami Saeed	Should Know

Learning Outcomes:

- Define ectopic pregnancy and enlist the common sites of development.
- Enumerate the differences between Complete mole and Partial mole with particular focus on karyotype, morphology, serum hcG levels and subsequent carcinoma risk.
- Define invasive mole.
- Enlist common non- molar malignancies and describe common morphological findings.
- Define Preeclampsia/ Eclampsia and Describe clinical findings.

18.	**Breast (Benign and Malignant Epithelial Lesions).**	**LGIS**	**Prof. Dr. Jamila**	**Should Know**

Learning Outcomes:

- Enlist benign epithelial lesions and understand their significance with respect to risk of subsequent carcinoma.
- Describe the morphology of proliferative lesions without and with atypia.
- Describe the clinical and mammographic features & Enlist the Risk factors associated with development of invasive carcinoma.
- Describe the morphology of in- Situ lesions, their types and enumerate differences between Ductal carcinoma in- situ and Lobular carcinoma in-situ.
- Describe the morphological findings of Invasive Ductal and Invasive Lobular carcinomas.
- Enlist the biological types of Invasive Carcinomas and tabulate differences amongst them.
- Enlist the factors that influence the outcome of invasive cancers with detailed focus on Biologic type and Tumor stage.
- Enlist the targeted therapies available for treatment of breast cancer.

19.	Breast (Stromal neoplasms).	LGIS	Prof. Dr. Jamila	Should Know

Learning Outcomes:

- Enlist benign and malignant stromal Neoplasms of breast.
- Describe the clinical features and morphological findings of Fibroadenoma.

● Describe the morphological Findings of Phyllodes tumor.				
20.	Breast (Immunohistochemical markers of importance).	LGIS	Prof. Dr. Jamila	Should Know
Learning Outcomes: ● Explain the importance of Detection of Estrogen receptor, Progesterone receptor, Her 2 Neu and Proliferative index on invasive cancer specimens.				
21.	Musculo- skeletal system	LGIS	Prof Brig (R)Tariq Masood Malik	Should Know
Learning Outcomes: ● Identify the normal bone histology. Differentiate Between woven and lamellar bone. ● Enumerate the factors controlling bone development and differentiate between endochondral and intramembranous ossification. ● Define and describe bone remodeling. ● Define dysostosis and dysplasia. ● Define and describe osteogenesis imperfecta. ● What is osteopenia? Describe the pathogenesis and morphology of osteoporosis. ● Describe the pathogenesis and morphology of Paget's disease. ● Enumerate the types of bone fractures. Describe osteonecrosis. ● Describe the etiological factors, pathogenesis and morphology of acute and chronic osteomyelitis. ● Classify bone tumors. Describe the pathogenesis, morphology and clinical features of osteosarcoma ● Describe the clinical and morphological features of osteochondroma. ● Describe the pathogenesis and morphological features of chondrosarcoma. ● Describe the clinical and morphological Features of Ewing's sarcoma and Giant cell tumor. ● Define and describe aneurysmal bone Cyst and fibrous dysplasia. ● Describe the etiology, Pathogenesis and morphology of osteoarthritis. ● Describe the etiology, pathogenesis and morphology of Rheumatoid arthritis. ● Define and describe suppurative arthritis. ● Classify soft tissue tumors. Describe morphological features of lipoma and liposarcoma. ● Describe clinical and morphological features of leiomyoma and leiomyosarcoma. Describe the morphological features of rhabdomyosarcoma. ● Enumerate tumors of uncertain origin. Describe morphological features of synovial sarcoma. ● Describe the etiology, pathogenesis, clinical features and morphology of gout.				

	• Enumerate tumors of uncertain origin. Describe morphological features of synovial sarcoma. • Describe the etiology, pathogenesis, clinical features and morphology of gout			
22.	Skin	LGIS	Assit. Prof Dr Syed Sarwer Ali	Should Know
Learning Outcomes: • Explain the disorders of pigmentation Along with chronic inflammatory dermatosis, various blistering diseases and disorders of epidermal appendages. • Describe the various benign, premalignant and malignant, Epidermal and dermal tumors including melanoma.				

References:

- Robbins Basic Pathology,10th ed. & Robbins and Cotran
- Pathologic Basis of Disease,9th Edition.

Practical

Learning Outcomes:

At the end of second block, the students of 4th year MBBS should be able to:
Establish diagnosis of given topics of Kidney and collecting system, Female Genital system and Breast by correlating findings in given slides with gross morphology.

S. No	Special Pathology Learning Objectives	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1	• Elucidate microscopic features of Chronic Pyelonephritis and convey the information to patients/attendants in simple words. • Counsel the patient for dietary modification in prevention of stone formation & chart out the prevention of renal stones	Demonstration / Practical	All Lecturers	Should Know
2	• Interpret and explain reports to patient/attendant based on the markedly	Demonstration / Practical		Should Know

	deranged Renal function tests.			
3	• Explicate the histological features of Wilms tumor with particular focus on the triphasic pattern.	Demonstration / Practical		Should Know
4	• Elucidate the histological findings of clear cell renal cell carcinoma. Counsel the patient for Radical Nephrectomy.	Demonstration /Practical		Should Know
5	• Elucidate the histological features of Transitional cell carcinoma bladder.	Demonstration/ Practical		Should Know
6	• Elucidate the histological findings of Leiomyoma uterus and explain the information to patients/attendants in simple words.	Demonstration /Practical		Should Know
7	• Elucidate the histological findings of Serous and mucinous Cystadenomas of ovary.	Demonstration /Practical		Should Know
8	• Elucidate the histological findings of Endometrial and cervical carcinomas.	Demonstration /Practical		Should Know
9	• Elucidate the histological findings of Mature cystic teratoma, other malignant Ovarian tumors and Endometriosis.	Demonstration /Practical		Should Know
10	• Elucidate the histological findings of Fibroadenoma of Breast.	Demonstration /Practical		Should Know
11	• Elucidate the histological findings of Invasive Ductal Carcinoma of breast.	Demonstration /Practical		Should Know

	Explain the significance of ER, PR & HER 2 in Breast neoplasms for detecting cancer.			
12	• Elucidate the histological findings of Fibrocystic changes in breast.	Demonstration /Practical		Should Know

References:

- Robbins & Cotran Atlas of Pathology, 3rd edition
- Robbins Basic Pathology, 10th edition.

Learning Resources:

- Robbins Basic Pathology, 10th edition
- Cotran Pathologic Basis of Disease, 9th Edition

Assessment formats

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

SGDs Y4BX1

SGD Renal system: Renal cell carcinoma

SGD Male genital tract: Prostate

SGD Female genital tract: Ca Cervix

SGD Musculoskeletal system: Ewing's Sarcoma

SGD Breast: Breast carcinoma.

Ophthalmology

Subject Learning Outcomes

By the end of Ophthalmology course medical 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 block Y4BXI, the students should be able to:

- Identify different corneal diseases and summarize principles of corneal disease management. **(SLO: 1,2,5,6)**
- Recognize and manage inflammation of the Uveal tract.**(SLO: 1,2,5,6)**
- Identify cataract and lens related pathologies**.** **(SLO: 1,2,3,4,5,6)**
- Justify different treatment options for cataract. **(SLO:1,2,3,4,5,6)**
- Classify and explain indications for different types of keratoplasty. **(SLO: 1,2,5,6)**
- Differentiate between various types of Glaucoma and suggest their management plan. **(SLO: 1,2,3,4,5,6)**

Sr#	Topic	Educational Strategies	Names of Instructor	Importance (**Must Know Should Know Could Know**)
1.	**Uveal Tract I**	LGIS	Dr. Ryyan Masood	Should Know
Learning Outcomes: • Explain the anatomical and physiological aspects of the uveal tract. • Recognize the congenital defects of uveal tract. • Classify uveitis. • Identify clinical features of uveitis.				

2.	**Uveal Tract II**	LGIS	Dr. Ryyan Masood	Should Know
Learning Outcomes: ● Order appropriate investigations and treat different cases of uveitis. ● Recognize certain special types of uveitis e.g. Fuch's uveitis, Sympathetic ophthalmia.				
3.	**Introduction to cornea**	LGIS	Dr. Marrium Shafi	Must know
Learning Outcomes: ● Recall the anatomy and histology of cornea. ● Correlate the clinical features of corneal diseases with its pathophysiology.				
4.	**Corneal Ulcers I**	LGIS	Dr. Marrium Shafi	Must know
Learning Outcomes: ● Recognize the clinical features of viral keratitis. ● Manage a case of viral keratitis.				
5.	**Corneal Ulcers II**	LGIS	Dr. Marrium Shafi	Must know
Learning Outcomes: ● Identify bacterial, fungal and acanthamoebal keratitis. ● Differentiate between various corneal ulcers/ keratitis. ● Justify different treatment strategies and visual rehabilitation options in patients of various corneal ulcers.				
6.	**Keratoconus**	LGIS	Dr. Marrium Shafi	Must know
Learning Outcomes: ● Diagnose keratoconus based upon their clinical features. ● Outline management plan for keratoconus				
7.	**Keratoplasty**	LGIS	Dr. Marrium Shafi	Must know
Learning Outcomes: ● Classify keratoplasty. ● Rationalize the indications of different types of keratoplasty.				
8.	**Introduction to lens and Ectopia Lentis**	Flipped Classroom	Dr. Asma Aftab	Must Know
Learning Outcomes: ● Explain anatomy and important physiological aspects of Lens. ● Identify clinical features of lenticular diseases. ● Define Ectopia Lentis and discuss its pathophysiology.				
9.	**Ectopia Lentis**	Flipped Classroom	Dr. Asma Aftab	Must know
Learning Outcomes: ● Classify Ectopia Lentis according to eitiology. ● Identify important systemic associations. ● Outline management plan for a case of Ectopia Lentis.				
10.	**Cataract**	Flipped Classroom	Dr. Asma Aftab	Must Know
Learning Outcomes: ● Classify and identify different types of cataract. ● Recognize different clinical presentations of cataract.				

● Explain different examination techniques to detect cataract.				
11.	**Management of cataract**	Flipped Classroom	Dr. Asma Aftab	Must know
Learning Outcomes: ● Manage a case of Cataract. ● Justify different treatment options for cataract.				
12.	**Complications of cataract surgery**	Flipped Classroom	Dr. Asma Aftab	Must know
Learning Outcomes: ● Anticipate complications of cataract surgery. ● Management of major complications of cataract surgery.				
13.	**Introduction to Glaucoma**	LGIS	Prof. M. Akmal Khan	Must know
Learning Outcomes: ● Revise applied anatomy and physiology. ● Discuss aqueous humour dynamics. ● Classify glaucoma. ● Elaborate pathophysiology of different types of glaucoma.				
14.	**Open Angle Glaucoma**	LGIS	Prof. M. Akmal Khan	Must know
Learning Outcomes: ● Diagnose open angle glaucoma. ● Elaborate glaucomatous visual field defects. ● Outline management plan for open angle glaucoma.				
15.	**Angle closure Glaucoma**	LGIS	Prof. M. Akmal Khan	Must know
Learning Outcomes: ● Correlate the pathophysiology of angle closure glaucoma to its clinical features. ● Outline management plan for acute congestive glaucoma.				
16.	**Secondary Glaucoma**	LGIS	Prof. M. Akmal Khan	Should know
Learning Outcomes: ● Recognize different types of secondary glaucoma based upon pathophysiology and clinical features. ● Suggest management plan for secondary glaucoma.				
17.	**Congenital Glaucoma**	LGIS	Prof. M. Akmal Khan	Should know
Learning Outcomes: ● Identify different features of congenital glaucoma. ● Appraise differential diagnosis of congenital glaucoma. ● Manage a case of congenital glaucoma.				
18.	**Ocular therapeutics**	LGIS	Prof. M. Akmal Khan	Must know
Learning Outcomes:				

- Choose appropriate anti-glaucoma drugs considering their indication for use.
- Discuss commonly used drugs in Ophthalmology.

Learning Resources:

1. **Text books:**
   - Clinical Ophthalmology, Jatoi S M
   - Basic Ophthalmology, Jogi R
2. **Reference Books:**
   - General Ophthalmology, Vaughan and Asbury
   - Kanski's Clinical Ophthalmology A Systematic approach, Bowling
3. **Online resources**:
   - https://www.medscape.com/ophthalmology
   - Ophthalmology Google classroom 2025
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 using MCQ's and SAQ's/ SEQ's, Quiz using Google forms	MCQ's , SAQ's / SEQ's

ENT

Learning Outcomes:

- Diagnose & manage common diseases of the nose & paranasal sinuses(PLO1,3,6,7,8)
- Be able to correlate the clinical features with the underlying pathology involved mechanisms; (PLO1,3,6,7,8)
- Describe and explain the pathophysiology, describe Clinical features, Diagnose, investigate and management plan in common nose & paranasal sinuses diseases. (SLO1, 3, 5, 6).
- Discuss recent advances pertaining to surgery in nose & paranasal diseases (PLO 6, 8).

Block Learning Outcomes:

- Revisit the applied anatomy and physiology of nose and paranasal sinuses.
- Enumerate various conditions resulting in nasal obstruction & discharge
- Describe the diseases of the nasal septum & define DNS and enumerate its various types.
- Describe the pathophysiology, types, and management of Sino nasal polyposis.
- Describe various types of allergic & non-allergic rhinitis.
- Describe acute & chronic rhinosinusitis, its various types and its complications along with management plans.
- Enumerate granulomatous diseases of the nose & paranasal sinuses and describe their management
- Suggest thorough management plan in case of Epistaxis. Knowledge of measures to control refractory epistaxis.
- Differentiate between various causes of Facial pain and headache on the basis of history and clinical examination.
- Categorize various conditions benign & malignant neoplasms of the nose & paranasal sinuses.

S. No	Topic	Educational Strategies	Name of instructor	Importance (Must Know Should Know Could Know)
1.	Anatomy of external nose & nasal septum& lateral wall	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
2.	Anatomy of Paranasal sinuses	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know

	Physiology of nose & PNS			
Learning Outcomes: • Discuss the applied anatomy of external nose, nasal septum, lateral wall of nose & paranasal sinuses. • Discuss the physiology of nose & PNS				
3.	Diseases of Nasal septum (Nasal trauma, DNS, septal hematoma, septal abscess & septal perforation)	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Learning Outcomes: • Discuss DNS, its types, the clinical features, medical & surgical treatment of DNS • Discuss septal hematoma, septal abscess, septal perforation.				
4.	Nasal polyps FESS	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Learning Outcomes: • Should be able to define nasal polyp, its type , clinical presentation to treatment. • Understanding of functional endoscopic sinus surgery (FESS).				
5.	Acute & chronic rhinitis (hypertrophic rhinitis, atrophic rhinitis, Rhinitis sicca & rhinitis caseosa)	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Learning Outcomes: • Discuss Rhinitis, its classification, differential diagnosis, investigations and formulate management plans.				
6.	Vasomotor rhinitis Allergic rhinitis & other forms of non allergic rhinitis	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Learning Outcomes: • Identify vasomotor rhinitis & other forms of non allergic rhinitis • Explain the etiology of Allergic Rhinitis, its types and management.				
7	Choanal atresia Foreign body nose, Rhinsolith, maggots Nose CSF rhinorrhea	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Learning Outcomes:				

- Should know the importance of congenital conditions of the nose. Identify and diagnose common congenital malformations of the nose and their managements.
- Discuss foreign bodies, rhinolith and maggots along with their management.
- How to manage foreign bodies of nose
- Discuss CSF rhinorrhea and the predisposing factors, types, clinical features, investigations and treatment.

8	Granulomatous diseases of nose (TB, syphilis, leprosy, rhinoscleroma, lupus) Fungal infections of nose	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know

Learning Outcomes:

- Discuss various granulomatous disorders & fungal infections affecting the nose & the clinical features, investigations & treatment.

9	Epistaxis	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know

Learning Outcomes:

- Discuss Pathophysiology of epistaxis
- Enlist Local and systemic Causes of epistaxis
- Formulate Management plan for a patient with epistaxis

10	Angiofibroma Nasopharyngeal carcinoma	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know

Learning Outcomes:

- Understand the origin, pathophysiology, signs and symptoms of angiofibroma & nasopharyngeal carcinoma.
- Discuss the Investigations for reaching correct diagnosis
- Formulate Management plan.

11	Acute rhinosinusitis	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know

Learning Outcomes:

- Discuss acute sinusitis & the appropriate clinical, radiological investigations and steps involved in treatment of patients.

12	Chronic rhinosinusitis	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know

Learning Outcomes:

- Identify fungal sinusitis, discuss its significance, anticipate complications associated with it and chalk out early management plan.

13	Complications of sinusitis	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Learning Outcomes: • Enumerate the predisposing factors for development of complications due to sinusitis. • Discuss management plans.				
14	Benign & Malignant Neoplasms of paranasal sinuses	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Learning Outcomes: • Discuss various benign and malignant tumors affecting the nose and paranasal sinuses and their clinical features; step involved in diagnosis and treatment options.				
15.	Snoring & sleep apnea	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Learning Outcomes: • Pathophysiology of snoring & sleep apnea • Investigations for sleep apnea • Management of sleep apnea				

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
- Textbook of ear nose throat and head neck surgery clinical practical - p l hazarika
- Oxford Handbook of ENT and Head and Neck Surgery (Oxford Medical Handbooks)

Assessment formats:

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

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Pediatrics

Learning Outcomes

The students should be able to:

- Diagnose, investigate and plan management of common renal disorders.
- Recognize complications & preventive measures and discuss prognosis of pediatric renal disorders.
- Understand common congenital Genito-urinary abnormalities and brief treatment.
- Etiology, investigations & management plan of Juvenile Idiopathic Arthritis, SLE and also common bone infections in children
- Understand common Skin conditions in children and brief treatment.

Sr#	TOPIC	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
NEPHROLOGY				
1.	Nephrotic Syndrome	LGIS	Dr Tahir Mahmood	Must Know
Learning Outcomes: • Define and list differential diagnosis of edema. • Define and explain pathophysiology of Nephrotic syndrome. • Recognize clinical features, list investigations and outline management plan of Nephrotic syndrome • List complications and discuss prognosis of Nephrotic syndrome				
2.	Approach to a child with hematuria & Nephritic syndrome	LGIS	Prof. Sohail Ashraf	Must Know
Learning Outcomes: • Define and list differential diagnosis of hematuria in children. • Recognize clinical features, list investigations and outline management plan of hematuria in children • Define and list differential diagnosis of hematuria • Define and explain pathophysiology of AGN. • Recognize clinical features, list investigations and outline management plan of AGN. • List complications and discuss prognosis of AGN				
3.	Congenital & developmental anomalies of kidney	LGIS	Dr Faiqa Taj	Must Know
Learning Outcomes:				

• Describe normal embryological dev of kidney • Classification of congenital anomalies • Explain the pathogenesis & clinical relevance of common anomalies				
4.	Urinary tract infections & VUR	LGIS	Dr Qurat-ul-Ain	Should Know
Learning Outcomes: • Define UTI. • Discuss clinical features, investigations and complications of UTI • Outline management of UTI. • Describe pathophysiology, • clinical features and • investigations of VUR • Outline management & discuss prognosis of VUR.				
5.	Acute Kidney injury	LGIS	Dr Sobia Noor	Should Know
Learning Outcomes: • Etiology of acute kidney injury • Symptoms & diagnostic clues in history and examination • Plan of investigation • Management steps • Complications of AKI				
6.	Chronic Kidney Disease	LGIS	Dr Sundus Khan	Should Know
Learning Outcomes: • Etiology of chronic kidney disease • Symptoms & diagnostic clues in history and examination • Plan of investigation • Management steps • Complications of CKD				
BONE & JOINTS				
1	Juvenile idiopathic arthritis in children	LGIS	Dr. Saba Mushtaq	Must Know
Learning Outcomes: • Introduction to bone & joint deformities • Identify signs & symptoms involving joints & Bone • Introduction to JIA • List investigations and enumerate management steps • Interpret radiological findings and investigations of diseases Discuss prognosis.				
2	**SLE in children**	**LGIS**	**Dr. Saba Mushtaq**	**Should know**
Learning Outcomes: • Introduction to Rheumatological disorders in children • Introduction to SLE • Identification of clinical features				

- List investigations and enumerate management steps
- Interpret radiological findings and investigations of diseases Discuss prognosis.

3	**Bone infections in children**	**LGIS**	**Prof Sohail Ashraf**	**Should know**

Learning Outcomes:

- Introduction to bone infections in children
- Identification of clinical features
- List investigations and enumerate management steps

Interpret radiological findings and investigations of diseases Discuss prognosis.

GENITO-URINARY

1.	Congenital Genitourinary abnormalities	LGIS	Dr Tahir Mahmood	Should Know

Learning Outcomes:

- Introduction to genitourinary tract
- Pictorial presentation of common congenital genitourinary abnormalities
- List investigations and enumerate management steps
- Discuss prognosis.

SKIN

1	Common Skin Conditions in Children	LGIS	Dr Tahir Mahmood	Should Know

Learning Outcomes:

- Interpret common pediatric skin conditions
- Develop an understanding regarding their differentiation
- Know their course & management

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

Assessment formats:

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

Gynecology

Learning Outcomes:

1. Manage common obstetrics & gynecological illnesses of women with evidence-basedcare.
2. Assist in management of gynecological cases as a member of health care team.

Block Learning Outcomes:

1. Identify the clinical presentation, diagnosis and plan management of women with medical complications of pregnancy (chronic renal disease, autoimmune diseases SLE,APS, Epilepsy) and recognize limitations and escalate care to senior colleagues and other specialties when appropriate.
2. Make a management plan for patients with benign and malignant diseases of the uterus, cervix and ovary based on findings of history, examination & investigations.
3. Differentiate between different types and formulate a management plan for patientswith urinary incontinence.

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1.	**Renal diseases in pregnancy**	**LGIS**	**Dr. Sidra Khan**	**Should Know**
Learning Outcomes: ● Describe effects of pregnancy on chronic kidney disease ● Explain effects of chronic kidney disease on pregnancy ● Discuss pre-pregnancy counseling and management of women with CKD ● Review management of pregnant women with renal transplant ● Discuss causes and management of women with acute renal failure in pregnancy				
2.	**Benign conditions of uterus andcervix: cervical ectopy, Uterine fibroids and adenomyosis**	**LGIS**	**Dr. Shabana Kalsoom**	**Must Know**
Learning Outcomes: ● Describe the common benign conditions of the uterus and cervix. ● Identify the presenting symptoms and examination findings associated with uterinefibroids & adenomyosis. ● Appraise the principles of management of fibroid uterus & adenomyosis ● Describe the common tests used to evaluate the uterus & endometrial cavity				

3.	**Premalignant and malignant conditions of cervix**	**LGIS**	**Dr. Sara Mehsud**	**Must Know**
Learning Outcomes: ● Discuss the aetiology, pathophysiology, diagnosis and management of cervicalintraepithelial neoplasia (CIN) ● Suggest primary prevention of cervical cancer through human papilloma virus(HPV) vaccination & cervical screening ● Discuss the aetiology, diagnosis, International Federation of Gynaecology andObstetrics (FIGO) staging and management of malignant disease of cervix				
4.	**Benign ovarian tumours**	**LGIS**	**Dr. Irum Mushtaq**	**Must Know**
Learning Outcomes: ● Classify common benign tumours of ovary ● Discuss relevant investigations, role of tumour markers and follow up of ovariancyst ● Describe the clinical presentation and principles of management of benign disease ofovary				
5.	**Medical disorders in pregnancy:SLE, APS, Rheumatoid arthritis, Epilepsy**	**LGIS**	**Dr. Ruqaiya Azhar**	**Should Know**
Learning Outcomes: ● Counsel the women in pre-pregnancy period & adopt multidisciplinary approach toimprove pregnancy outcomes in women having any medical condition ● Appraise the effect of autoimmune disease on the mother and fetus in pregnancyand outline the management plan ● Describe antepartum, intrapartum and postpartum principles of management ofepilepsy in pregnancy ● Recognize the related drugs with safety profile and those which have teratogenic effects on the baby.				
6.	**Malignant ovarian tumours**	**LGIS**	**Dr. Maimoona Riaz**	**Should Know**
Learning Outcomes: ● Classify malignant ovarian tumors ● Enumerate risk factors which increase and decrease the risk of ovarian cancer ● Discuss the genetic factors, clinical presentation & relevant investigation ofmalignant disease of ovary ● Recall FIGO staging of ovarian cancer & survival by stage. ● Appraise the management (surgery & chemotherapy) of ovarian cancer				
7.	**Endometriosis and chronic**	**LGIS**	**Dr. Nazia Naz**	**Must Know**

	pelvic pain			
Learning Outcomes: ● List the gynaecological and non gynaecological causes of chronic pelvic pain ● Appreciate the multifactorial nature of CPP & potential management options ● Explain the pathology of endometriosis & its involvement in CPP and subfertility ● Discuss the diagnosis and treatment of endometriosis				
8.	**Benign and malignant conditions of endometrium**	**LGIS**	**Lt Col Zaib Un Nisa**	**must Know**
Learning Outcomes: ● Discuss the clinical presentation, diagnosis and management of endometrial polyp ● Describe the incidence & classification of Endometrial carcinoma ● Describe the presentation and investigations needed for women with suspectedendometrial cancer ● Discuss the FIGO staging of endometrial cancer & survival by stage. ● Appraise the principles of management (role of surgery, radiotherapy & palliativetreatment) of endometrial cancer				
9.	**Genital tract infections**	**LGIS**	**Dr. Nazia Naz**	**must Know**
Learning Outcomes: ● Outline important points in sexual history and importance of contact tracing. ● Summarize the methods of diagnosis of various types of vaginal discharge ● Select diagnostic tests for STI ● List name of organism causing STI. ● Recognize the presentation of acute PID. ● Name causative the organism of PID ● Explain sequel of PID				
10.	**Genetic Counselling (Lecture 1)**	**LGIS**	**Dr. Sadia Ijaz**	**Good to Know**
Learning Outcomes: ● Enlist disease that needs genetic counseling. ● To recognize the importance of pre-conception clinic. ● To explain mod of inheritance of different inherited disorder.				
11.	**Genetic Counselling (Lecture 1)**	**LGIS**	**Dr. Ayesha Irfan**	**Good to Know**
Learning Outcomes: ● Outline the basic steps in diagnosing genetic disorders. ● To choose the investigation for diagnosing certain disorders. ● To select proper place for refreshing the couple for proper counseling and management.				

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 :**

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4. **Assessment formats**:

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

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 Nephrology, Rheumatology, Dermatology and Psychiatry disorders (SLO1,3, 5,6).
- Recognize complications & advise preventive 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)
	Nephrology			
1.	Nephrotic Syndrome – Clinical Presentation, Differential Diagnosis and Management	LGIS	Dr. Mobeena	MUST KNOW
Learning Outcomes: • Diagnose the patient on the basis of history and examination • Differentiate nephrotic from nephritic syndrome • Determine the cause of nephrotic syndrome • Advise relevant investigations • Devise management plan				
2.	Nephritic Syndrome - Clinical Presentation, Differential Diagnosis and Management)	LGIS	Dr. Ali Riaz	MUST KNOW
Learning Outcomes: • Diagnose the patient on the basis of history and examination • Differentiate nephrotic from nephritic syndrome • Determine the cause of Nephritic syndrome • Advise relevant investigations • Devise management plan				
3.	UTI and Pyelonephritis	LGIS	Dr. Ali Riaz	MUST KNOW
Learning Outcomes: • Diagnose the patient on the basis of history and examination				

- Differentiate lower urinary tract infection from Pyelonephritis
- Narrate causes of Sterile pyuria
- Advise relevant investigations
- Devise management plan
- Learn to choose appropriate antibiotic and duration
- Propose preventive measures

4.	Acute Kidney Injury and its management	LGIS	Dr. Mobeena	MUST KNOW

Learning Outcomes:

- Diagnose the patient on the basis of history and examination
- Determine the cause of AKI
- List common nephrotoxic medications
- Differentiate between pre-renal and renal causes of AKI
- Advise relevant investigations
- Devise management plan
- Propose preventive measures
- Treat complications of AKI
- Counsel the patient with renal failure

5.	Metabolic Acidosis: Renal Tubular Acidosis.	LGIS	Dr. Mobeena	MUST KNOW

Learning Outcomes:

- Learn approach to patient with metabolic acidosis
- Differentiate between high anion gap and normal anion gap metabolic acidosis
- Identify different types of renal tubular acidosis
- List causes of renal tubular acidosis
- Advise relevant investigations
- Devise management plan

6.	Cystic Diseases of the Kidney	LGIS	Dr. Khalil Ur Rehman	Should Know

Learning Outcomes:

- Diagnose the patient on the basis of history and examination
- List different cystic diseases of the kidney
- Diagnose Autosomal dominant polycystic kidney disease (ADPKD)
- Manage complications of ADPKD
- Advise relevant investigations
- Devise management plan
- Counsel the patient
- Advise family screening if needed

7.	Tubulointerstitial Diseases	LGIS	Dr. Khalil Ur Rehman	SHOULD KNOW

Learning Outcomes:

- Diagnose the patient on the basis of history and examination
- Differentiate tubular disorders from glomerular disorders

- Determine the cause
- List nephrotoxic medications
- Advise relevant investigations
- Devise management plan

8.	Calcium Metabolism and Parathyroid related problems	LGIS	Dr. Ali Riaz	Should Know

Learning Outcomes:

- Diagnose the patient on the basis of history and examination
- Determine the cause
- Advise relevant investigations
- Devise management plan

12.	Chronic Kidney Disease and Management	LGIS	Dr. Khalil Ur Rehman	Must Know

Learning Outcomes:

- Diagnose the patient on the basis of history and examination
- Determine the cause of CKD
- Learn staging of CKD
- List common nephrotoxic medications
- Advise relevant investigations
- Devise management plan
- Propose preventive measures
- Treat complications of CKD
- Counsel the patient with renal failure

13.	Fluid and Electrolyte balance disorders	LGIS	Dr. Ali Riaz	Must Know

Learning Outcomes:

- Learn approach to patient with hyponatremia, hypokalemia, hyperkalemia and hypernatremia
- Determine the cause on the basis of integrated clinical findings
- List common drugs causing sodium disturbances
- Advise relevant investigations
- Devise management plan

14.	Renal replacement therapy: Dialysis and Renal Transplant	LGIS	Dr. Khalil Ur Rehman	Should Know

Learning Outcomes:

- List indications for dialysis and transplant
- Differentiate between different types of dialysis
- Enumerate steps of dialysis and its preparation
- Manage common complications during dialysis
- Enumerate pre-requisites of renal transplant

15	Renal Artery Stenosis	LGIS	Dr. Ali Riaz	Must Know
Learning Outcomes: • Identify patient with uncontrolled/resistant hypertension • Advise relevant investigations • Devise management plan				
Rheumatology				
1.	**Rheumatoid Arthritis**	LGIS	Dr. Asim Ali Shah	Should Know
Learning Outcomes: • Discuss etiology, Symptoms and signs of the disease • Diagnose the patient on the basis of presenting complaints and clinical examination • Interpret relevant Investigations and laboratory findings. • Recognize complications and their management options				
2.	**Ostemalaicia , Rickets &Osteoportsis**	LGIS	Dr. Rubaba	Should Know
Learning Outcomes: • Correlate Pathophysiological basis of various etiological factors to clinical manifestations of Ostemalaicia , Rickets &Osteoportsis disorder. • Devise plan for diagnosis and clinical management of each of above disorder.				
3.	**SLE**	LGIS	Dr. Kanwal	Should Know
Learning Outcomes: • Define diagnostic criteria SLE • Suggest therapeutic options and investigations after establishing diagnosis based on etiology, clinical • Presentation And investigations & Manage complications.				
4.	**Osteoarthritis**	LGIS	Dr. Marzia	Should Know
Learning Outcomes: • Diagnose the patient on the basis of presenting complaints and clinical examination • Determine causes of osteoarthritis Established through Investigations and laboratory findings. • Manage complications of the disease				
5.	**Scleroderma& MCTD**	LGIS	Dr. Asim Ali Shah	Should Know
Learning Outcomes: • Suggest therapeutic options and investigations after establishing diagnosis based on etiology, clinical • Presentation and investigations				
Psychiatry				
1.	Stress Disorders	LGIS	Dr. Faheem Qasim	Must Know
Learning Outcomes:				

• Classify Stress Disorders • Discuss the Management of Stress Disorders				
2.	Substance use Disorders	LGIS	Dr. Fatima Amir	Must Know
Learning Outcomes: • Elaborate the different groups of drugs of abuse and misuse • Suggest the laboratory investigations needed for Management • Evaluate the prognosis of substance abuse.				
3.	Schizophrenia	LGIS	Dr. Faheem Qasim	Should Know
Learning Outcomes: • Diagnose Schizophrenia based on signs and symptoms. • Devise a plan for treatment of disease, side effects of the treatment and its withdrawal. • Assess prognosis of the disease.				
4.	Suicide & Deliberate Self Harm	LGIS	Dr. Fatima Amir	Must Know
Learning Outcomes: • Diagnose mood Disorder on thebasis of etiology . • Identify Suicide& Deliberate Self Harm • Discuss its Management and prognosis				
Dermatology				
1	Sebrrohoeic and Contact dermatitis	LGIS	Prof. Dr. Naveed Akhtar	Must Know
Learning Outcomes: • Classify Dermatitis • Apply diagnostic criteria to clinical assessment of Sebrrohoeic and Contact Dermatitis • Develop management plan of Sebrrohoeic and Contact Dermatitis				
2	Atopic Dermatitis	LGIS	Dr. Maham Amin	Must Know
Learning Outcomes: • Classify Dermatitis • Apply diagnostic criteria to clinical assessment of Atopic Dermatitis • Develop management plan of Atopic Dermatitis				
3	Bullous Disorders	LGIS	Prof. Dr. Naveed Akhtar	Must Know
Learning Outcomes: • Classify Bullous Disorders • Apply diagnostic criteria to clinical assessment of Bullous Disorders • Develop management plan of Bullous Disorders				

4	Sexually Transmitted diseases	LGIS	Dr. Maham Amin	Should Know
Learning Outcomes: • Make clinical diagnosis by assessing symptoms. • list necessary investigations • Discuss management of the condition.				
Emergency Medicine				
1.	Electrocution	LGIS	Dr. Huma Hussain	MUST KNOW
Learning Outcomes: • Correlate pathophysiological basis of various etiological factorstoclinical manifestations of Electrocution • Devise plan for diagnosis& management of Electrocution				
2.	Drowning	LGIS	Dr. Tazeen Hina	MUST KNOW
Learning Outcomes: • Correlate pathophysiological basis of various etiological factorstoclinical manifestations of Drowning • Devise plan for diagnosis& management of Drowning				
3.	General approach to a patient with poisoning	LGIS	Dr. Huma Hussain	MUST KNOW
Learning Outcomes: • Devise plan for diagnosis& management of poisoning • Discuss the pharmacological effects of Paractamol. • Diagnose paracetamol poisoning on the basis of clinical presentation • Apply the concepts of mode of reversal to the dosage and route of reversal medication • Enumerate the complication				
4.	Envenomation – Snake Bite	LGIS	Dr. Tazeen Hina	SHOULD KNOW
Learning Outcomes: • Classify Snake bite, based on animal and time duration and type of wound. • List the immediate management and long term management • Discuss the antivenom type and dosing and the criteria of administering antivenom • • Enumerate the various complications				

Learning Resources:

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

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

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Dr. Marzia Sheharbano	Senior Registrar

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

Learning Outcomes:

At the end of this block students will be able to.

- Describe the common surgery related cardiovascular diseases and their presentations and outline the basics of their management. (SLO 1,2,3,4)
- Describe the common gastrointestinal pathologies and rationalize appropriate management plans. (SLO 1,3,4)
- Describe urological ailments and their clinical presentation/management.
- Diagnose the common and outline the management upper/ lower limb fractures (SLO 2,3,4,5)
- Describe principles and types of anesthesia.

(Detail of skill related outcomes can be found in surgery Logbooks))

S#	Topic	Educational Strategies	Names of Instructor	Importance (Must Know Should Know Could Know)
General Surgery				
1.	Breast I & II	LGIS	Prof. Dr. Naeem Ashraf	Must Know
Learning outcomes: ● Classify Benign Breast Disease ● Diagnose Benign breast disease based on history and clinical presentation ● Enumerate the Diagnostic investigations of Benign Breast Diseases ● Design management plan for Benign Breast Disease and its complication ● Suggest management plan for Ca breast and its complications applying basic concepts of anatomy and lymphatic drainage of the area. ● Diagnose Ca Breast based on signs and symptoms and investigations				
2.	Skin / subcutaneous tissue surgical pathologies	LGIS	Assoc. Prof. Dr. Naeem Akhtar	Must Know
Learning outcomes: ● Describe the principle of Skin and Subcutaneous swelling and it management.				
3.	Burn I & II	LGIS	Asstt. Prof. Dr. Munawer Latif	Should Know
Learning outcomes: ● Describe the principle of Burn and its management				
4.	Surgery anastmosis/ sutures	LGIS	Prof. Brig Dr. Muhammad Parvez	Should Know
Learning outcomes: ● Describe the surgery anastomosis and suturing technique.				
5.	Principles of Oncology surgery risk factors	LGIS	Assoc. Prof. Dr. Muhammad Azhr	Nice to Know

Learning outcomes: ● Describe the principles of oncology surgery and its risk factors, investigation and its management.				
6.	Radiotherapy/ Chemotherapy	LGIS	Prof. Dr. Naeem Ashraf	Nice to Know
Learning outcomes: ● Describe the radiotherapy and chemothetapy.				
7.	Hernia I & II	LGIS	Assoc. Prof. Dr. Naeem Akhtar	Should Know
Learning outcomes: ● Describe the type of inguinal scrotal hernia and its management.				
Orthopedics				
8.	Spine fracture and dislocations	LGIS	Dr. Muhamamd Ikram	Nice to Know
Learning outcomes: ● Describe the spine fracture and dislocations and its management.				
9.	Paralytic disorders (Polio, Cevebral, Palsy, Spina bifida)	LGIS	Dr. Muhammad Ikram	Nice to Know
Learning outcomes: ● Describe the type paralytic disorders (Cevebral, Polio, Palsy , Pina bifida) and its management.				
10	Tumours of Musculoskeletal System	LGIS	Dr. Muhamamd Ikram	Nice to Know
Learning outcomes: ● Describe the tumours of musculoskeletal system and its management.				
11	Arthritis, Arthrodesis, Arthoplasty	LGIS	Dr. Sajid Ejaz Rao	Should Know
Learning outcomes: ● Describe Arthiritis, arthodesis, and arthoplasty				
12	Acute +Chronic Infection of bones and joints		Dr. Sajid Ejaz Rao	Should Know
Learning outcomes: ● Describe the Acute/Chronic infection of bones and joints and its management.				
Urology				
13	Acute+ Chronic infections of urinary tract	LGIS	Dr. Abdullah	Should Know
14	Kidneys + Ureters Pathologies			
15	Urinary bladder			
16	Incontinance, Urinary diversion & Urodynamics			
17	Prostate + seminal vesicles			
Learning outcomes:				

- Identify basis for diagnosing hematuria.
- Recognize those pigments that may discolor the urine, mimicking hematuria.
- Give a differential diagnosis for hematuria originating in the different anatomical parts of the urinary tract.
- justify the significance of the information gathered from the palpation of the prostate rectally.
- List the radiological investigations available for the assessment of the urinary tract
- Manage the patient with visible and non-visible hematuria.
- Differentiate between obstruction at different levels of the urinary tract based on history, Clinical features and diagnostic modalities
- Discuss the presenting features, signs and symptoms of urological emergencies
- Generate a prioritized differential of the most important and likely causes of a patient's emergency
- Study the classification of urological emergencies based on etiology
- Discuss the appropriate investigations leading to a definite diagnosis
- Devise a management plan according to clinical presentation
- Review the epidemiology and causes
- List the risk factors for carcinoma of

18	Urethra & penis	LGIS	Dr. Abdullah	Should Know
19	Testes + Scrotum			
20	Urolithiasis			
21	Urogenital system trauma			

Learning outcomes:

- Outline the initial diagnostic workup for patients suspected of having carcinoma of urinary system
- Discuss the grading and staging of carcinoma of urinary tract
- Plan the general management and pre-operative workup of patient
- Suggest the potential options for treatment of carcinoma of urinary tract
- Implement effective treatment options for advanced and metastatic basal cell carcinoma (BCC) based on efficacy data and current guidelines.

Anesthesia

22	Pre anaesthesia assessment	LGIS	Prof. Brig (R) Dr. Imran Ul Haq	Should Know

Learning outcomes:

- Describe the pre anaesthesia and its management.

23	Regional anaestheisa/ nerve block	LGIS	Prof. Brig (R) Dr. Imran Ul Haq	Nice to Know

Learning outcomes:

- Describe the regional Anaesthesia/ nerve block and its management.

24. Disaster surgery, triage damage control surgery

Learning outcomes:

- Understand the principles of disaster management and their application in surgical settings.
- Be able to apply the triage system to prioritize patients based on the severity of their injuries and the resources available.
- Be aware of complications associated with damage control surgery and the role of postoperative intensive care.
- Apply knowledge of trauma management protocols to ensure appropriate early intervention in patients with multiple injuries.

25.ICU & Essential monitoring, ventilator care

Learning Outcomes:

- Define the ICU (Intensive Care Unit) and its role in managing critically ill patients.
- Understand the difference between general wards and the ICU, including the intensity and type of monitoring available.
- Understand the indications for mechanical ventilation, including acute respiratory failure, respiratory distress, and hypoxemia/hypercapnia.

Radiology

26	Imaging of GIT	LGIS	Dr. Nadia Gull	Should Know
27	Imaging of Musculoskeletal			
28	Imaging of Urinary system			

Learning outcomes:

- Differentiate between different types of chest injuries based on mechanism of pathophysiology findings, and management.
- Demonstrate knowledge, clinical and technical skills and decision-making capabilities with respect to diagnostic imaging pertinent to the practice of General Surgery
- State the basic principles of radiation protection and law in relation to use of ionizing radiation
- Justify use of relevant imaging techniques invarious clinical scenarios reference to advantages and disadvantages.

Learning Resources:

1. Principles of Management of urology diseases.
2. Principles of Management of Surgical Disease & Breast Pathologies
3. Principles of Management of orthopeadics Trauma and Pathologies
4. Principles & type of Aneasthesia

1. Reference Books

- Bailey & Loves, Norman brows, clinical method , Essential Orthopaedics (including Clinical method & Anesthesia for medical students

2. Online Resources

- Zoom / g classroom/ E-books

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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.

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

ii. 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

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 11:30-11:15	Comm.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		Comm.med	SGD
				Lect #4		Lect #4		Lect #4		Mentorr	Lect #4
Wednesday 25-01-2023			Comm.med	Flipped Class Room	EMT	LGIS	Surgery	LGIS		Pathology	SGD
				Lect #4		Lect #4		Lec #4			Lect #4
Thursday 26-01-2023			Pathology	LGIS	Comm.med (12:05 - [illegible])	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	8:00-8:45		8:45-09:30		9:30-10:15		10:15-11:05		Break 11:05-11:20	11:20-12:10		12:10-1:00		Jumma Break 1:00-1:30	1:30-2:15	2:15-3:0	1:30-3:00	
	Medicine	LGIS	Surgery	LGIS	Surgery	LGIS	Gynae-Obs			Comm.med	LGIS	Pathology	LGIS		Comm.med	SGD (A,B,C, D)	Pathology (Practical) (E, F, G, H)	
		ect 8		Lect #4		Lect #4		Lect #4			Lect #4		Lect #4			Lect#5		Lect #4

Professor
Dr. S. Sabah Imran
th year / In charge T4B1

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