WAH MEDICAL COLLEGE

2023-2027

Department of Medical Education

STUDY GUIDE
4th YEAR MBBS
Y4BXII

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-critic1.al 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.

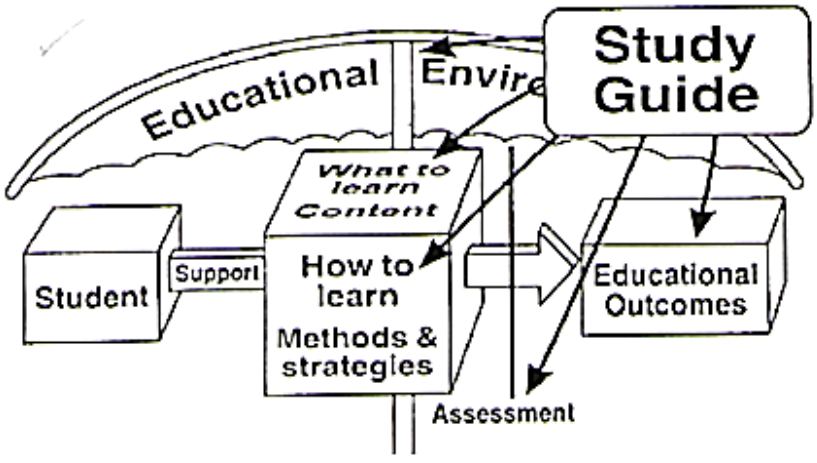


Figure 1.
Objectives of the study Guide**(HARDEN, J.M. LAIDLAW, E.A. HESKETH, 1999)**

II. Commonly used abbreviations & Logos in the study guide

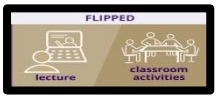
Learning Outcomes:

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.

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: Bed Side Teaching	
Skill Lab	
Clinical Teaching (OPD/ OT/ IPD	

Large Group Interactive Sessions

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

Flipped classroom

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

Small Group Discussion

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

Case-Based Learning

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

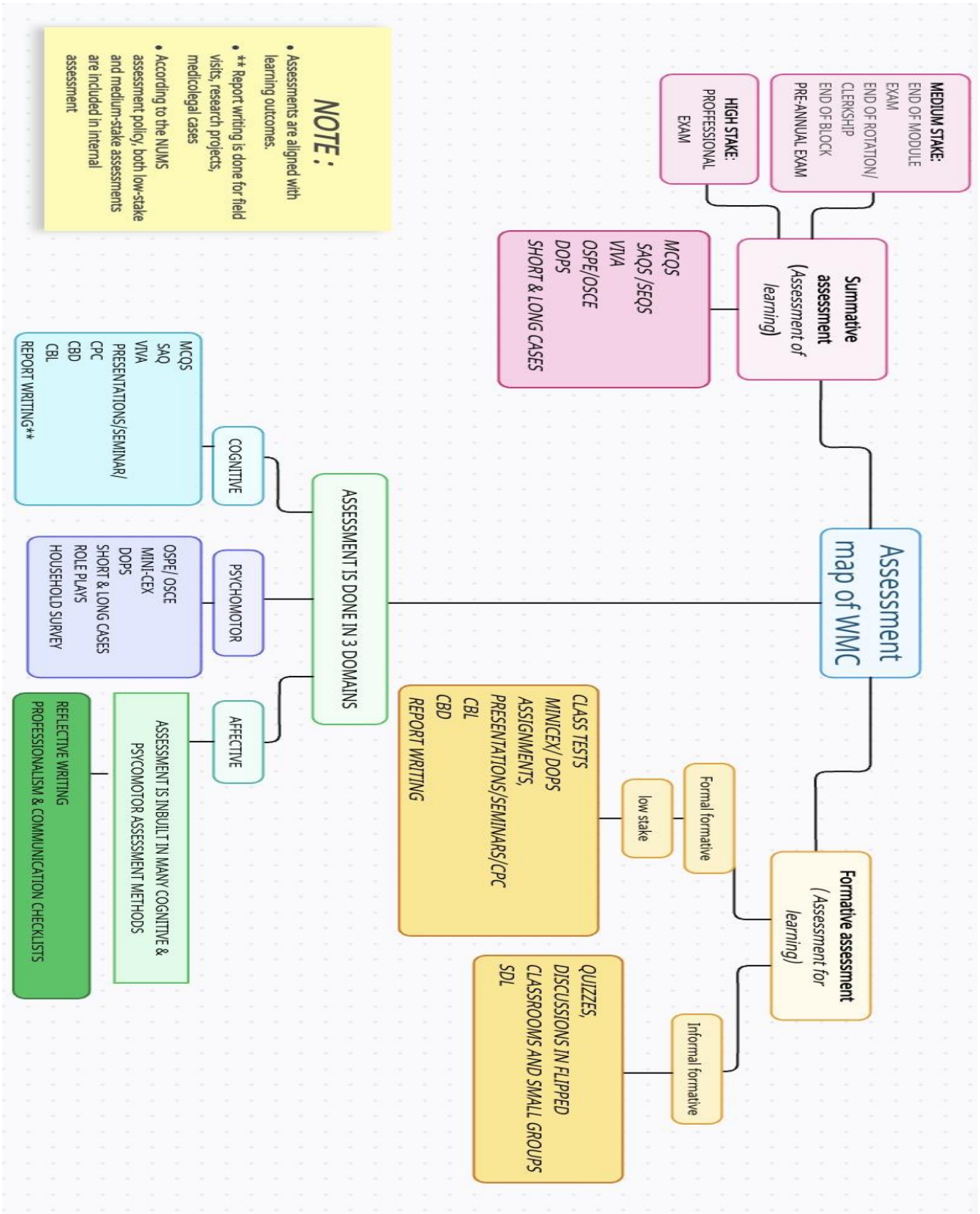
Self-Directed Study

Students assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from 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. Students must pass at least 50% of all the formal formative assessments conducted during the year to become eligible to sit in the send-up exam. 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.

1. Scheme of Assessment:

SPECIAL PATHOLOGY, COMMUNITY MEDICINE
Marks of theory paper = 120
Time Allowed = 3 hours
Total Marks = 150
MCQs: 40% (150 x 0.4=60 marks)
SEQs: 40% (150 x 0.4= 60 Marks)
IA: 20% (150 x 0.2=30 Marks)
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 in 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 in 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	
INTERNAL ASSESSMENT WEIGHTING: 20%	
Exams	**Weightings**
Attendance in Lectures: a. ≥90% = 10% b. 80-89% = 7% c. 75-79% = 5%	10%
End of Block/ clinical rotation (theory) Examination	45%
Continuous assessment (average score of all tests attempted after every learning session during the academic year)	20%
Pre-Annual Exam	25%
Total	**100%**
INTERNAL ASSESSMENT STRUCTURE - PRACTICAL	
INTERNAL ASSESSMENT WEIGHTING: 20%	
Exams	**Weightings**
Attendance in Practicals: a. ≥90% = 10% b. 80-89% = 7% c. 75-79% = 5%	10%
*End of Block/ clinical rotation (OSCE) Examination	45%
*Continuous assessment of practical/ clinical skills and attitude	20%
Pre-Annual Exam	25%
Total	**100%**

Curriculum Year IV (2023)

4. Block Development Committee

Chairperson	**Col (R)Prof. Asad Chughtai**
Block In charge	**Col (R)Prof. Asad Chughtai**
Members/ Resource persons	**Community Medicine : Dr. Khola Waheed Khan** **Pathology : Dr. Lubna Ehtizaz** **ENT : Col (R)Prof. Asad Chughtai** **Ophthalmology : Dr. Mariyam Shafi** **Medicine : Dr. Sohaib Ahmed** **Surgery : Prof. M. Naeem Ashraf** **Gynecology : Dr. Khair un-Nisa** **Pediatrics : Dr. Tahir Mahmood** **Patient Safety : Year Coordinator**
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 Mansoor**

5. Structured Summary of Y4BXII

Block	Y4B3
Duration	**10 weeks**
Prerequisite Block	**Y4BXI**
Special Pathology	• Endocrine System/ Short stature, Central & Peripheral Nervous System, White blood cells, Red blood cells and bleeding disorders
Community Medicine	• Primary Health Care, MCH (Reproductive Health, Preventive Pediatrics, Geriatrics), Health Education, Health management, Travel Medicine, Injuries and Accidents, Disaster Management, Sewage Treatment, Health Management Information System, Leadership, Medical Ethics, Social Sciences
ENT	• Oropharynx, larynx, tracheostomy, esophagus
Ophthalmology	• Retinal diseases, strabismus, amblyopia, ocular injuries, • neuro-ophthalmic conditions
Obstetrics & 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
Surgery	• Neurosurgery, vascular surgery, Surgical Gastrointestinal Pathologies, Aneasthesia, Radiological Diagnosis.
Medicine	• Common Acute and chronic infections, Pituitary / CNS Disorders, Introduction to Diabetes, Hematological disorders. Dermatology and Psychiatry disorders, Management of critically ill patients in the A & E department
Pediatrics	• ENDO, BLOOD, CNS

6. Course content

Community Medicine

After completion of Community Medicine 3rd block the students would be able to:

- Formulate relevant health message and educate community effectively
- Recognize reproductive, child related, occupational health and other health related issues at household and communities' levels and recommend appropriate interventions to control them.
- Explain epidemiology of non-communicable diseases in the global and local context and apply knowledge for control and prevention of diseases.
- Recommend appropriate interventions for control and prevention of common social health issues at house hold and community level
- Identify ethical issues and malpractices related to health care delivery

Learning outcomes of skills and attitude

- Demonstrate computing and soft skills
- Write a comprehensive report on assigned tasks.
- Demonstrate professional behavior in all learning activities.

The following educational and Assessment strategies will be used to achieve the block learning outcomes

S#	Topic	Educational Strategies	Names of Instructor	Importance Must Know Should know Could know
1.	**Health planning and Policy**	**Flipped Classroom**	**Prof. S. Sabah Imran**	**Must know**
Learning Outcomes: • Explain Planning cycle and types of plans. • Differentiate between goal, target and objectives • Describe the context and salient features of national health policy • Appraise the efficiency of a health system/health outlet				
2.	**Reproductive Health**	**Flipped Classroom**	**Prof. Musarat Ramzan**	**Must know**
Learning Outcomes: • Interpret risk associated with pregnancy, causes of maternal mortality and relevant indicators of Reproductive Health in the given scenario • Describe components of RH, safe motherhood and post-natal care. • Calculate Maternal Mortality Rate and Ratio in the given scenarios • Recommend relevant actions in the given RH scenarios • Educate women regarding antenatal care in the given scenario				

3.	**Preventive Pediatrics and Geriatrics**	**Flipped Classroom**	**Dr. Khola Waheed**	**Must know**
Learning Outcomes: ● Justify the role of screening during pregnancy and in infants ● Interpret growth pattern by plotting given information on the growth chart ● Educate the mothers about benefits of breastfeeding and weaning ● Recommend relevant preventive measures to control infant and children mortality. ● Manage common health issues of infants and children. ● Suggest measures catering to the geriatric problems. ● Prepare ORS according to the protocol				
4.	**Health Education**	**Flipped Classroom**	**Prof. S. Sabah Imran**	**Must know**
Learning Outcomes: ● Identify communication process, its barriers, stages, best methods and approaches of health education ● Explain functions, models, scope of health education; planning of health education program and reasons of failure of the program. ● Construct health education message ● Implement principles of health education for running health education program ● Demonstrate professionalism to educate community effectively.				
5.	**Travel Medicine**	**Flipped Classroom**	**Prof. S. Sabah Imran**	**Must know**
Learning Outcomes: ● Identify factors that determine the risk among travelers ● Interpret the common health problems of travelers ● Advise the travelers to prevent the travel related problems				
6.	**Disaster Management**	**Flipped Classroom**	**Dr. Robina Mushtaq**	**Must know**
Learning Outcomes: ● Categorize different types of disasters ● Outline management plan of Disaster in the given situation ● Apply National Disaster Management and Preparedness guidelines on the given scenarios				
7.	**Medical Ethics**	**SDL**	**Dr. Khola Waheed**	**Must know**
Learning Outcomes: ● Demonstrate professional behavior in all learning activities				

	Occupational Health	**Flipped Classroom**	**Dr. Sadia Nadeem**	**Must know**
Learning Outcomes: • Identify occupational diseases on the basis of clinical and laboratory findings. • Suggest preventive measures for Occupational Diseases. • Educate industrial workers and owners about prevention of occupational diseases				
	Social Sciences	**LGIS**	**Dr. Aimen** **Dr. Nabil** **Dr. Areeba**	**Need to Know**
Learning Outcomes: • Relate social etiology with individual and public health. • Appreciate the role of interprofessional relationships in a hospital to form a social organization. • Apply the bio-psycho-social model on disease etiology and its prevention. • Recognize warning signs of poor mental health. • Recommend preventive measures against mental health problems according to the given scenario • List WHO criteria and Recommendations to improve mental health in countries • Relate factors and hazards associated with drug abuse and smoking • Differentiate the symptoms of different drug-related addictions • Recommend measures to control drug abuse and smoking in Pakistan. • Educate individuals to quit Substance abuse.				

Clerkship Module

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
Week 1: Epidemiology and Biostatistics				
1.	**Microsoft word**	**Hands on training**	**Dr. Saleh Dr. Ahmed Mughal**	**Must Know**
Learning Outcomes: • Perform assign commands on Microsoft Word.				
2.	**Mendeley**	**Hands on training**	**Dr. Saleh Dr. Ahmed Mughal**	**Must Know**
Learning Outcomes: • Apply Mendeley software for referencing				
3.	**SPSS**	**Hands on training**	**Dr. Saleh Dr. Ahmed Mughal Mr. Asad Elahi**	**Must Know**
Learning Outcomes: • Analyze provided or collected data using SPSS.				
4.	**Press Cutting**	**SGD**	**Batch In charge Co In charge**	**Must Know**
5.	**HMIS**	**Field Visit**	**Dr. Khola Dr. Qandeel Dr. Aimen**	**Should Know**
6.	**Measures of Morbidity and mortality**	**SGD**		**Must Know**
Learning Outcomes: • Calculate various measures of morbidity, mortality and association.				
7.	**Emerging and reemerging Diseases**	**SDL**	**Dr. Sabah Dr. Aimen**	**Must Know**
8.	**Investigation of Epidemic**	**Workshop**	**Dr Saleh Dr Qandeel**	**Must Know**
Learning Outcomes: • Rationalize steps taken to investigate an epidemic.				
Week 2: Maternal, Neonatal Child Health and Family planning				

9.	**Sustainable Development Goals**	**SDL**	**Dr. Khola Dr. Aimen**	**Must Know**
10.	**MNCH/WGH/BHU**	**Field visit**	**Dr. Sadia Dr. Qandeel**	**Must Know**
11.	**Family planning**	**SGD**	**Dr. Sadia**	**Must Know**
Learning Outcomes: • Recommend contraceptive methods according to the given situation. • Calculate failure rate of contraceptive methods (Pearl's Index).				
12.	**Family planning center**	**Field visit**	**Dr. Qandeel Dr. Aimen**	**Must Know**
13.	**National Programs of Pakistan**	**SDL**	**Dr. Khola Dr. Ahmed**	**Must Know**
14.	**Counseling skills**	**Skills**	**Dr. Qandeel, Dr. Aimen, Dr. Ahmed**	**Must Know**
Learning Outcomes: Demonstrate the ability to educate the: • Mother for dietary management of PEM, breast feeding, weaning, preparation and administration of ORS (homemade / packet). • Women regarding antenatal and postnatal care in the given scenario • Advise mothers for vaccination in different situations				
15.	**EPI**	**Hands on training**	**Dr. Saleh Dr. Aimen Dr. Ahmed**	**Must Know**
Learning Outcomes: • Identify the given vaccine & the compartment of Refrigerator for its storage. • Administer Polio vaccine following the protocol. • Demonstrate the site administration of vaccine, recapping & cutting technique of syringe. • Recognize efficacy of a vaccine on basis of the Vaccine Vial Monitor				
16.	**EPI Center**	**Field visit**	**Dr. Saleh Dr. Aimen Dr. Ahmed**	**Must Know**
17.	**Press cutting**	**SGD**	**Batch In charge Co In charge**	**Must Know**
Week 3: Communicable disease school health and Hospital waste management				
18.	**School Health Services**	**SGD**	**Dr. Saleh Dr. Ahmed Dr. Qandeel**	**Must Know**
Learning Outcomes:				

• Describe components of School Health, responsibilities of the school Health team members and functions of School Health program • Assist in training of members of school health teams regarding control of common school health problems. • Assist in various screening programs among school children.				
19.	**Visit to School**	**Field visit**	**Dr. Qandeel** **Dr. Ahmed**	**Must Know**
20.	**Press cutting**	**SGD**		**Must Know**
21.	**Communicable diseases**	**CBL**	**Dr. Qandeel** **Dr. Aimen**	**Must Know**
Learning Outcomes: • Compare and contrast the gastrointestinal diseases, mode of transmission, spectrum, clinical presentations and investigations of gastrointestinal diseases. • Recommend strategies for control of gastrointestinal diseases.				
22.	**Hospital Waste management**	**SDL**	**Dr. Khola**	**Must Know**
23.	**Visit to Incinerator**	**Field visit**	**Dr. Aimen** **Dr. Ahmed**	**Must Know**
24.	**Rural urban health**	**SDL**	**Dr. Saleh**	**Should Know**
25.	**Zoonotic diseases**	**SGD**	**Dr Fatima**	**Must Know**
Learning Outcomes: • 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.				
26.	**International health agencies**	**SDL**	**Dr. Saleh**	**Should Know**
Week 4: Non-communicable diseases and nutrition				
27.	**Genetics**	**SDL**	**Dr. Aimen**	**Should Know**
28.	**Non communicable diseases**	**Seminar by students**	**Dr. Robina** **Dr Ahmed** **Dr Aimen**	**Must Know**
Learning Outcomes: • Identify epidemiological determinants of common non-communicable diseases • Suggest preventive measures for these diseases in at-risk individuals and populations				
29.	**Dental health**	**SDL**	**Dr. Ahmed**	**Must Know -**

30.	**Non-communicable diseases**	**Communication Skills**	**Dr. Qandeel Dr. Aimen Dr. Ahmed**	**Must Know**
Learning Outcomes: • Demonstrate the ability to educate the: • Individuals about prevention of hypertension, diabetes, obesity, cancer, snake bite, accidents • 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				
31.	**Press cutting**	**SGD**	**Batch In charge Co In charge**	**Must Know**
32.	**Personal Hygiene and unsafe Injection**	**SDL**	**Dr. Saleh**	**Must Know**
33.	**Hand washing**	**Hands on training**	**Dr. Qandeel Dr. Aimen Dr. Ahmed**	**Must Know**
Learning Outcomes: • Demonstrate steps of hand washing				
34.	**Visit to Double Dispensary for BMI, Anemia, Dehydration, MUAC and Growth monitoring**	**Hands on training**	**All Lecturers**	**Must Know**
Learning Outcomes: • 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 • Categorize the calculated BMI following the given protocol. • Assess the nutritional status of a child using Shakers Tape				
Week 5: Occupational health and Environment				
35.	**Press cutting**	**SGD**	**Batch In charge Co in charge**	**Must Know**

36.	**Occupational health**	**CBL**	**Dr. Sadia Dr. Qandeel Dr. Aimen**	**Should Know**
Learning Outcomes: • Relate type of pneumoconiosis with the trade of patients • Identify the clinical condition and its agent on the basis of occupational history, clinical examination and laboratory investigations. • Identify the special radiological features of patients having pneumoconiosis. • Suggest preventive and control measures for workers of various trades				
37.	**Air and ventilation**	**SDL**	**Dr. Saleh Dr. Ahmed**	**Must Know**
38.	**Occupational health (factory)**	**Field visit**	**Dr. Saleh Dr. Ahmed**	**Should Know**
39.	**Water**	**SDL**	**Dr. Robina Dr. Qandeel**	**Must Know**
40.	**Water treatment plant and sewage treatment plant**	**Field visit**	**Dr. Sadia Dr. Ahmed**	**Must Know**
41.	**Temperature pressure and noise**	**SDL**	**Dr. Saleh**	**Must Know**
42.	**Housing and radiation**	**SDL**	**Dr. Robina Dr. Ahmed**	**Must Know**
43.	**Reflection**	**Reflective writing**	**Dr. Saleh**	**Must Know**
Learning Outcomes: Reflective writing activity will enable the students to: • Make connection of theoretical knowledge with practical experience • Critically evaluate their learning experience • Become reflective Practitioner in future • Be self-assessor and lifelong learner • Demonstrate their writing skills				

Research

S.#	Topic	Educational Strategies	Name of Instructor	Importance (Must Know Should Know Could Know)
1.	**Statistical data analysis SPSS**	**SGD**	**Batch In charges**	**Must know**
Learning Outcomes: ● Enter data in SPSS software ● Formulate charts and graphs				
2.	**Result writing**	**SGD**	**Batch In charges**	**Must know**
Learning Outcomes: ● Interpret results of the study				
3.	**Discussion**	**SGD**	**Batch In charges**	**Must know**
Learning Outcomes: ● Discuss results of their project by making comparison with the searched literature				
4.	**Conclusion & Recommendations**	**SGD**	**Batch In charges**	**Must know**
Learning Outcomes: ● Summarize results of the study ● Write recommendations on the basis of results				
5.	**Reference writing**	**SGD**	**Batch In charges**	**Must know**
Learning Outcomes: ● Make a list of references according to the recommended style				
6.	**Abstract**	**SGD**	**Batch In charges**	**Must know**
Learning Outcomes: ● Write a structured abstract according to the guidelines				
7.	**Final Compilation of the research project**	**SGD**	**Batch In charges**	**Must know**

Learning Resources:

Reference Books

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**
    - Handouts/SDL prepared by faculty

3. **Online resources**
    - Communication for health education
    - https://www.youtube.com/watch?v=1l_PHw3rrp8
    - www.facebook.com/WHO/videos/what-is-people-centred-care/1508940922484619/

Teaching faculty:

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Dr. Khola Waheed Khan	**khankhola@wahmedicalcollege.edu.pk**
Dr. Sadia Nadeem	**sadianadeem@wahmedicalcollege.edu.pk**
Dr. Saleh Ahmed	**Saleh_ahmed@wahmedicalcollege.edu.pk**

Assessment formats

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

Special Pathology

Block outcomes:

- Identify endocrine disorders resulting from abnormal development, genetic mutations, immune mechanisms, infections, and intrinsic diseases as they relate to multiple endocrine organ abnormalities
- Describe red blood cell disorders resulting from abnormal development, nutritional derangements, inherited disorders, and intrinsic disease
- Analyze white blood cell disorders resulting from abnormal development, genetic mutations, infections, and intrinsic disease as they lead to reactive and neoplastic abnormalities.
- Explain Central Nervous system disorders resulting from abnormal development, genetic mutations, immune mechanisms, infections, and intrinsic diseases as they lead to central nervous system (CNS) abnormalities.

The following educational and assessment strategies will be used to achieve the block learning outcomes

S. No	Topic	Educational Strategies	Name of Instructor/	Importance Must know Should Know Could Know
1.	**Endocrinology: Thyroid gland disorders**	**LGIS/ Practical**	**Assoc. Prof. Dr. Lubna Ehtizaz**	**Must know**
Learning Outcomes: ● Describe the structure and function of the thyroid gland. ● List the congenital anomalies of thyroid gland. ● List the hormones synthesized by the thyroid gland and state their functions. ● Describe the synthesis, regulation, and metabolism of thyroid hormones. ● Describe the conditions associated with the effects of increased and decreased concentrations of thyroid hormone and their diagnosis based on laboratory investigations. ● Compare the different forms of thyroiditis based on incidence, pathogenesis, and morphology. ● Enumerate the tumors of thyroid gland and differentiate based on their incidence, pathogenesis, and morphological features.				
2	**Pituitary gland/Short Stature/Parathyroid gland disorders**	**LGIS**	**Prof. Dr. Sami Saeed /**	**Must know**
Learning Outcomes:				

- Describe the structure and function of pituitary gland.
- Interpret the effects caused by the increased and decreased secretion of the individual hormones of the anterior as well as posterior pituitary gland.
- Define a normal childhood growth pattern.
- Define short stature.
- Describe some specific causes of short stature including constitutional delay of growth and puberty, familial short stature, endocrine diseases, chromosomal abnormalities or syndromes, skeletal dysplasia and chronic diseases or malnutrition.
- Plan a workup of short stature keeping in view its differential diagnosis.
- Explain the difference between Diabetes Insipidus and SIADH.
- Explain the structure and functions of Parathyroid gland.
- Explain the etiology, types, and pathogenesis of hypo and hyperparathyroidism.
- Discuss the gross and morphological features of hypo and hyperparathyroidism.
- Describe the pathogenesis of Hypercalcemia of malignancy.
- Elaborate the clinical features and laboratory investigations in parathyroid disorders.
- Describe the etiology and lab diagnosis of Pseudohypoparathyroidism

3.	**Pituitary Gland Tumors**	**LGIS**	**Assoc. Prof. Dr. Lubna Ehtizaz**	**Should know**

Learning Outcomes:

- Describe the incidence, risk factors, pathogenesis, and morphology of Hypothalamic and pituitary tumors.

2.	**Diabetes Mellitus (I)**	**LGIS**	**Assoc. Prof. Dr. Lubna Ehtizaz**	**Must know**

Learning Outcomes:

- Define and classify diabetes mellitus based on etiology.
- Describe the pathogenesis, clinical features, diagnostic criteria, management and complications of Type 1 and Type 2 diabetes mellitus**.**

3.	**Diabetes Mellitus (II)**	**LGIS**	**Prof. Dr. Sami Saeed**	**Must know**

Learning Outcomes:

- Plan a diagnostic approach and work up for diabetes mellitus type 1 and II.
- Interpret different investigations to confirm the diagnosis of each.

4.	**Gestational Diabetes Mellitus**	**LGIS**	**Prof. Dr. Sami Saeed**	**Must know**

Learning Outcomes:

- Define gestational diabetes mellitus, its etiology, the disease process (pathogenesis) and the effects of the disease, including its symptoms and complications.

- Plan and interpret laboratory investigations to confirm the diagnosis and its management.

5.	**Adrenal Gland (I) Adrenal Gland (II) /**	**LGIS/ Practical**	**Assoc. Prof. Dr. Lubna Ehtizaz**	**Must know**

Learning Outcomes:

- Identify the clinical presentation, causes and functional pattern of lesions of adrenal cortex / medulla.
- Describe the clinico-pathological consequences of each lesion.
- Plan a diagnostic approach and further work up for each lesion.
- Interpret different investigations to confirm the diagnosis of each lesion.

6.	**Infertility 1**	**LGIS/ SGD/CBL/ OSPE**	**Prof. Dr. Sami Saeed**	**Must know**

Learning Outcomes:

- Define common terms associated with infertility.
- Explain different causes of infertility in both males and females.
- Discuss the specific methods of evaluation to diagnose infertility in both male and female patients.
- Discuss therapeutic management of infertility.
- Comprehend the available infertility treatment options.
- Identify common assisted reproductive techniques

8.	**Lymphoid System Disorders**	**LGIS**	**Asstt. Prof. Dr. Syed Sarwar Ali**	**Must know**

Learning Outcomes:

- Enlist the diseases of thymus and spleen.
- Explain the etiology, classification, and morphology of thymic tumors.
- Describe the classification of lymphoid neoplasms.
- Differentiate between Hodgkin's and Non- Hodgkin's lymphoma.
- Discuss Plasma cell neoplasms and related disorders.
- Explain Non-neoplastic white cells disorders (infections, inflammation)..

9.	**Leukemias**	**LGIS/OSPE/ practical**	**Assist.Prof. Dr. Syed. Sarwar Ali / Prof. Dr. Jamila**	**Must know**

Learning Outcomes:

- Enlist Non neoplastic white cells disorders (infections, inflammation).
- Classify leukemias. (FAB classification)
- Classify acute leukemias.

- Discuss the clinical presentation of patient with leukemia, peripheral blood film and bone marrow findings, and lab diagnosis.
- Name special stains used for diagnosis of leukemias.
- Name chronic Leukemias (Myeloid & Lymphoid).
- Discuss the peripheral and bone marrow findings in chronic leukemias.
- Define Myelodysplastic syndrome.
- Enumerate etiological factors of MDS.
- Discuss the diagnosis of MDS.

10.	**Hematology: Anemias/ Platelet Disorders**	**LGIS/ SGD / OSPE/Practicals**	**Prof. Dr. Jamila**	**Must know**

Learning Outcomes:

- Define anemia and give the classification of anemia based on the size of the red blood cells and the etiology.
- Outline the nutritional and metabolic aspects of iron metabolism, including dietary iron, iron absorption, body iron distribution and transport.
- Enlist common causes of iron deficiency anemia.
- Describe the signs and symptoms of iron deficiency anemia and diseases associated with it.
- Differentiate by laboratory tests, anemia due to iron deficiency from other causes of microcytic anemia.
- Outline the concept of anemia of chronic disease/inflammation and describe the pathogenesis.
- Describe the common causes of macrocytic anemia.
- Describe the concept of megaloblastic anemia and the effect of vitamin B12 and folate deficiency on inhibition of DNA synthesis. Compare megaloblastic to non-megaloblastic anemia.
- Describe the signs, symptoms, and laboratory diagnosis of macrocytic anemia.
- Enumerate aplastic anemia, its causes, peripheral and bone marrow findings, and complications.
- Outline a simplified classification for the hemolytic anemias.
- Describe additional clinical signs in a patient with hemolytic anemia and explain how these may differ from those caused by anemia due to other causes.
- Describe the mechanism involved in the development of anemia in congenital spherocytosis and in G6PD.
- Outline the clinical consequences of Hemolysis.
- Describe the pathological mechanism that leads to autoimmune hemolytic anemia and discuss warm and cold hemolytic anemia.
- Outline the laboratory diagnosis of a hemolytic process and discuss the concept of extravascular and intravascular hemolysis.
- Describe the investigations of a patient with hemolytic anemia.
- Enlist the complications of hemolytic anemias.

- Classify autoimmune hemolytic anemia (AIHA).
- Enlist the secondary causes of autoimmune hemolytic anemia.
- Enlist the lab findings seen in autoimmune hemolytic anemia
- Name the typical autoantibodies in warm autoimmune hemolytic anemia.
- Briefly explain G6PD.
- Enlist the salient features of hereditary Spherocytosis with respect to cause, sign and symptoms and laboratory diagnosis.
- Explain the pathophysiology, Hemoglobin defect and genetics in Sickle Cell Disease.
- Discuss the clinical features and complications of Sickle Cell Disease.
- Name the tests for prenatal screening of Sickle Cell Disease.
- Enlist the lab tests for the diagnosis of Sickle Cell Anemia.
- Classify thalassemia.
- Explain pathophysiology of β thalassemia.
- Enlist the sign and symptoms, complications, and lab diagnosis of β Thalassemia.
- Discuss the importance of cross matching.
- Describe the Rh incompatibility**.**

11.	**Red blood cells and bleeding disorders**	**LGIS/ Practical**	**Prof. Dr. Jamila**	**Must know**

Learning Outcomes:

- Enumerate Red blood cells and bleeding disorders.
- Enlist different kinds of bone marrow transplant indications and complications.
- Describe different phases of hemostasis.
- Enlist causes of vascular abnormalities, platelet disorders and clotting factor abnormalities
- Name the coagulation disorders.
- Discuss idiopathic thrombocytopenic purpura.
- Discuss the causes & pathophysiology of DIC.
- Briefly discuss the Thrombotic thrombocytopenic Purpura and HUS.
- Name Myeloproliferative disorders, causes and lab diagnosis of Myeloproliferative Disease.

12.	**Central & Peripheral Nervous System**	**LGIS**	**Prof Brig (R)Tariq Masood Malik/ Assist. Prof. Dr Ambreen Zafar**	**Must know**

Learning Outcomes:

- Discuss the diseases of neuromuscular junction / diseases of skeletal muscle / disorders of peripheral nerves.

- State the etiology, pathogenesis, and diagnosis of cerebrovascular diseases / malfunctions & developmental disorders / infections / traumatic injury /prion diseases / demyelinating diseases.
- Discuss Neurodegenerative disorders / CNS tumors.

Small Group Discussions
Mode of Assessment: MCQs/SEQS

Chemical Pathology- Endocrinology Diabetes Mellitus

Case Scenario:
An 18-years-old girl consulted her family doctor because of tiredness and weight loss. She complained of excessive and polyuria. Laboratory investigations showed glycosuria. He advised her to report to Diabetes clinic the next day.
By the next day, she felt too sick to get out of bed. Started vomiting and became drowsy. She was immediately rushed to hospital emergency. Where her blood pressure was 95/60 mmHg with a pulse rate of 112/min and had cold extremities. She had deep sighing respiration (Kussmaul's breathing) and her breath smelt of acetone. Her glucose random was 32 mmol/l and her urine for ketones was positive by dipstick.
Detailed investigations showed;
ABGs
pH 7.05 (7.35-7.45)
pCO_2 15 mmHg (35-45)
Blood bicarbonate 5.0 mmol/l (23-33)
Serum potassium 5.8mmol/l (3.2-4.8)
Plasma glucose (R) 32 mmol/l (3-11 mmol/l)
Urine for ketones: +++
Tasks

A. Name the likely diagnosis in this case?
B. Describe the pathophysiology of this disease?
C. Discuss the metabolic derangements in this patient?
D. Write the complications that can develop in this patient with the progress of this disease?

WHITE BLOOD CELL DISORDER (Lymphoma)

A 27-year-old man presents with an 8-week history of fevers, chills, pruritis, and night sweats. Two months ago, he experienced a flu-like illness. A nagging cough

with occasional hemoptysis persisted for several weeks following resolution of his other symptoms.
Physical examination reveals moderately enlarged, firm, non-tender lymph nodes located in the right supra-clavicular region. A lymph node biopsy showed complete effacement of lymph node architecture by large bi-nucleate cells with prominent nucleoli. The background contains mix population of lymphocytes, histiocytes and eosinophils.
Learning Objectives:

A. Enlist the most likely diagnosis.
B. Describe the classification of this disorder.
C. Explain the pathogenesis of this disorder.
D. Discuss the diagnostic cells in this disease.
E. Enumerate the laboratory and radiological tests in this disease.
F. Discuss Staging of lymphoma.

RED BLOOD CELL DISORDER (Thalassemia)

A 16-month girl, from Gujranwala, presented to Pediatrics Emergency unit in Lahore General Hospital with Pallor -1month, difficulty in breathing & feeding since 5days. Marked pallor evident on general examination. Physical examination revealed no positive findings except irritability. Laboratory studies show haemoglobin 5.2 g/dL, platelet count 321,000/mm^3, and WBC count 5390/mm^3. The peripheral blood smear shows anisocytosis, poikilocytosis, fragmented cells and normoblasts (immature red cells)

Learning Objectives:

A. Name the most likely diagnosis.
B. Discuss the classification of this disorder.
C. Explain the pathogenesis of this disorder.
D. Enlist the complications of above disease.
E. Enumerate the other laboratory tests in this disorder.

Hematology (Aplastic Anemia)

Case Scenario:

A 15 years old female developed petechiae and ecchymoses, followed a few days by fever, chills and prostration. She was also feeling breathlessness particularly after walking a few steps.
Examination: Heart rate was increased and her temperature was 101^{O} F.

On physical examination, her spleen was not palpable and there was no lymphadenopathy. Her routine blood profile showed:
Hemoglobin = 5.0 g/dl TLC = 2.1 x 10^9/l RBCs = 1.0 x 10^{12}/l
Platelets = 20X10^9/l
DLC showed relative lymphocytosis with a few eosinophils
Reticulocyte count was = 0.1%
Bone marrow examination:
The aspiration yielded very little material (dry tap), which under microscope showed no fragments and very occasional megakaryocytes.
Bone marrow trephine showed markedly hypocellular marrow containing mainly fat cells. There was a mature / normal lymphoid aggregate in one focus and some plasma cells were seen.

Learning Objectives:

A. Name the most likely diagnosis after bone marrow examination?
B. State the major causes of this disease?
C. Discuss the pathogenesis of this disease?
D. Enlist the complications of this disease?

Practicals

Learning Outcomes:

At the end of XIIth module, the student of 4th year MBBS should be able to:

- Establish diagnosis of given slides of Special Pathology lesions included in the module, correlating histopathological findings.

S. No	Topic	Educational Strategies	Name of Instructor	Important Must know/ Should know/ Could know
1	**Endocrine System**	**Demonstration/ Practical**	**All Lecturers**	**Must know**
Learning Outcomes: ● Multinodular goiter ● Follicular Adenoma ● Papillary Carcinoma thyroid and convey the findings to the patient and attendants in simple words.				
2.	**Bones and joint diseases**	**Demonstration / Practical**	**All Lecturers**	**Must know**
Learning Outcomes: ● Giant cell tumor, Osteosarcoma				
3.	**White Blood cells**	**Demonstration / Practical**	**All Lecturers**	**Must know**

Learning Outcomes: ● WBCs disorders (Leukemias) ● Multiple Myeloma. ● Hodgkin's lymphoma and non-Hodgkin's ● lymphoma, Tuberculous Lymphadenitis				
4	**Red blood cells & bleeding disorders**	**Demonstration / Practical**	**All Lecturers**	**Must know**
Learning Outcomes: ● Explain principles of Leishman Stain ● Stain peripheral smear and identify reticulocytes. ● Perform blood grouping. ● Identify different blood groups.				
5	**Instruments: Spectrophotometer**	**Demonstration / Practical**	**All Lecturers**	**Must know**
Learning Outcomes: ● Identify the instrument. ● Identify the parts of the instrument and explain their functions. ● Explain the principle of operating the instrument. ● Explain Beer Lambert Law. ● Define absorbance.				

Learning Resources:

Textbooks

- Robbins Atlas of Pathology 3rd edition
- Robbins Basic Pathology 10th and 11th edition

Reference Books/ Library resources:

- Hoff brand Essential Haematology 7th edition
- Zilva Clinical Chemistry in Diagnosis and Treatment 5th edition

Online resources:

www.pathologyoutlines.com

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Dr. Amina Aziz	Aminaasif 997@gmail.com

Assessment formats:

Assessment Strategies (Formative)	Assessment Strategies (Summative)
Practical Logbook, SGD, SEQS, MCQS, OSPES and VIVA	SEQS, MCQS, OSPES and VIVA

ENT

Subject Learning Outcomes (SLO)

1. Diagnose & conservatively manage common diseases of the Ear and facial nerve, Nose & paranasal sinuses, oral cavity & throat (PLO 1, 3, 6, 7, 8).
2. Provide primary ENT care for common ENT diseases including emergencies if required , refer the patient to appropriate centre (PLO 1, 3, 6, 7, 8)
3. Provide awareness regarding prevention of common public ENT health problems (PLO 4,5,7,8)
4. Demonstrate respect, compassion , integrity, commitment to ethical principles & appropriate responsiveness to the needs of the patient (PLO3)

Block Learning Outcomes:

After completion of ENT course content for 3rd block the students would be able to:

- Discuss the applied anatomy and physiology of oral cavity, pharynx, larynx and esophagus
- Discuss acute and chronic tonsillitis & pharyngitis along with its diagnosis and management plan
- Identify various head & neck space infections. Discuss their investigation and formulate management plans.
- Discuss acute inflammatory conditions of the larynx and their management
- Discuss the pathophysiology of various voice and speech disorders and their management.
- Discuss the pathophysiology of different types of laryngeal paralysis along with its appropriate management options. .
- Describe the significance of hoarseness and stridor & enumerate their causes and clinical features of respiratory obstruction
- Describe squamous cell carcinoma of the larynx and the impact of the stage of disease on management and survival of the patient
- Describe dysphagia and its causes, Plummer-Vinson Syndrome, and malignant tumors of the hypopharynx that could lead to dysphagia and hoarseness, along with their management
- Discuss recent advances in ENT
- Discuss the differential diagnosis of neck mass

S. NO	Topic	Educational Strategies	Names of Instructor	Importance (Must Know Should Know

				Could know)
1.	Anatomy of the oral cavity	LGIS	Prof. Dr. Muhammad Asad Chughtai	Must Know
Learning Outcomes: • Thorough understanding of the anatomy of the oral cavity				
2.	Common Disorders of the Oral Cavity (viral, bacterial, and fungal infections, aphthous ulcers, submucous fibrosis)	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Learning objective: • Recognize common disorders of oral cavity • Investigations and management of common disorders of oral cavity				
3.	Tumours of Oral Cavity	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Learning objective: • Basic understanding of malignant disorders of oral cavity • Differentiate & plan management of various types of oral lesions on the basis of history and clinical examination /investigations • Recognize mass arising from different sights of oral cavity, suggest different treatment modalities.				
4.	Anatomy & physiology of the pharynx	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Learning objectives: • Recall the anatomy & physiology of pharynx				
5.	Acute & Chronic pharyngitis	LGIS	Pro. Dr. Muhammad Waqar Khan	Should know
Learning objectives: • Know the causes and symptoms of acute and chronic pharyngitis. • Learn how to assess, treat, and prevent the condition.				
6.	Acute & Chronic Tonsillitis	LGIS	Prof. Dr. Muhammad Asad Chughtai	Must know
Learning objectives: • Discuss classification, types, aetiologia, clinical features, diagnosis, and treatment of acute & chronic tonsillitis				
7.	Head & Neck Space Infections	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know

	(Peritonsillar abscess, Ludwig's angina, retropharyngeal abscess, parapharyngeal abscess)			
Learning objectives: • Recall the applied anatomy of the facial planes of the neck. • Discuss the abscesses around the pharynx • Differentiate between various abscesses (Retropharyngeal, Parapharyngeal, Peritonsillar, Submandibular (Ludwig`s angina) and learn about the relevant investigations & management options				
8.	Tumor's of Oropharynx	LGIS	Prof. Dr. Muhammad Asad Chughtai	Must know
Learning objectives: • Recall common sites of tumor of oropharynx • Diagnose tumor of oropharynx on the basis of history, signs and symptoms. • Plan investigations and management				
9.	Anatomy & Physiology of Larynx	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Learning objectives: • Discuss the applied anatomy of infantile, adult male, and female larynx.				
10.	Acute & Chronic Inflammations of larynx (Acute epiglottitis, croup, chronic laryngitis)	LGIS	Prof. Dr. Muhammad Asad Chughtai	Must Know
Learning objectives • Identify various Inflammatory diseases of the larynx (acute and chronic laryngitis of various types, acute epiglottitis, acute laryngotracheobronchitis • Discuss Investigations and management of acute & chronic inflammations of the larynx				
11.	Congenital lesions of the larynx (Laryngomalacia Laryngeal web, subglottic hemangioma, laryngocoele, laryngeal cysts)	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know

	stridor			
Learning objectives • Identify congenital anomalies effecting larynx and management plans • Discuss various causes and management of stridor				
12.	Laryngeal paralysis	LGIS	Prof. Dr. Muhammad Asad Chughtai	Must Know
Learning Outcomes: • Discuss the nerve supply of the larynx • Discuss the clinical features of laryngeal paralysis • Suggest investigation needed for diagnosis • Discuss the management of different types of laryngeal paralysis				
13.	Cancer Larynx	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Learning objective • Recall the surgical anatomy of the larynx • Discuss cancer of the larynx, relevant investigations, and treatment plan in a case of carcinoma of the larynx • Advise pre- and post-treatment (conservative and surgical) and counseling of these patients • Discuss options available for Voice rehabilitation post-laryngectomy				
14.	Voice & Speech disorders (vocal nodules, vocal polyps, Reinke's edema, intubation granuloma, dysphonias, phonesthenia, puberphonia)	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Learning objective • Diagnose various benign lesions of the larynx affecting the voice (vocal cord nodules, vocal cord polyps, Reinke's edema, laryngoceles, intubation granuloma) on the basis of history, presentation, and findings, and choose a management plan. • Diagnosis & management of different speech disorders				
15.	Anatomy & physiology of the esophagus	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know

Learning objectives: • Revisit the applied anatomy and physiology of the esophagus				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				

S. NO		Educational Strategies	Names of Instructor	Importance (Must Know Should Know Could know)
12.				
13.	Cancer Larynx	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
14.	Voice & Speech disorders (vocal nodules, vocal polyps, Reinke's edema, intubation granuloma, dysphonias, phonesthenia, puberphonia)	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
15.	Anatomy & physiology of the esophagus	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
• Learning objectives: • Revisit the applied anatomy and physiology of the esophagus				
16.	Disorders of the esophagus Dysphagia Pharyngeal pouch	LGIS	Prof. Dr. Muhammad Asad Chughtai	Should know
Learning objectives • Diagnose common motility disorders of esophagus • Diagnosis of benign & malignant lesions of esophagus • Recall normal swallowing mechanism • Discuss Types of dysphagia, causes, and pathophysiology of each cause.				

• Differentiate between various types of dysphagia based on its etiology and pathophysiology. • Plan investigation and management. • Discuss the pathophysiology of pharyngeal pouch, its diagnosis, and management. •				
17.	Neck masses	LGIS	Prof. Dr. Muhammad Waqar Khan	Should know
Learning objectives • Discuss the Differential diagnosis of neck masses • Discuss various Investigations and management options.				
18.	Foreign bodies of air & food Passages	LGIS	Prf. Dr. Muhammad Asad Chughtai	Must know
Learning objectives • Knowledge of foreign bodies of air and food passages. • Thorough understanding of the management of foreign bodies of air & food passages.				

Learning Resources:

- 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)

Teaching faculty & Students' hours

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Assessment formats:

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

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 centres. (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:

At the end of Y4BXII the students of 4th year MBBS should be able to:

1. Recognize clinical features of retinal diseases and suggest their management plan. (SLO: 2,5)
2. Clinically diagnose strabismus and describe management of its different types. (SLO: 2,3,5,6)
3. Classify different ocular injuries and suggest management of different types of ocular injuries. (SLO: 1,2,3,4, 5, 6)
4. Describe different neuro-ophthalmic conditions and suggest their management plan. (SLO: 1,2,3,5,6)

S. #	Topics	Educational Strategies	Name of instructor	Importance: Must Know Should Know Could Know
1.	**Introduction to retina and retinal diagnostics**	**LGIS**	**Dr. Yaseen Lodhi**	**Must know**
Learning outcomes: • Describe the anatomical and physiological basis of retinal structure. • Describe the basis of various retinal diagnostics.				
2.	**Surgical Retina**	**LGIS**	**Dr. Yaseen Lodhi**	**Should know**
Learning outcomes: • Recognize different types of retinal detachment on the basis of their clinical features.				

• Suggest a management plan for different types of retinal detachment. • Differentiate between surgical techniques used in retinal diseases.				
3.	**Diabetic Retinopathy**	**LGIS**	**Dr. Yaseen Lodhi**	**Must Know**
Learning outcomes: • Explain the pathophysiology of diabetic retinopathy. • Describe the basis of signs and symptoms of diabetic retinopathy. • Elaborate the classifications of diabetic retinopathy and maculopathy. • Suggest management plan of different stages of diabetic retinopathy.				
4.	**Retinal Vascular disorders**	**LGIS**	**Dr. Yaseen Lodhi**	**Must know**
Learning outcomes: ● Explain pathological basis of hypertensive retinopathy. ● Recognize the pathophysiological basis of retinal vascular occlusions. ● Suggest different treatment options for retinal vascular occlusions.				
5.	**Macular disorders**	**LGIS**	**Dr. Yaseen Lodhi**	**Should know**
Learning outcomes: ● Describe the pathogenesis, types and clinical presentations of common macular disorders. ● Explain management of age-related macular degeneration				
6.	**Miscellaneous retinal disorders**	**LGIS**	**Dr.Ryyan Masood**	**Should know**
Learning outcomes: ● Explain management of retinitis pigmentosa. ● Describe the pathological basis and management of retinopathy of pre-maturity.				
7.	**Pediatric Vitreoretina**	**LGIS**	**Dr.Ryyan Masood**	**Should know**
Learning Outcomes: ● Enumerate differential diagnosis of leucocoria. ● Explain management of retinoblastoma**.**				
8.	**Strabismus I**	**LGIS**	**Dr. Akmal Khan**	**Should know**
Learning Outcomes: ● Recall the anatomy of extraocular muscles. ● Explain different physiological phenomena in binocular muscular balance.				

● Identify strabismus clinically.				
9.	**Strabismus II**	**LGIS**	**Dr. Akmal Khan**	**Should know**
Learning Outcomes: ● Suggest management of different types of squint. ● Classify amblyopia and suggest its management plan.				
10.	**Ocular Trauma: Blunt trauma**	**LGIS**	**Dr. Marrium Shafi**	**Should know**
Learning Outcomes: ● Classify different types of ocular injuries. ● Describe different presentations in blunt ocular trauma. ● Suggest management of a case of blunt ocular trauma.				
11.	**Penetrating trauma and Intra Ocular Foreign Body**	**LGIS**	**Dr. Marrium Shafi**	**Must know**
Learning Outcomes: ● Describe different types of penetrating ocular injuries. ● Suggest the management of different penetrating ocular injuries. ● Recognize features of different intraocular foreign bodies**.**				
12.	**Chemical injuries and Orbital fractures**	**LGIS**	**Dr. Marrium Shafi**	**Must know**
Learning Outcomes: ● Describe the pathogenesis of chemical injuries. ● Recognize different grades of chemical injuries and suggest their management plan. ● Describe different types of orbital fractures and their management.				
13.	**Neuro-Ophthalmology: Introduction, Visual Pathway**	**Flipped Classroom**	**Dr. Asma Aftab**	**Must know**
Learning Outcomes: ● Recall the visual pathway. ● Correlate the anatomical & pathophysiological aspects of different visual field defects.				
14.	**Neuro-Ophthalmology: Cranial Nerve pathways**	**Flipped Classroom**	**Dr. Asma Aftab**	**Must know**
Learning Outcomes: ● Recall the pathways of cranial nerves supplying extra ocular muscles. ● Recognize different clinical conditions of nerve palsies related to ophthalmology.				

15.	**Neuro-Ophthalmology: Pupil and Miscellaneous disorders**	**Flipped Classroom**	**Dr. Asma Aftab**	**Must know**
Learning outcomes: ● Recall the pupillary light reflex pathway. ● Explain different pupillary reflex disorders and their pathogenesis.				
Neuro-Ophthalmology: Optic Nerve		**Flipped Classroom**	**Dr. Asma Aftab**	**Must know**
Learning outcomes: ● Classify optic neuritis. ● Suggest steps of management of optic neuritis. ● Explain papilloedema and identify its causes.				
16.	**Visual Loss**	**LGIS**	**Dr. Yaseen Lodhi**	**Must Know**
Learning Outcomes: ● Identify various causes of visual loss ● Diagnose most probable causes of visual loss on the basis of clinical presentation.				

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

Pediatrics

Learning Outcomes:

- Identify signs & symptoms, laboratory work-up and management outline of common endocrine diseases in children
- Identify signs & symptoms, laboratory work-up and management outline of common blood disorders in children
- Identify presentation, diagnostic work-up and management outline of common hematological malignancies in children
- Discuss common causes of fits with fever in children, necessary laboratory work-up and management outline.

S. NO	Topic	Educational Strategies	Names of Instructor	Importance (Must Know Should Know Could know)
	ENDOCRINOLOGY			
1.	**Disorders of pituitary gland**	**LGIS**	**Dr Sohail Ashraf**	**Must Know**
Learning Outcomes: • Define stature, normal growth curves • Define short and tall stature • Common presenting features with targeted history • Causes of short & tall stature in children • Investigation plan for short & tall stature • Outline management plan of short / tall stature • Discuss prognosis.				
2.	**Thyroid problems in children**	**LGIS**	**Dr Saba Mushtaq**	**Must know**
Learning Outcomes: • Define Hypothyroidism & Hyperthyroidism • Identify the clinical presentation of thyroid disorders in children • Investigation plan for Hypothyroidism & Hyperthyroidism • Outline management plan • Discuss prognosis.				
3.	**Diabetes Mellitus in children**	**LGIS**	**Dr Sohail Ashraf**	**Must know**
Learning Outcomes: • Discuss normal blood glucose physiology				

- Define Diabetes mellitus in children
- Discuss types of Diabetes mellitus in children and their presenting features
- Pathophysiology of Diabetes mellitus in children
- Diagnostic work-up for Diabetes mellitus in children
- Discuss Treatment / management plan
- Define DKA, its presentation, diagnosis, management & comlications
- Discuss prognosis
- Parental counselling regarding diet and lifestyle modification of the child

4.	**Adrenal disorders in children**	**LGIS**	**Dr Sundus khan**	**Must know**

Learning Outcomes:

- Enlist common adrenal problems in children
- Identify the clinical presentation of common adrenal disorders in children
- Investigation plan for adrenal disorders
- Outline management plan
- Discuss prognosis.

BLOOD

5.	**Leukemia in children**	**LGIS**	**Maj Dr Sehrish Anjum**	**Should know**

Learning Outcomes:

- Enlist common hematological malignancies in children
- Define Leukemia
- Classification of Leukemia, with definition of ALL, CLL, AML, CML
- Common presenting features with targeted history & clinical examination in suspected hematological malignancy
- Discuss investigation plan & work-up
- Outline management plan of Leukemias
- Discuss prognosis and complications.

6.	**Lymphoma in children**	**LGIS**	**Dr Sohail Ashraf**	**Must know**

Learning Outcomes:

- Enlist commonly occurring Lymphoid malignancies in children
- Define Lymhoma
- Classification of Lymphoma, with definition of Hodgkin & Non-Hodgkin's Lymphoma.
- Common presenting features with targeted history & clinical examination in suspected Lymphoid malignancy
- Discuss investigation plan & work-up
- Outline management plan of Lymphomas

• Discuss prognosis and complications.				
7.	**Anemias**	**LGIS**	**Dr Saba Mushtaq**	**Must know**
Learning Outcomes: • Define Anemia • Enlist common causes of anemia in children • Classification of Anemia • Common signs & symptoms related to different anemias & clinical examination • Discuss investigation plan & work-up • Outline management plan of Anemias • Discuss prognosis and complications.				
8.	**Thalassemia in children**	**LGIS**	**Dr Qurat ul Ain**	**Must know**
Learning Outcomes: • Define Hemolytic anemia • Discuss common causes of hemolytic anemia in children • Define Thalassemia, its classification & pathophysiology • Common presenting features with targeted history & clinical examination in suspected case of hemolytic anemia • Discuss investigation plan & work-up • Outline management plan of thalassemia with its different types • Discuss prognosis and complications. • Parental & family counselling with future therapeutic options.				
CNS				
9.	**Fever with fits in Children**	**LGIS**	**Dr Tahir Mahmood**	**Must Know**
Learning Outcomes: • Enlist common conditions with fever & Fits in children • Common presenting features with targeted history & clinical examination • Define Febrile fits, its types & presentation • Discuss investigation plan & work-up • Outline management plan • Discuss prognosis and complications				

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, CBL	**MCQ, SEQ, Long case, short case**

Gynecology

Learning Outcomes:

Manage common obstetrics & gynecological illnesses of women with evidence-basedcare.

1. 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. .	Thyroid disorders in pregnancy	LGIS	Dr. Gulwish Hameed	ShouldKnow
Learning Outcomes: • Review the clinical presentation of Hypothyroidism and hyperthyroidism in pregnancy and discuss their effects on feto maternal outcome • Interpret the investigations done for thyroid disease and knows the pregnancy specific ranges • Outline a management plan of pregnancy in women with thyroid disorders & thyroid storm				
2.	Diabetes Mellitus in pregnancy	LGIS	Dr. Iram Mushtaq	Should Know
Learning Outcomes: • Classify types of diabetes in pregnancy. • State and interpret tests done for diagnosis of gestational diabetes. • Enlist maternal and fetal complications of diabetes. • Formulate a management plan for diabetes in pregnancy.				
3.	Sexually transmitted infections	LGIS	Dr. Sidra Khan	Nice to Know
Learning Outcomes:				

• Name the disease transmitted sexual contact. • Outline investigations and diagnostic criteria • Recognize its complications • Discuss treatment of sexually transmitted infections. • Discuss prevention.				
4.	Sudden Maternal collapse and its management, amniotic fluid ambolism, pulmonary embolism	LGIS	Dr. Sadia Ijaz	Must Know
Learning Outcomes: • To acknowledge obstetrical emergencies • Be prepared 24/7 to handle such cases • To appreciate the importance of blue code and multi-disciplinary approach				
5.	Medical error Doctor's responsibility in prescribing & administrating medication	LGIS	Dr. Maimoona Riaz	Must Know
Learning Outcomes: • To understand professionalism and ethics • To identify the importance of patient safety • To acknowledge patient autonomy in management				
6.	Anemia in pregnancy I	LGIS	Dr. Ayesha Irfan	Should Know
Learning Outcomes: • Define anemia in pregnancy and its incidence • Describe the common causes of an anemia in pregnancy • Describe symptoms and signs of anemia • To discuss nutritional deficiency anemia. • To select proper treatment option for anemia in pregnancy according to gestational age.				
7.	Anemia in pregnancy II	LGIS	Dr. Nida Javed	Should Know
Learning Outcomes: • Discuss different types of anemia and how to investigate • Discuss hemoglobinopathies • Formulate a management plan for anaemic women in pregnancy • Recognizes importance of multi disciplinary care in management of medical disorders in pregnancy.				
8.	Rhesus Isoimmunization	LGIS	Lt Col Zaib	Must Know

			un Nisa	
Learning Outcomes: • To appraise Rh incompatibility in pregnant lady • Must know the impact of non immunization of pregnant lady on next pregnancy • Outline management option of immuno sensitive patients				
9.	Miscarriage	LGIS	Dr. Sidra Khan	must Know
Learning Outcomes: • Define miscarriage • Discuss common causes of miscarriages. • Enlist different types of miscarriages. • Differentiate clinically different types of miscarriages. • Interpret ultrasound findings in a case of miscarriage. • Outline a management plan according to types of miscarriage. • Counsel a patient of miscarriage • Define recurrent miscarriage. • Discuss causes of recurrent miscarriage. • Enlist investigations for a case of recurrent miscarriage. • Counsel a couple with history of recurrent miscarriage. • Manage a case of recurrent miscarriage.				
10.	Postpartum haemorrhage	LGIS	Dr. Ruqaiya Azhar	must Know
Learning Outcomes: • Define post partum hemorrhage(PPH) and its type • Identify risk factors for PPH • Enlist causes of PPH • Formulate a management plan (general & specific) for PPH				
11.	Pre-Pregnancy Care	LGIS	Dr. Nazia Naz	must Know
Learning Outcomes: • Explain the Importance of Pre-Pregnancy Care • Identify Key Components of Pre-Pregnancy Health Assessments • Describe Recommended Lifestyle Modifications • Understand the Role of Supplements and Vaccinations • Recognize and Address Risk Factors • Develop a Reproductive Life Plan • Communicate Effectively About Preconception Care				
12.	Antepartum Haemorrhage	LGIS	Lt Col Zaib un Nisa	must Know
Learning Outcomes:				

- Define APH.
- Enlist causes of APH.
- Describe clinical presentation of placenta previa & placental abruption
- Discuss diagnosis, management & complications of APH.
- Differentiate between placenta previa & abruption.

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 Acute and chronic infections, Pituitary / CNS Disorders Hematological disorders. 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)
1.	Cushing's Syndrome and Addison's Disease	LGIS	Dr. Sohaib Ahmed	**Should Know**
Learning Outcomes: • Justify abnormalities in the hormones produced by the adrenal glands and their functions resulting in Cushing Syndrome /Addison's Disease • Propose management of Cushing Syndrome after establishing clinical diagnosis.				
2.	Hypothroidism and Endemic Goiter	LGIS	**Dr. Rifat Yasmin**	**Should Know**
Learning Outcomes: • Correlate pathophysiological basis of various etiological factors to clinical manifestations of hypothyroidism. • Classify hypothyroidism. • Interpret investigations for diagnosis including thyroid function tests. • Outline management including drug therapy and regular follow up				
3.	Hyperthyroidism	LGIS	Dr. Rifat Yasmin	**Should Know**
Learning Outcomes: • Correlate pathophysiological basis of various etiological factors to clinical manifestations of hyperthyroidism. • Devise plan for diagnosis, drug therapy, radio active iodine and surgeryical management of hyperthyroidism				
4.	Introduction to Diabetes - Clinical Manifestation and Management	LGIS	Prof. Muzamil Jamil	**Should Know**

Learning Outcomes:

- Differentiate between type 1and type 2diabetes on the basis of pathophysiology, etiology,
- Prevalence and incidence, risk factors, manifestations and complications.
- Identify abnormalities in investigations for blood sugar levels includingHbA1c.
- Propose diagnostic tests used for screening, diagnosis and monitoring of diabetes mellitus.

5.	**Clinical Presentation of common presenting diseases in Neurology**	LGIS	Dr. Junaid ur Rehman	**Should Know**

Learning Outcomes:

- Discuss the common sign and symptoms of the diseases in OPD
- Identify the specific clinical findings
- Identify Susceptible individuals
- Diagnose various stages of disease and complications based on clinical and characteristic features.
- Suggest Diagnostic modalities and treatment options.
- Propose prevention options

6.	**Clinical Presentation of common presenting diseases in Gastroenterology**	LGIS	Dr. K. Bilal Khan	**Should Know**

Learning Outcomes:

- Discuss the common sign and symptoms of the diseases in OPD
- Identify the specific clinical findings
- Identify Susceptible individuals
- Diagnose various stages of disease and complications based on clinical and characteristic features.
- Suggest Diagnostic modalities and treatment options.
- Propose prevention options

7.	**Clinical Presentation of common presenting diseases in Nephrology**	LGIS	Dr. Ali Riaz	**Should Know**

Learning Outcomes:

- Discuss the common sign and symptoms of the diseases in OPD
- Identify the specific clinical findings
- Identify Susceptible individuals
- Diagnose various stages of disease and complications based on clinical and characteristic features.
- Suggest Diagnostic modalities and treatment options.
- Propose prevention options

8.	**Clinical Presentation of common presenting diseases in Pulmonology**	LGIS	Dr. Sidla Rehman	**Should Know**
Learning Outcomes: ● Discuss the common sign and symptoms of the diseases in OPD ● Identify the specific clinical findings ● Identify Susceptible individuals ● Diagnose various stages of disease and complications based on clinical and characteristic features. ● Suggest Diagnostic modalities and treatment options. ● Propose prevention options				
9.	**Clinical Presentation of common presenting diseases in Psychiatry**	LGIS	Dr. Faheem Qasim	**Should Know**
Learning Outcomes: ● Discuss the common sign and symptoms of the diseases in OPD ● Identify the specific clinical findings ● Identify Susceptible individuals ● Diagnose various stages of disease and complications based on clinical and characteristic features. ● Suggest Diagnostic modalities and treatment options. ● Propose prevention options				
10.	**Clinical Presentation of common presenting diseases in Dermatology**	LGIS	Dr. Maham Amin	**Should Know**
Learning Outcomes: ● Discuss the common sign and symptoms of the diseases in OPD ● Identify the specific clinical findings ● Identify Susceptible individuals ● Diagnose various stages of disease and complications based on clinical and characteristic features. ● Suggest Diagnostic modalities and treatment options. ● Propose prevention options				
11.	Pituitary Disorders	LGIS	Dr. Rifat Yasmin	Should Know
Learning Outcomes: ● Define criteria for diagnosing acromegaly & growth hormone deficiency. ● Recall pathophysiology of central precocious puberty, acromegaly and growth hormone deficiency. ● Discuss functions of anterior and posterior pituitary hormones and hypothalamic hormones.				

● Suggest investigations for diagnosis by oral glucose tolerance test and GH levels. Propose surgical ,medical and radiotherapy management .				
12.	Extra Pulmonary Tuberculosis	LGIS	Dr. Asim Ali shah	Must Know
Learning Outcomes: ● Define Extra pulmonary Tuberculosis ● Describe etiology, pathogenesis of Extra Pulmonary Tuberculosis. ● Clinical manifestations and complications ● Diagnose extra pulmonary Tuberculosis ● Give Treatment plan of Extra Pulmonary Tuberculosis				
13.	Malaria	LGIS	Dr. Asim Ali shah	Must Know
Learning Outcomes: ● Discuss the etiology and Enumerate the Symptoms and signs of the disease ● Elaborate Modes of transmission and the causative organism ● Identify Susceptible individuals ● Diagnose various stages of disease and complications based on clinical and characteristic features. ● Suggest Diagnostic modalities and treatment options. ● Propose prevention option.				
14.	Typhoid Fever	LGIS	Dr. Rifat Yasmin	MUST KNOW
Learning Outcomes: ● Discuss the etiology and Enumerate the Symptoms and signs of the disease ● Elaborate Modes of transmission and the causative organism ● Identify Susceptible individuals ● Diagnose various stages of disease and complications based on clinical and characteristic features. ● Suggest Diagnostic modalities and treatment options. ● Propose prevention options including vaccination.				
15.	HIV	LGIS	Dr. Sohaib	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				
16.	Introduction to Diabetes - Clinical Manifestation and Diagnosis	LGIS	Prof. Muzamil Jamil	MUST 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				
17.	Hodgkin's Lymphoma	LGIS	Dr. Sohaib Ahmed	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				
18.	Epilepsy	LGIS	Dr. Junaid Ur Rehman	MUST 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				
19.	Non-Hodgkin's Lymphoma	LGIS	Dr. Sohaib Ahmed	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				
20.	Disorder of Plasma cells - Multiple Myeloma	LGIS	Prof. Muzamil Jamil	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				

21.	Chronic Leukemia	LGIS	Prof. Muzamil Jamil	COULD 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				
22.	Blood & blood product transfusion and related problems	LGIS	Dr. Rifat Yasmeen	MUST KNOW
Learning Outcomes: ● Elaborate the generic prerequisites and modes of transfusion. ● Correlate the pathophysiology of blood reactions to the Requirement & safety protocol Follow through ● Outline step by step management of different types of transfusion reactions				
Haematology				
23.	Approach to a patient with Anemia	LGIS	Dr. Asim Ali Shah	MUST KNOW
Learning Outcomes: ● Differentiate between various types of anemia based on etiology, underlying pathology, symptoms and signs. ● Evaluate the patient on the basis of signs and symptoms and differential diagnosis ● Interpret appropriately ordered laboratory investigation to reach a final diagnosis ● Devise plan for treatment of disease and complications of the condition if it remains untreated ‘ ● Monitor treatment of anemia				
24.	Iron Deficiency Anemia	LGIS	Dr. Asim Ali Shah	MUST 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				
25.	Common Cranial Nerve Disease	LGIS	Dr. Junaid Ur Rehman	Should Know

Learning Outcomes: ● Discuss etiology, Symptoms and signs of the disease ● Diagnose the patient on the basis of presenting complaints and clinical examination ● Differentiate among lower motor neuron and upper motor neuron lesion based on signs and symptoms and pathology. ● Interpret relevant Investigations and laboratory findings. ● Recognize complications and their management options				
26.	Hemolytic Anemia		Dr. Sohaib Ahmed	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				
27.	Approach to a patient with Bleeding Disorder	LGIS	Dr. Rifat Yasmin	Must Know
Learning Outcomes: ● Correlate abnormalities in physiology of coagulation with etiology, Symptoms and signs of ITP/ Bleeding Disorders/ DIC ● Devise plan for investigating, diagnosing and treating Bleeding disorders and their complications.				
28.	Cerebrovascular Disease	LGIS	Dr. Junaid ur Rehman	Must Know
Learning Outcomes: ● Classify stroke ● Correlate pathophysiology of stroke to its causes and risk factors ● Outline early evaluation and management of stroke patients ● Emphasize the importance of early symptom recognition and prompt reaction ● Justify the role of thrombolytic therapy and administration of tPA ● Explain the pathophysiological basis of Transient Ischemic Attack (TIA) ● Evaluate stroke risk after transient ischemic attack (TIA) ● Order Investigations for diagnosis of stroke ● List the complications of stroke ● Identify various prevention strategies pertaining to stroke ● Outline management of ischemic and hemorrhagic stroke				
29.	Pyogenic Meningitis	LGIS	Dr. Asim Ali Shah	MUST 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				
Psychiatry				
30.	Organic Psychiatric I	LGIS	Dr. Faheem Qasim	SHOULD KNOW
Learning Outcomes: ● Give overview regarding Phenomenology and Psychiatry disorders ● Classify Psychiatric disorders ● Elaborate epidemiological and etiological basis of psychiatric disorders ● Outline diagnostic plan for Psychiatry disorders.				
31.	Organic Psychiatric II	LGIS	Dr. Fatima Amir	SHOULD KNOW
Learning Outcomes: ● Give overview regarding Phenomenology and Psychiatry disorders ● Classify Psychiatric disorders ● Elaborate epidemiological and etiological basis of psychiatric disorders ● Outline diagnostic plan for Psychiatry disorders				
32.	Dissociative Disorders	LGIS	Dr. Faheem Qasim	SHOULD KNOW
Learning Outcomes: ● Give an overview of dissociative disorders ● Discuss common presentation ● Give management options for these disorders				
33.	Reactions to Stressful Experiences	LGIS	Dr. Fatima Amir	SHOULD KNOW
Learning Outcomes: ● Classify Anxiety Disorders ● Discuss the Management of Anxiety Disorders				
Dermatology				
34.	Fungal Infections	LGIS	Brig(R). Naveed Akhtar Malik	SHOULD KNOW
Learning Outcomes: ● Differentiate between different fungal infections of the skin based on their clinical features and ● Management plan.				

● Take history of a patient ● Perform clinical examination of a patient with fungal infections of skin				
35.	Acne Vulgaris	LGIS	Dr. Maham Amin	SHOULD KNOW
Learning Outcomes: ● Clinically assess Acne vulgaris ● Diagnose acne vulgaris based on clinical features and investigations ● Suggest treatment options for Acne vulgaris				
36.	Psoriasis and Lichen Planus	LGIS	Brig(R). Naveed Akhtar Malik	SHOULD KNOW
Learning Outcomes: ● Explain the etiology and precipitating factors ● Discuss general and specific treatment of psoriasis and Lichen planus ● Describe the role of ultraviolet and PUVA therapy and its uses in Psoriasis ● Propose systemic treatment of psoriasis and Lichen planus				
Emergency Medicine				
37.	Heat Related Illness	LGIS	Dr. Tazeen Hina	MUST 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				
38.	Envenomation - Snake Bite	LGIS	Dr. Huma Hussain	MUST 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				
39.	Approach to a stroke patient.	LGIS	Dr. Tazeen Hina	SHOULD KNOW
Learning Outcomes Classify stroke ● Correlate pathophysiology of stroke to its causes and risk factors ● Outline early evaluation and management of stroke patients ● Emphasize the importance of early symptom recognition and prompt				

reaction
- Justify the role of thrombolytic therapy and administration of tPA
- Explain the pathophysiological basis of Transient Ischemic Attack (TIA)
- Evaluate stroke risk after transient ischemic attack (TIA)
- Order Investigations for diagnosis of stroke
- List the complications of stroke
- Identify various prevention strategies pertaining to stroke
- Outline management of ischemic and hemorrhagic stroke

Learning Resources:

1. **Reference books:**
   a. Davidson's Principals & Practice of Medicine 23th Edition Elsevier
   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

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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

Learning Outcomes:

At the end of this block, final year student 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 plans. (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 of Anesthesia.
5. Describe principles of trauma management.
6. Describes common neurosurgery related cases & their management

(Details of skill related outcomes can be found in surgery Logbooks.

S.#	Topic	Educational Strategies	Instructor	Importance (Must Know Should Know Could Know)
1.	**Acute + chronic infection of bones and joints**	**LGIS**	**Asstt. Prof. Dr. Muhammad Ikram**	
Learning Outcomes: • Define and classify acute and chronic infections of bones and joints. • Describe the etiology, risk factors, and pathogenesis of osteomyelitis and septic arthritis. • Recognize the clinical features of acute and chronic bone and joint infections. • Outline the diagnostic approach, including relevant laboratory and radiological investigations. • Discuss the basic principles of management of acute and chronic infections of bones and joints. • Identify potential complications associated with untreated or poorly managed infections.				
2.	**Principles of Oncology surgery risk factors**	**LGIS**	**Assoc. Prof Dr Muhammad Azhar**	
Learning Outcomes: • Define the basic principles of oncologic surgery.				

- Identify and describe major risk factors associated with the development of cancer.
- Explain the role of environmental, genetic, and lifestyle factors in carcinogenesis.
- Recognize the importance of early detection and risk factor modification in cancer prevention.
- Discuss the significance of risk assessment in planning oncologic management**.**

3.	**Breast II**	**LGIS**	**Prof. Dr M. Naeem Ashraf**	

Learning Outcomes:

- Describe the anatomy and lymphatic drainage of the breast and understand its clinical importance.
- Take a focused history and perform a proper clinical examination of the breast and axilla.
- Identify and differentiate common benign breast diseases, such as fibroadenoma, mastitis, and breast abscess.
- Explain the clinical features, risk factors, and diagnosis of breast carcinoma, including the concept of triple assessment.
- Outline the principles of management and prevention of breast cancer, including surgery, radiotherapy, chemotherapy, and screening methods.

4.	**Imaging of Musculoseketal**	**LGIS**	**Assoc. Prof. Dr. Nadia Gul**	

Learning Outcomes:

- Describe the basic principles and indications of musculoskeletal imaging, including X-ray, CT scan, MRI, and ultrasound.
- Identify normal anatomical structures of bones and joints on plain radiographs.
- Recognize common radiological features of fractures, dislocations, and bone infections.
- Differentiate common musculoskeletal pathologies on imaging, such as tumors, arthritis, and degenerative bone diseases.
- Interpret basic musculoskeletal imaging findings and correlate them with clinical presentation for appropriate diagnosis.

5.	**Imaging GIT**	**LGIS**	**Assoc. Prof. Dr. Nadia Gul**	

Learning Outcomes:

- Describe the basic principles and indications of GIT imaging, including X-ray, contrast studies (barium), ultrasound, CT scan, and MRI.
- Identify normal anatomical structures of the gastrointestinal tract on common imaging modalities.

- Recognize radiological features of common GIT conditions, such as obstruction, perforation, tumors, and inflammatory diseases.
- Explain the role of contrast studies (e.g., barium swallow, meal, follow-through, enema) in diagnosing GIT disorders.
- Interpret basic GIT imaging findings and correlate them with clinical features for diagnosis and management.

6.	**Hernia I & II**	**LGIS**	**Assoc. Prof. Dr. Naeem Akhtar**	

Learning Outcomes:

- Describe the anatomy of the abdominal wall and inguinal region, including the inguinal canal and its clinical significance.
- Classify different types of hernias, including inguinal (direct and indirect), femoral, umbilical, and incisional hernias.
- Take a focused history and perform clinical examination to diagnose various types of hernias.
- Recognize complications of hernias, such as obstruction, incarceration, and strangulation.
- Outline the principles of management of hernias, including indications and types of surgical repair (herniorrhaphy and hernioplasty).

7.	**Chemotherapy**	**LGIS**	**Prof. Dr. Naeem Ashraf**	

Learning Outcomes:

- Describe the basic principles of chemotherapy, including mechanisms of action and classification of anticancer drugs.
- Identify common chemotherapeutic agents and their clinical uses in different malignancies.
- Recognize the common side effects and toxicities of chemotherapy, such as bone marrow suppression, nausea, and alopecia.
- Explain the indications and role of chemotherapy in cancer management (curative, adjuvant, neoadjuvant, and palliative).
- Demonstrate basic knowledge of safe administration and patient monitoring during chemotherapy treatment

8.	**Radiotherapy**	**LGIS**	**Prof. Dr. Naeem Ashraf**	

Learning Outcomes:

- Describe the basic principles of radiotherapy, including types of radiation and mechanisms of action on cancer cells.
- Identify the indications and role of radiotherapy in cancer management (curative, adjuvant, neoadjuvant, and palliative).

- Differentiate between types of radiotherapy, such as external beam radiotherapy and brachytherapy.
- Recognize the common side effects and complications of radiotherapy, including acute and late effects.
- Understand basic principles of patient care and safety during radiotherapy, including radiation protection measures.

9.	**Thyroid I & II**	**LGIS**	**Assoc. Prof. Dr. Naeem Akhtar**	

Learning Outcomes:

- Correlate the clinical presentation of simple and toxic goiter to anatomical and physiological basis of thyroid gland.
- Suggest the diagnostic investigations needed to rule out other thyroid conditions.
- Enumerate the Treatment options for goiter.
- Propose management plan for goitre and its complications.
- Diagnose Ca thyroid based on clinical presentation and investigations.
- Classify Ca Thyroid.
- List tumor markers for Ca Thyroid.
- Diagnose Ca thyroid based on clinical presentation and investigations**.**

10.	**Ruptured diaphragm**	**LGIS**	**Brig® Prof. Dr. M. Parvez**	

Learning Outcomes:

- Describe the physiologic response to injury.
- State the principles of surgical treatment in a injured patient.
- State the importance of analgesia in the management of the patients

11.	**Parathyroid**	**LGIS**	**Prof. Dr. Naeem Ashraf**	

Learning Outcomes:

- Diagnose disorders of parathyroid based on clinical presentation and investigations
- Diagnose disorders of adrenal glands based on clinical presentation and investigations Develop management plan

12.	**CNS Tumors**	**LGIS**	**Asstt. Prof. Dr. M. Mehboob Alam**	`

Learning Outcomes:

- Sate relative incidence and location of the major types of primary and secondary brain tumors and space occupying lesions.
- Differentiate brain tumors based on their locations: Cerebellum, brainstem and pituitary etc.

- Describe the surgical indications for the most common benign and malignant tumors and also space occupying lesions of brains.
- List the major differences between the diagnosis and management of brain tumors and abscesses.

	Periphral nerve injuries		**Assoc. Prof Dr M Azhar**	
13.	**Adrenals**	**LGIS**	**Prof. Dr. Naeem Ashraf**	

Learning Outcomes:

- Describe the location and structure of the adrenal glands.
- Identify the hormones produced by the adrenal cortex and adrenal medulla, and summarize their target cells and effects
- Proposed management plan

14.	**Abdominal trauma I**	**LGIS**	**Assoc. Prof. Dr. M Azhar**	

Learning Outcomes:

- Discuss the mechanism of injury and clinical presentation of different type of blunt abdominal injuries
- Enlist the common organ injuries in blunt abdominal trauma
- Outline the basic principles of management

15.	**Cervical + Lumbar disc prolapsed/ Backache**	**LGIS**	**Asstt. Prof. Dr. M. Mehboob Alam**	

Learning Outcomes:

- Relate functional anatomy of mechanisms for pain production.
- Differentiate between different types of low back pain based on signs and symptoms.
- Develop management plan for a patient with a lower back pain.
- Justify physical therapy as management options.

16.	**Imaging of genitourinary**	**LGIS**	**Assoc. Prof. Dr. Nadia Gull**	

Learning Outcomes:

- 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 relating to use ionizing radiation
- Justify use of relevant imaging techniques in various clinical scenarios reference to advantages and disadvantages.
- Differentiate between normal and pathological findings of Cxray.

● Differentiate between normal and different pathological conditions on x ray**.**				
17.	**Pre-Operative Care/Assessment**	**LGIS**	**Asst. Prof. Dr. Sadia Farhan**	
Learning Outcomes: ● Rationalizes routine Intravenous fluid replacement in surgical patients ● Identify the commonly prescribed intravenous fluids. ● Optimize management of comorbidities.				
18.	**Abdominal trauma II**	**LGIS**	**Assoc. Prof. Dr. Naeem Akhtar**	
Learning Outcomes: ● Discuss the mechanism of injury and clinical presentation of different type of penetrating abdominal injuries ● Enlist the common organ injuries in penetrating abdominal trauma ● Outline the basic principles of management				
19.	**Imaging of neuroradiology**	**LGIS**	**Assoc. Prof. Dr. Nadia Gull**	
Learning Outcomes: ● 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 in various clinical scenarios reference to advantages and disadvantages.				
20.	**Post-operative Care (Surgical)**	**LGIS**	**Asst. Prof. Dr. Sadia Farhan**	
Learning Outcomes: ● Differentiate between different technique of anesthesia and airway maintenance. ● Manage drains placed during surgery ● Enhance recovery of patient care of wound				
21.	**Recovery from anesthesia /Post -Op Care**	**LGIS**	**Brig® Prof. Dr Mubashir**	
Learning Outcomes: ● List the steps in management of recovery of patient from general anesthesia ● Enumerate common post-operative complication on patient with a variety of co-morbidities & how to manage them ● Outline methods to manage post-operative pain & nausea & vomiting ● Outline post-operative fluid management.				

22.	**Head Injury I**	**LGIS**	**Asstt. Prof. Dr. M. Mehboob Alam**	

Learning Outcomes:

- List the interventions that may be required for head injury.
- Explain the importance of nerve or vessel injury in trauma.
- Correlate types of head injury to their pathophysiology.
- Review the GLASSGOW COMA SCALE
- Recognize signs in neurologically deteriorating patient.
- Demonstrate the ABCDE approach and its relation to the avoidance of secondary neurological damage after head injury.
- Discuss the surgical treatment and complications

23.	**Ant. Mediastinal Tumor thymus / Myasthenia gravis**	**LGIS**	**Brig® Prof. Dr. M. Parvez**	

Learning Outcomes:

- Classify Mediastinal Tumor.
- List common symptoms signs of myasthenia gravis
- Management plan for myasthenia gravis

24.	**Neck Masses**	**LGIS**	**Brig® Prof. Dr. M. Parvez**	

Learning Outcomes:

- Classify the neck masses according to anatomical bases
- Formulate D/D on basis of anatomical location / clinical presentation
- Differentiate between benign / malignant

25.	**Head Injury II**	**LGIS**	**Asstt. Prof. Dr. M. Mehboob Alam**	

Learning Outcomes:

- List the interventions that may be required for head injury.
- Explain the importance of nerve or vessel injury in trauma.
- Correlate types of head injury to their pathophysiology.
- Review the GLASSGOW COMA SCALE
- Recognize signs in neurologically deteriorating patient.

- Demonstrate the ABCDE approach and its relation to the avoidance of secondary neurological damage after head injury.
- Discuss the surgical treatment and complications

26.	**Machine, Equipment & monitoring**	**LGIS**	**Prof. Brig®. Dr. Mubashir**	

Learning Outcomes:

- List the commonly used anesthesia equipment & briefly describe their use
- Enumerate different monitoring modalities & equipment utilized in major & minor surgery's.
- Describe basis international monitoring slandered & be able to interpret basic information gained from monitoring.

23	**Massive Transfusion Protocol**	**LGIS**	**Dr Sadia Farhan**	

Learning Outcomes:

- -Recognize the benefits of MTP:
- Reduced mortality: due to severe traumatic bleeding.
- Earlier hemostasis: with 1:1:1 ratio.
- Understand potential complications:
- Coagulopathy: due to massive transfusion.
- Electrolyte imbalance: due to transfusion [3].

27.	**Imaging of Chest**	**LGIS**	**Assoc. Prof Dr Nadia Gul**	

Learning Outcomes:

- 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 relating to use ionizing radiation
- Justify use of relevant imaging techniques in various clinical scenarios reference to advantages and disadvantages.
- Differentiate between normal and pathological findings of Chest X Ray.
- Differentiate between normal and different pathological conditions on x-ray

28.	**Interpretation of arterial blood gasses/ indication of ventilatory support**	**LGIS**	**Prof. Brig®. Dr. Mubashir**	

Learning Outcomes:

- Interpret data provided in arterial blood gases & generate a differential diagnosis of common respiratory & metabolic acid base distance.
- Consulate the test result with clinical condition of patient.

● Enlist the condition in which ventilatory support is required. ● Enumerate the criteria for starting & stopping ventilatory support.				
29.	**Disaster surgery, triage damage control surgery**	**LGIS**	**Prof. Dr. Naeem Ashraf**	
Learning Outcomes: ● Describe principles of triage 7 damage control surgery/ golden hour etc.				
30.	**Spinal Injuries**	**LGIS**	**Asstt. Prof. Dr. M. Mehboob Alam**	
Learning Outcomes: ● Differentiate between compression and laceration in nerve injury on the basis of pathology presentation. ● Identify historical and current concepts of sensibility retraining in nerve injury. ● Identify common nerve palsies, rehabilitation phases, treatment approaches and associated problems. ● Discuss common nerve compression syndromes, anatomical features, provocative tests, differential diagnosis and therapeutic interventions ● Relate functional anatomy to mechanisms for pain production. ● Differentiate between different types of low back pain based on signs and symptoms ● Develop management plan for a patient with a Lower back pain. ● Justify physical therapy as management option.				
31.	**Plastic, Reconstructive Smg+ flaps**	**LGIS**	**Senior Registrar Dr. Junaid**	
Learning Outcomes: ● Describe different types of skin flap & indication				
32.	**Imaging of Hepatobiliary**	**LGIS**	**Assoc. Prof. Dr. Nadia Gull**	
Learning Outcomes: ● 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 relating to use ionizing radiation ● Justify use of relevant imaging techniques in various clinical scenarios reference to advantages and disadvantages. ● Differentiate between normal and pathological findings of Cxray. ● Differentiate between normal and different pathological conditions on x ray.				
33	**Hydrocephalus**			

Learning Outcomes:

- Define Hydrocephalus
- List common symptoms and signs of acute hydrocephalus in children
- List common symptoms and signs of normal pressure hydrocephalus in adults
- Define communicating and non-communicating hydrocephalus
- Describe the difference in the treatments of these conditions

Learning Resources:

1. **Reference Books**
   - Bailey & Loves, Norman brows, clinical method, Anesthesia for medical students & Chapman & Nakielny's Aids to radiological differential Diagnosis.
2. **Online Resources**
   - Zoom/ G Class Room
3. **Library resources**

- Bailey & Love's Short Practice of Surgery
- Short Textbook of Surgery by R.G. Prasad
- SRB's Manual of Surgery by Sriram Bhat M
- Radiology for Medical Students by David Sutton
- Clinical Radiology Made Easy by Arnold D. Friedman
- Basic Clinical Oncology by Ian S. Fentiman
- Oxford Handbook of Oncology
- Essentials of Orthopaedics by Maheshwari J
- Clinical Anesthesia by Paul G. Barash

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SR Dr Junaid	

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**.**

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

II. Attendance policy:

a. Students are required to mark attendance for every class.
b. The attendance is compiled by the respective department and submitted to student affairs by the 10th of each month.
c. The Students Affair Department will compile the absent report and a 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 a 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 the academic year, a consolidated state of attendance of students will be submitted to the 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

Write it down

Test yourself

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

Improve memorization with Mnemonics

Incorporate auditory methods; use online podcasts

Use visuals, images, concept maps & illustration charts

Consider forming a study group or find an accountability buddy

Take 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: Genitourinary System

Wah Medical College
4th Year MBBS Session 2023-2024
Time Table From:22-04-2024 To 26-04-2024 (18th Batch)

Course Code:**Y4BXI**
Academic Week: **10**

Days/Date	08:00-11:20	11:20 -12:10		12:10-1:00		01:00-01:50		1:50: 2:05 Break	2:05-3:00	
Monday 22-04-2024	Clinical Rotation	Com.med	Student Seminar	Medicine	LGIS	Pathology	LGIS		Gynae	LGIS
			Lect #4		Lect #4		Lect #4			Lect #4
Tuesday 23-04-2024	(21 Days) 21-03-2024 to 09-05-2024) D = Medicine E = Community Medicine F= ENT A= Eye B= Surgery C = Gynae / Peads (Students will go first 3 days in Medicine and last 3 days in Surgery Deptt)	Pathology	SGD	EYE	LGIS	Medicine	LGIS		Research	SGD
			Lect #4		Lect #4		Lect #4			Lect #4
Wednesday 24-04-2024		Com.med	LGIS	ENT	LGIS	Surgery	LGIS		Pathology	LGIS
									Gout	
			Lect #4		Lect #4		Lec #4		Asstt Prof. Dr. Lubna Ehtizaz	Lect #4
Thursday 25-04-2024		Pathology	LGIS	Paeds	LGIS	Surgery	LGIS			LGIS
			Lect # 4		Lect #4		Lect #4		Senior Lec. Mr. Hassan Ali	Lect #4

Days/Date	8:00-08:50		8:50-09:40		9:40-10:30		10:30-11:20		11:20-1:00		1:00: 1:20 Juma Break	1:20-3:00	
Friday 26-04-2024	Medicine	LGIS	Surgery	LGIS	Research	SGD	Pathology	SDL	Pathology	Behavioral Sciences		Pathology	Behavioral Sciences
		Lect #4		Lect #4		Lect #4		Lect #4					
Saturday 27-04-2024	09:00 -01:00												
	Team Work (G Class) Dr. Rabia Ashraf												

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Professor
Dr. Jamila
In charge Y4BXI

Professor
Dr. S. Sabah Imran
Coordinator 4th year / In charge Y4BX

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