# WAH MEDICAL COLLEGE

2024-2028


Department of Medical Education

STUDY GUIDE
3rd YEAR MBBS
Y3BVIII

2024-2028

# 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. Program Learning Outcomes of WMC MBBS Program:

| At the end of our five-year MBBS program, the graduates should be able to: |
|---|
| PLO 1: Independently manage common, non-critical clinical problems. |
| PLO 2: Assist in the management of critically ill patients & demonstrate competency in life saving procedures. |
| PLO 3: Exhibit the attributes of an ethical professional. |
| PLO 4: Conduct research which brings relevance to health care practices. |
| PLO 5: Act as an efficient community health promoter. |
| PLO 6: Exhibit scientific knowledge in all professional activities. |
| PLO 7: Demonstrate clear and efficient written & verbal communication skills. |
| PLO 8: Exhibit the habits of a lifelong learner. |

# 2. Introduction to the Study Guide:

## I. Objectives of the Study Guide

Dear Students,

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

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

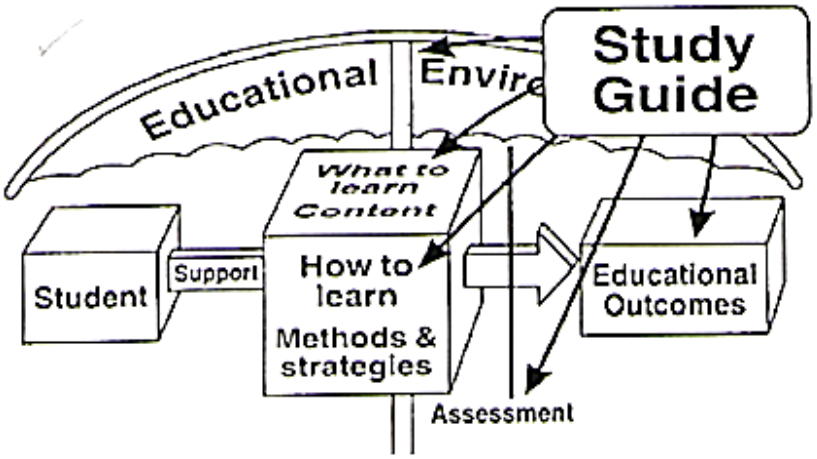



**Figure 1. Objectives of the study Guide**(HARDEN, J.M. LAIDLAW, E.A. HESKETH, 1999)

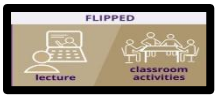
## II. Commonly used abbreviations & Logos in the study guide

## Learning Outcomes:

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

1. **Educational Strategies:**

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

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

**Large Group Interactive Sessions**

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

**Flipped classroom**

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

**Small Group Discussion**

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

**Case-Based Learning**

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

**Self-Directed Study**

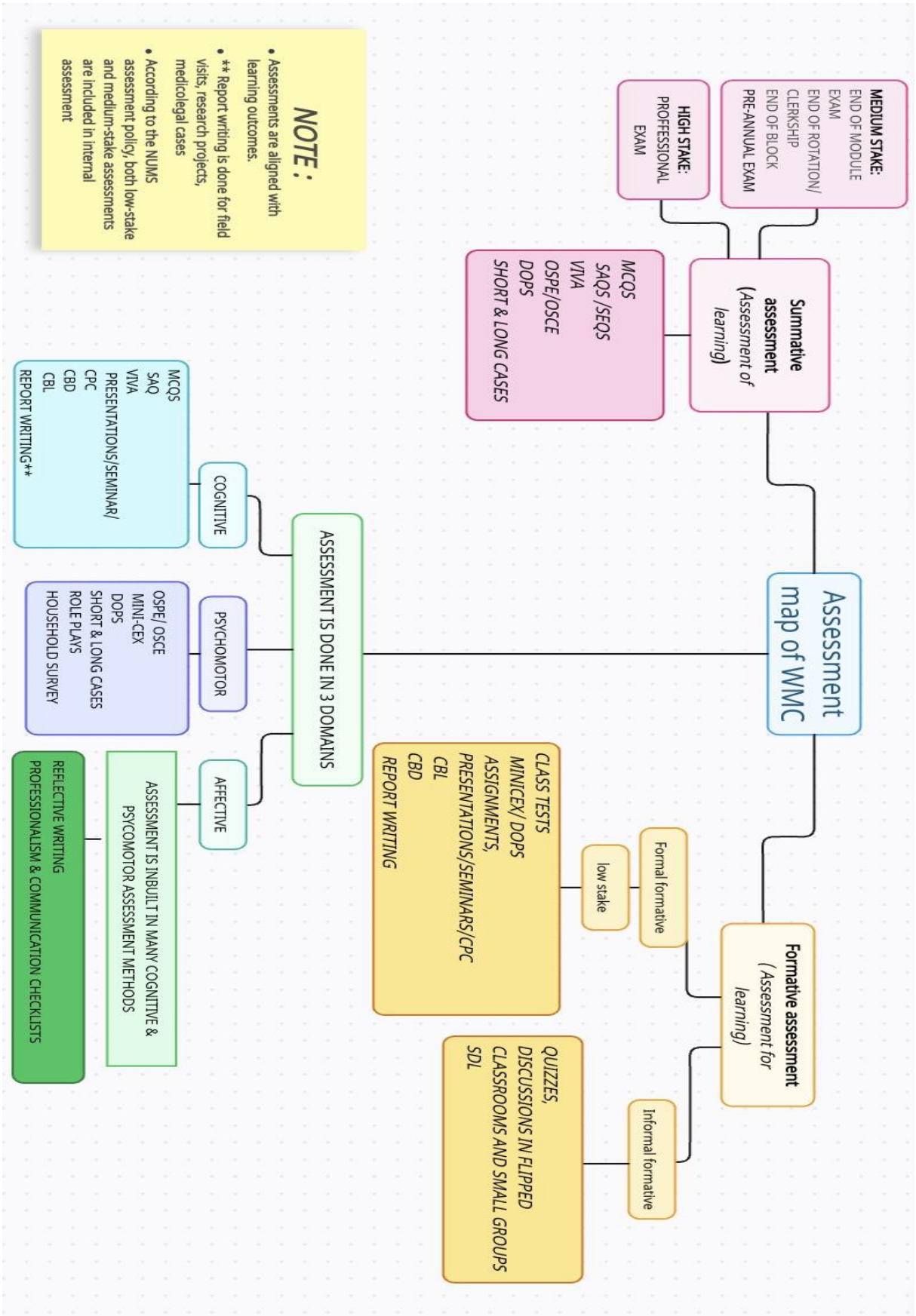
Students assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from learning Resource Center, teachers, and resource persons within and outside the college. Students can utilize the time within the college schedule hours for self-study.

**Bedside teaching**

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

# 3. Assessment Map & Strategies

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



## 4. Formative assessment

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

1. Class tests, Assignments, Presentations, Quizzes
2. Assessment of professionalism via checklists provided in logbooks/ practical copies in all learning sessions.
3. Viva
4. Subject-specific & Integrated CBL Assessment
5. Practical Assessment (OSPE)
6. Ward tests (Mini-CEX, DOPS, OSCE)

- Some of these assessments will be used only to inform students where they stand against benchmarks (Informal Formative) and some will be used in the calculation of internal assessment (Formal Formative).

- The scores of all formal formative assessments shall be used for calculation of the **internal assessment** according to NUMS curriculum. The weighting of internal assessment shall be **20%** in 3rd professional MBBS Examination. Internal assessment will be submitted to NUMS examination branch at least two weeks prior to the annual exam.

- The same internal assessment shall be counted both for annual and supplementary examinations. The students who are relegated, however, can improve the internal assessment during subsequent year.

## 5. Summative Assessment

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

towards internal assessment. Failure in clinical assessment will require the student to repeat the end rotation exam.

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

**Annual Professional Examination:**

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

**Marks Distribution will be as follows:**

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

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

**Paper 1:**

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

c. Time =80 min

**Paper-2:**

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

**Internal Assessment**

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

## FORENSIC MEDICINE (200)

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

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

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

Time Allowed= 03 hrs

**Internal assessment** 20%= 20 marks

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

### Internal Assessment (Theory) – MBBS

| Criteria | Percentage | I / II/III |
|---|---|---|
| ▪ Continuous assessment : (Average score of class tests/ quizzes etc) | **03 %** | **Marksobtained*3/Total Marks** |
| ▪ EOB Exam ; For each discipline; | **05 %** | **Marks obtained* 5 / Total Marks** |
| ▪ Attendance | **02 %** | **> 95 % = 02, 90- 94 % = 01** |
| ▪ PreannualExam:TheoryPaperI,II&III | **10 %** | **Marks obtained*10 /Total Marks** |
| ▪ **Final IA** | **20%** | |

### Internal Assessment (Practical) – MBBS

| Criteria | Percentage | I / II/III |
|---|---|---|
| ▪ Continuous assessment (03%): (EOB) | **03%** | **Marks obtained * 3/Total Marks** |
| ▪ Attendance (02 %) | **02 %** | **> 95 % = 02, 90- 94 % = 01** |
| ▪ Practical books/Logbooks (02%) | **02%** | **Obtainedmarks*02/Total marks** |

| | | |
|---|---|---|
| ▪ Discipline/Attitude,Responsibilityand Teamwork | **03%** | **Obtainedmarks*03/Total marks** |
| ▪ Pre Annual Practicals | **10%** | **Marks obtained* 10 /Total Marks** |
| ▪ **Final IA** | **20%** | |

# 6. Structured Summary of Y3B-VIII M- XVI Hematology& Immunology Module

| BLOCKS | BLOCK – VIII |
|---|---|
| **Module** | **MODULE- XVI Hematology& Immunology Module** |
| **DURATION** | **03 weeks** |
| **Prerequisite Module** | 2nd Prof. Exam |
| **Pharmacology** | **Hematology Module**<br>• Drugs used in Anemia.<br>• Drug used in Malaria&HIV (Blood borne disease)<br>• Autacoids (Prostaglandins, Histamine, Serotonin) NSAIDs, DMARDs, $H_1$ receptors blockers, Drugs used to treat Gout.<br>• Immunomodulators, Heavy Metal toxicity |
| **Pathology** | Medically important bloodborne pathogens, Immune system with their clinical manifestations. |
| **Forensic Medicine** | Biological specimens, General Toxicology, Specific Poisons, Forensic Psychiatry, Regional Injuries of Head, Face, Neck, Vertebral Column and its contents, Regional Injuries, Heat Cold, Electrical Injuries, Violent Deaths due to Asphyxia. |
| **Community Medicine** | General Immunology, Genetics, Drug addiction, Mental Health, Social sciences, Respiratory Infections |
| **Research Methodology** | Distributions, Hypothesis testing, Sampling, Sampling Errors, House Hold Survey |
| **Medicine** | Anemia and bleeding disorders, hypersensitivity reaction, common neurological symptoms, common pulmonary diseases. |
| **Surgery** | • Hazards of blood transfusion<br>• Organ kidney transplant<br>• Transplant rejection its immunology& immunosuppression |
| **Pediatrics** | Anemias, Bleeding disorders in children. Down Syndrome, Meningitis, Respiratory tract illnesses. |
| **Gynecology** | Anemia in pregnancy, thalassemia minor, mode of inheritance of inherited disorder |
| **ENT** | Applied anatomy & physiology of oral cavity, pharynx, nose, paranasal sinuses; blood supply, nerve supply and lymphatic drainage of nose PNS, role of air condition of inspired air, olfaction, speech and reflex function of nose and |

| | |
|---|---|
| | PNS. |
| **Ophthalmology** | Uveal Tract, Cornea, Lens, and Glaucoma and neuro Ophthalmology |
| **PCMILE** | Research on genetics & Ethics, Ethical issues, and pharmaceutical companies, Accept errors & mistakes-Professionalism, Surveillance for infection control, Practical aspects of infection control, Law in relation to medical ethics, Informed consent, Communicating with patients for counselling & interviewing, Management of exposure to blood-borne pathogens |

# 7. Block Development Committee

| Chairperson | Maj(R) Prof. Dr. Khalida Ajmal |
|---|---|
| **Block In charge** | Dr. Ayesha Afzal |
| **Members/ Resource persons** | **Pharmacology:** Dr. Saima Rafique<br>**Forensic Medicine:** Dr. Muhammad Iqbal<br>**Pathology:** Dr. Tahira Tehseen<br>**Community Medicine:** Dr. Robina Mushtaq Rizvi<br>**Research Methodology:** Dr. Robina Mushtaq Rizvi<br>**Medicine:** Dr. Riffat Omer<br>**Surgery:** Dr. Naeem Akhter<br>**Pediatrics:** Dr. Saba Mushtaq<br>**Gynecology:** Dr. Ayesha Naz<br>**Behavioral Science:** Ms. Sara Rubab |
| **Study guide Developed By** | **Department of Medical Education**<br>**Wah Medical College**<br>**under Supervision of**<br>**Prof. Dr. Musarat Ramzan** |
| **Resource person for Study Guide** | **Dr. Memoona Mansoor** |

# 8. Course content

## Pharmacology

**Subject Learning Outcomes (SLO)**

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

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

**Block Learning Outcomes (BLO):**

- **BLO-1:** Justify the management plan of anemias, coagulation disorders & Malaria by correlating to the pathophysiological basis of the diseases. (SLO-2,3,4,5)
- **BLO-2:** Rationalize the clinical applications of immunomodulators and DMARDs. (SLO-2,3,4,5)
- **BLO-3:** Outline the essential pharmacological principles of toxicology. (SLO-3,4)

| S# | Topic | Educational Strategy | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Drugs used in Anemias** | LGIS | Assoc. Prof Dr. Saima | Must Know |
| **Learning outcomes:**<br>• Correlate the types & causes of anemia with its treatment strategy. (BLO-1) *MCQ/SEQ (S/F)* | | | | |
| | | | | |
| 2. | **Anticoagulants** | LGIS | Prof Maj® Dr. Khalida Ajmal | Must Know |
| **Learning outcomes:**<br>• Recommend the treatment of coagulation disorders by correlating it to the patho-physiology of the diseases. (BLO-1) *MCQ/SEQ (S)* | | | | |
| 3. | **Thrombolytics &** | LGIS | Assoc. Prof Dr. | Must Know |

| | | | | |
|---|---|---|---|---|
| | **Anti-platelets** | | Ayesha Afzal | |
| **Learning outcomes:**<br>• Appraise the role of thrombolytics & anti-platelet drugs in various clinical disorders. (BLO-1) *MCQ/SEQ (S)* | | | | |
| 5. | **Drug used in Malaria** | Flipped Classroom | Prof Maj® Dr. Khalida Ajmal | Must Know |
| **Learning outcomes:**<br>• Justify the management plan for chemoprophylaxis and treatment of all types of malaria.<br>(BLO-1) *MCQ /SEQ (S/F)* | | | | |
| 8. | **Gout** | Flipped Classroom | Assoc. Prof Dr. Saima | Must Know |
| **Learning outcomes:**<br>• Rationalize the treatment strategy for the management of acute and chronic gout. (BLO-2) *MCQ/SEQ (S/F)* | | | | |
| 9. | **DMARDs** | LGIS | Asst. Prof Dr. Tajwar | Should Know |
| **Learning outcomes:**<br>• Describe the role of DMARDs in Rheumatoid arthritis and other autoimmune disorders. (BLO-2) *MCQ/ SEQ (S/F)* | | | | |
| 10. | **Immunomodulators** | LGIS | Asst. Prof Dr. Tajwar | Good to Know |
| **Learning outcomes:**<br>• Justify the use of immunostimulants including probiotics, immunosuppressants, vaccines and sera. (BLO-2) *MCQ (F)* | | | | |
| 11. | **Heavy Metal toxicity** | LGIS | Dr. Batool Jahan | Good to Know |
| **Learning outcomes:**<br>• Describe the role of chelating agents in various types of heavy metals toxicities. (BLO-3) *MCQ (S/F)* | | | | |
| | **Module Test** | | | |

# Practical Work

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

- Justify the selection of priority drugs for certain indications and prescribe medicine accordingly.
- Counsel the patient on the dosage & adverse effects of prescribed drugs.
- Calculate different concentrations of drugs/ Solutions used in various clinical conditions.

| S.# | **Topic** | Educational Strategy | Instructor | Importance (**Must Know Good to Know Nice to Know**) |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1. | **Prescription writing on Iron deficiency Anemia, Acute attack of Gout** | Simulation & Role play in SGD | Assoc Prof. Dr. Saima & Asst Prof. Dr Tajwar All Lecturers | Must Know |
| **Learning outcomes:**<br>• Write a suitable prescription for anemia & allergic rhinitafter justifying the selection of a P- drug. *Unobserved OSPE (F & S)*<br>• Counsel the patient on the dosage & adverse effects of used drugs. *Observed OSPE (F & S)* | | | | |
| 2. | **Prescription writing on Malaria & Cerebral Malaria, Rheumatoid Arthritis** | SGD | Assoc Prof. Dr. Saima & Asst Prof. Dr Tajwar All Lecturers | Must Know |
| **Learning outcomes:**<br>• Calculate different concentrations of percentage solutions used in various clinical conditions. *Unobserved OSPE (F & S)* | | | | |
| 3. | **Stock solutions** | SGD | Assoc Prof. Dr. Saima & Asst Prof. Dr. Tajwar All Lecturers | Must Know |
| **Learning outcomes:**<br>• Calculate different concentrations of stock solutions used in various clinical conditions. *Unobserved OSPE (F & S)* | | | | |

# Case Based Learning (CBLs)

***CBL No: 01 Anti-coagulants, Anti-platelets & Thrombolytics***

**Scenario:**

A 76-year-old man known case of Type 2 Diabetes and ischemic heart disease presents to the emergency department after experiencing a sudden episode of weakness in his right arm and difficulty speaking while watching television. His wife noticed that he was unable to articulate words clearly and had drooping on the right side of his face. The symptoms resolved completely within 20 minutes before arrival at the hospital.

**Learning Outcome:**

Justify the use of anticoagulants, antiplatelets and thrombolytics in a patient of IHD by correlating their MOA to the pathophysiology of this disease.

***CBL No: 02 Anti-malarial Drugs***

**Case Scenario:**

A 27-year-old-man has just returned to Europe from a trip to Southeast Asia. He was advised some drugs for prevention of malaria, but he refused this therapy. Over the past 24 hours, he has developed shaking, chills and high-grade fever of 104 ◦F. A blood smear reveals ring forms of Plasmodium. He has been prescribed tablet Chloroquine & Paracetamol for 3 days. On revisit after 3 days, he was afebrile, but he was prescribed another drug for 2 weeks.

**Learning Outcomes:**

- Evaluate the role of various anti-malarial drugs along with WHO recommendations for treatment of malaria.

***CBL No: 03 DMARDs***

**Case Scenario:**

A 68-year-old woman presents with complaints of morning stiffness and pain in her wrist and knee joints which increases on exercise. On physical examination, these joints are slightly swollen. The rest of the examination is unremarkable. Her laboratory findings show anemia, elevated erythrocyte sedimentation rate, and positive rheumatoid factor. Her physician put her on DMARDs therapy.

**Learning Outcome:**

- Correlate the mode of action and pharmacological effects of DMARDs to their therapeutic uses.

***CBL No: 04 Gout***

**Case Scenario:**

A 50-year-old male presents to OPD with complaints of rapid onset of pain and swelling in his right big toe. Patient gives history of two similar episodes previously lasting for 4-5 days which was treated successfully by General Practitioner. His drug history reveals hydrochlorothiazide therapy for hypertension. On examination, his right metatarsophalangeal joint is red, hot, and swollen. Lab investigations reveal raised serum uric acid (10 mg/dl).

**Learning Outcome:**

- Rationalize the treatment strategies for the management of acute & chronic gout.

## Learning Resources:

**Textbook:**

- Basic and Clinical Pharmacology by Bertram G Katzung 15th Edition

**Reference Books:**

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

1. **Online resources:**
   - https://www.youtube.com/
     - Pharmacology lectures by Dr. Najeeb
     - Pharmacology lectures by Kaplan
     - Pharmacology made easy
2. **Library resources:**
   - Tripathy KD, Essentials of Medical Pharmacology, 6th Edition.
   - Lippincott Illustrated Reviews Pharmacology 7th Edition
   - Current Medical Diagnosis and treatment- latest Edition
   - Oxford Handbook of clinical medicine by J.A. B. Collier-latest edition

- Workbook and Casebook for Goodman and Gilman's The Pharmacological Basis of Therapeutics: latest Edition.

- **Teaching Faculty:**

| Name | Email address |
|---|---|
| Maj (R) Dr. Khalida Ajmal (HOD & Prof) | drkhalida@wahmedicalcollege.edu.pk |
| Dr. Ayesha Afzal (Assoc. Prof) | dr.ayeshaafzal@hotmail.com<br>drayeshaafzal@wahmedicalcollege.edu.pk |
| Dr. Saima (Assoc. Prof) | saima@wahmedicalcollege.edu.pk |
| Dr. Tajwar Sultana | tjwrsultana@gmail.com |
| Dr Batool Jahan | Batooljahan27@gmail.com |
| Dr Ahmad Kamran | iahmad2k15@gmail.com |
| Dr. Bushra Malik | bush83458@gmail.com |
| Dr. Zunaira Asghar Awan | zunaira.asghar97@gmail.com |
| Dr. Umaima Riaz | umaima.riaz99@gmail.com |

# General Pathology

**Subject Learning Outcomes (SLO):**

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

**Block Learning Outcomes (BLO):**

Relate the basic pathology of immune system to the common diseases.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | •Immune system, complement system& Immunoglobulins<br>• Hypersensitivity I & II<br>• Hypersensitivity III & IV<br>• HLA system, Tissue transplantation, tolerance and autoimmunity<br>• Autoimmune diseases<br>• Immune deficiency syndrome, AIDS<br>• Lab diagnosis of immunological diseases | LGIS/SDL/ CBL | Prof. Dr Jamila and all faculty members | Must Know |
| **Learning Outcomes:**<br>• Categorize the components of normal immune system along with various pathological immune responses.<br>• Classify hypersensitivity reactions with examples.<br>• Identify the classes of immunoglobulins & their role in immunity.<br>• Discuss the importance of HLA system<br>• Recognize types of transplants and importance of tissue transplantation, tolerance & autoimmunity.<br>• Evaluate the autoimmune diseases and various types of immunodeficient syndromes.<br>• Lab diagnosis of immunological diseases.<br>**Assessment strategy:**<br>MCQ, SEQ/ SAQ, Viva-Voce | | | | |
| 2. | Amyloidosis | LGIS | Prof. Dr Jamila | Good to know |

**Learning Outcomes:**
•Discuss etiology, pathogenesis and morphology of Amyloidosis
**Assessment strategy:**
o MCQ, SEQ/ SAQ, Viva-Voce

**References/ Learning resources:**

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

# Microbiology

**Block Learning Outcomes:**

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

- Correlate the basic morphological, physiological and genetic characteristics and pathological mechanisms of organisms
- Correlate the mechanisms of disease production with clinical manifestations, diagnostic modalities, treatment and preventive strategies of important bloodborne pathogens causing infections.

| | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Plasmodium Trypanosomes Leishmania** | LGIS/ SDL | Prof. Dr Jamila | Must know |
| 2. | **Viral hemorrhagic Fever** | LGIS / SDL/ CBL | Assoc. Prof. Dr Tahira Tehseen and all faculty members | Must know |

**Learning Outcomes:**

- Classify medically important blood borne pathogens.
- Describe the mechanism of action, mode of transmission into body.
- Clinical manifestation of the disease.
- Suggest Treatment and preventive measures for paper-based clinical scenarios.

**Assessment strategy:**

- MCQ, SEQ/ SAQ, Viva-Voce

**References/ Learning resources:**

- Review of Medical Microbiology and Immunology, Warren Levinson, 17th Edition
- Medical Microbiology, Jawetz, Melnick & Adelberg, 28th Edition

**Online Rresources:**

- www.cdc.gov

**Library resources**

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

## General Pathology Practicals

**Learning Outcomes:**
.Correlate the histopathological features with the pathological processes of immune system &Amyloidosis.

| S. | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | Identify the following slide Amyloidosis | Practical/SGD | All Faculty Members | Must Know |
| **Learning Outcomes:**<br>• Correlate the histopathological features with the pathological process of Amyloidosis.<br>**Assessment strategy:**<br>OSPE | | | | |
| 2. | Interpret Blood CP | Practical/SGD | All Faculty Members | Must Know |
| **Learning Outcomes:**<br>• Correlate the findings in Blood Complete Picture with underlying pathology.<br>**Assessment strategy:**<br>OSPE | | | | |

- **References/ Learning resources:**
- Robbins & Cotran Pathologic Basis of Diseases 10th Edition.
- Robbins Basic Pathology 10th Edition

## Microbiology Practical

**Learning Outcomes:**
Order and interpret laboratory diagnostic tests for identification of medically important blood borne pathogens.
.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | Malarial parasites LD bodies | Practical/ SGD | All faculty members | Must Know |
| **Learning Outcomes:**<br>Identify and interpretation of report of medically important blood borne pathogens. | | | | |
| **Assessment strategy:**<br>• OSPE | | | | |

| | | | | |
|---|---|---|---|---|
| 2. | Identify different types of blood culture bottles Demonstrate understanding of blood culture collection technique. | Practical/SGD | All faculty members | Good to know |
| 3. | Interpret culture and sensitivity of selected bacteria. | Practical/SGD | All faculty members | Must Know |

**Learning Outcomes:**

- Identify and interpretation of report of blood culture and sensitivity.

**Assessment strategy:**

- OSPE

## Pathology Case-Based Learning
## CBL 1:Viral Hemorrhagic fever

**Learning Outcomes:**

Correlate the etiology, morphology and pathophysiological events with the pathological process of Viral Hemorrhagic fever

**Case scenario:**

(A patient with fever, severe myalgia and headache)

**History:**

A 40-year-old male, presented soon after monsoon season with fever, severe myalgia, arthralgia, vomiting and headache for 3 days. The patient had been taking tablet paracetamol but the fever did not resolve.

**Physical Examination:**

Upon physical examination, he had temperature of 39.8°C, hypotension (90/50 mmHg), tachycardia and generalized petechial hemorrhages on the skin.

Laboratory Investigations: Blood complete picture showed mild leukocytosis, normocytic anemia and thrombocytopenia. No malarial parasites were seen. Tests for typhoid were also negative.

**Treatment:**

The patient was admitted and samples were taken for other tests. The patient was continued on Paracetamol.

**LEARNING OBJECTIVES:**

1. Enlist other tests that could be done to reach a definitive diagnosis.
2. Analyze the scenario to conclude a provisional diagnosis? Justify other differential diagnoses which come to your mind?
3. Paraphrase the term viral hemorrhagic fever? Outline the organisms causing viral hemorrhagic fever.
4. Enumerate common viral hemorrhagic diseases in our setup.
5. Describe Crimean-Congo hemorrhagic fever and the ways it spread?
6. Discuss the laboratory methods of diagnosis of CCHF? Plan the treatment and preventive strategies of CCHF.
7. Describe the pathogenesis of Dengue fever.
8. Explain the diagnostic modalities of a case of dengue fever?

9. Discuss the treatment plans and preventive strategies of dengue?
10. Categorize the Ebola virus? Describe its modes of transmission, clinical features, laboratory diagnosis and preventive measures.

## CBL 2:Known Case of HIV/AIDS presents with fever

**Learning Outcomes:**

Correlate the etiology, morphology and pathophysiological events with the pathological process of HIV/AIDS

**Case scenario:**

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

**Learning Objectives:**

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

## Hypersensitivity Reaction Type 1

**Case Scenario:**

**History:** A 15 years old female was given injection penicillin intramuscular. After 20 minutes she developed severe nauseating condition, fainting and choking sensation. She fell down in semiconscious state.

**Examination:** On examination, blood pressure was 80/40 mm Hg. Her hands were cold and sweaty, pulse was irregular. Her breathing was laborious.

**Treatment:** Considering an acute drug reaction she was immediately given injection adrenalin and solucortef (hydrocortisone). She gradually felt better and gained her consciousness.

**Late examination:** Her Blood pressure became 120/80 mm Hg and pulse became regular. Later on, she developed rash all over her body as well.

**Learning Objectives**

- Define hapten.
- Enumerate the characteristic features of hapten.
- Identify the type of hypersensitivity reaction she developed, and what are the other types?
- Explain above signs & symptoms.
- Explain pathogenesis of above symptoms particularly responsible mediators and immunoglobulins in this condition and in other types of hypersensitivity reactions.
- Differentiate the features of systemic disorder and a local reaction in type 1 hypersensitivity reaction.
- Describe the morphological changes in these reactions?

## Hypersensitivity Reaction Type 2

**Case Scenario:** A 45 years old male, labor by profession, presented in medical OPD with low grade fever, night sweats, weight loss, productive cough, and mild chest pain for 3 weeks. His detailed systemic examination was unremarkable except for pallor. A set of investigations was carried out including complete blood picture, ESR, X-ray chest and an intradermal test.

**Lab Results:**

- Blood complete picture revealed Hb of 12gms/dl
- ESR showed 90 mm fall at the end of first hour.
- X-ray chest showed bilateral hilar lymphadenopathy and opacities in apical lobe of right lungs.
- PPD (5TU) injection was given intradermally and an area of induration of 13 mm noted at 72 hrs.

**Learning Objectives**

- Discuss the pathogenesis of hypersensitivity reaction and mention the mediators involved?
- Enumerate the hypersensitivity reaction seen in this intradermal test?
- Identify the test and enlist its indications?
- Describe the morphological features of above mentioned lesion?
- Interpret the intradermal test and mention the condition leading to false positive and false negative results?
- Identify the type of hypersensitivity reaction and enlist specific examples of this type of hypersensitivity reaction?

**Learning Resources:**

1. **Reference Books**
   - Review of Medical Microbiology and Immunology, Warren Levinson, 15th Edition
   - Medical Microbiology, Jawetz, Melnick & Adelberg, 27th Edition
2. **Online resources**

   www.cdc.gov
3. **Library resources**
   - Foundations in Microbiology 10th edition Kathleen Talaro, Barry Chess

**Teaching Faculty:**

| Name | Email address |
|---|---|
| Prof. Dr Jamila | Jamila1601@yahoo.com |
| Assoc.Prof Dr Tahira Tehseen | drtahira.tehseen7@gmail.com |

# Forensic Medicine

## Subject Learning Outcomes (SLO):

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

1. Correlate the given medico legal with the cause, manner, mode and mechanism of death. (PLO1, PLO2)
2. Relate the relevant laws with the medico legal practice.(PLO5, PLO7)
3. Infer the given autopsy findings for writing a comprehensive medico legal report. (PLO6, PLO7)
4. Describe the procedure of collection, preservation and transportation of biological specimens to Forensic Science Laboratory and relevant offices.(PLO6, PLO7)
5. Differentiate the plans of management in acute and chronic toxicological cases. (PLO1, PLO2)
6. Apply ethical principles of Forensic Medicine in the given situation. (PLO3, PLO4)

## Block Learning Outcomes (BLO):

- Appraise the Forensic importance of Biological Specimens ( Blood, Semen, Saliva, Vomitus, Breath, Urine, Hair)**(SLO3,4)**
- Relate the cases of toxicology to its related laws. **(SLO2)**
- Plan to manage toxicological cases in acute and chronic exposure. **(SLO5)**

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Biological Specimen** | LGIS | Dr. M.Iqbal | Must Know |
| **Learning Outcomes:**<br>• Forensic importance of biological specimens ( Blood, Semen, Salive, Vomitus, Breath, Urine, Hair) (SEQ,MCQ)<br>• Describe the method of their collection, preservation, dispatch and the common labortary tests. (SEQ,MCQ) | | | | |
| 2. | **General Toxicology** | LGIS | Dr. M.Iqbal | Good to Know |
| **Learning Outcomes:**<br>• Describe the scope of toxicology's forensic aspect, its classification (SEQ)<br>• Diagnose acute & chronic toxicological cases in living & dead, its fatal dose, fatal period and its exception. (SEQ,MCQ)<br>• Utilize general principles of treatment. (SEQ)<br>• Prepare & interpret the chemical examiner report, autopsy technique. (SEQ)<br>• Define the different treatments. Techniques like emesis, gastric lavage, rehydration, catharsis & othermethods used for treatment of poisoning. (SEQ,MCQ) | | | | |

# Forensic Medicine and Toxicology Practical's

**Block Learning Outcomes:**

After completion of block, students should be able to know:

- Appraise the Forensic importance of biological specimens like blood and Hair.
- Method of their collection, preservation, dispatch and the common laboratory tests.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1 | Slides of Animal and Human blood | SGD | All lecturer | Good to know |
| • To know the difference between animal and human blood and their medico legal importance. ( VIVA,OSPE) | | | | |
| 2 | Slides of Animal and Human Hair | SGD | All lecturer | Good to know |
| • To know the difference between animal and human hair and their medico legal importance. ( VIVA,OSPE) | | | | |

**Learning Resources:**

1. **Reference Books**
   - Parikh's text book of Forensic medicine and Toxicology Dr C.K parikh.
   - Principles and practice of forensic medicine by Prof Dr Naseeb R Awan.
   - Simpson's Forensic Medicine Richard Shepherd.
2. **Online resources**
   - https://youtube.com/C/DRJAVEDIQBALKHOKHARLECTURESFORENSICMEDICIN
1. **Library resources**
   - Parikh's text book of Forensic medicine and Toxicology Dr C.K parikh
   - Principles and practice of forensic medicine by Prof Dr Naseeb R Awan
   - Simpson's Forensic Medicine Richard Shepherd

**Teaching faculty:**

| Name | Email address |
|---|---|
| Prof Dr. Babar Rashid Chughtai | brchughtai@gmail.com |
| Prof Dr. Muhammad Iqbal | drmiqbalkhan6@gmail.com |
| Dr. Sarah Pervez khan | Sarahpervez84@gmail.com |
| Dr. Misbah Amanat | Perfect_smile95@yahoo.com |
| Dr. Muhammad Kashif | dr.kashifclinic@gmail.com |
| Dr. Muhammad Usman Khan | muk_8@live.com |

# Community Medicine

**Subject Learning Outcomes**

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

**Block Learning Outcomes**

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

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **General Immunology** | Flipped Classroom | Prof. Dr. S Sabah Imran | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Interpret the immune reactions, types of immunity, herd immunity<br>• Describe pre-requisites of vaccination including cold chain, hazards, contra-indications & precautions<br>• Recommend immunizing agents in various situations.<br>• Investigate the adverse effect following immunization<br>• Administer polio vaccine following the protocol.<br>• Advise mothers for vaccination in different situations<br>**Assessment strategy: MCQ, SEQ, OSPE, Viva** | | | | |

**Learning Resources:**

1. **Text Books**

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

2. **Reference Books**

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

3. **Online resources**

General Immunology

4. **Library resources**

- Notes/Handouts by Faculty
- G classroom

**Teaching Faculty:**

| Name | Email address |
|---|---|
| **Prof. Dr. Musarat Ramzan** | dean@wahmedicalcollege.edu.pk |
| **Prof. Dr. S. Sabah Imran** | sabahimran@wahmedicalcollege.edu.pk |

## Surgery

**Preamble:**

Students will be taught history taking and relevant examination in Medicine / Surgery rotations to enhance their clinical examination skills. Research methodology and Behavioral Sciences will be taught as a part of the longitudinal theme. Apart from attending daily scheduled sessions, students should engage in self-directed learning to achieve the desired objectives

**Learning Outcomes:**

At the end of this module, students should be able to:

- Demonstrate all steps of history taking and examination of patients presenting with hematology and immune disorders in medical and surgical clinics
- Relate the basic pathology of immune system for understanding different clinical disorders.

| Sr No. | Topics | Educational strategies | Name of instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Hazards of blood transfusion reaction** | LGIS/ CBL/ Video clips | Dr Huda Ali | |
| **Learning outcomes:**<br>• Assess the patient for transfusion reactions, management, its prevention | | | | |
| 2. | **Kidney transplant** | LGIS/ CBL/ Video clips | Dr Azhar | |
| **Learning outcomes:**<br>• Summarize renal transplant immune response, its complications and management | | | | |
| 3. | **Transplant rejection its immunology & immunosuppression** | LGIS/ CBL/ Video clips | Asstt. Prof. Dr. Munawer Latif | |
| **Learning outcomes:**<br>• Summarize the types of transplant rejection and its management | | | | |
| 4. | **Ward visits** | Bed side teaching/ CBL | | |
| **Learning outcomes:**<br>• Take history and perform examination of the patients with relevant disorders | | | | |

## Medicine

**Subject Learning Outcomes:**

- Diagnose common medical conditions, suggest and formulate appropriate investigations, rationalize treatment plan and if appropriate, refer patient for specialist opinion/ management (PLO 1).

- Suggest preventive measure for the common Public Health Problem in the community (PLO5).
- Perform relevant bedside procedures (PLO 2).
- Convey relevant information and explanations accurately to patients, families, colleagues and other professionals (PLO 7).
- Understand medical ethics and its application pertaining to medicine and maintain the confidentiality of the patient (PLO 3).
- Adapt research findings appropriately to the individual patient situation or relevant patient population (PLO 4 & 6).

## Block Learning outcomes:

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

- Evaluate clinically and make differential diagnosis of patients presenting with Anemia, hemoglobinopathies and bleeding disorders (SLO 1).
- Assess the patient with hypersensitivity reaction, anaphylaxis and suggest emergency management (SLO 1).
- Evaluate clinically, make differential diagnosis of patients presenting with malaria, Dengue fever and suggest management plan. (SLO 1)

| Sr No. | Topics | Educational strategies | Name of instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Approach to patient with Anemia** | LGIS | Dr. Asim Ali Shah | Must know |
| **Class Learning outcomes**:<br>• Differentiate between various types of Anemias based on etiology, underlying pathology, symptoms and signs.<br>• Evaluate the patient on the basis of signs and symptoms and make differential diagnosis.<br>• Outline the management plan. | | | | |
| 2. | **Nuttrional anemias - Iron / B12 defecincy anemias -Diagnosis and treatment** | LGIS | Dr Marzia | Must know |
| **Class Learning outcomes**:<br>• Enlist causes of iron and B12 deficiency and explain microcytic vs macrocytic anemia.<br>• Analyze CBC, Peripheral smear, iron studies and B12 level<br>• Distinguish iron deficiency from B12 deficiency using clinical and bio chemical features | | | | |

| | | | | |
|---|---|---|---|---|
| • Formulate a management plan for anemia. | | | | |
| 3. | **Hemoglobinopathies – Thalassemia/ Sickle cell Anemia Diagnosis and treatment** | LGIS | Dr Farhan Ul Haq | Should know |
| **Class Learning outcomes**:<br>• Explain the genetic basis and pathophysiology of Hemoglobinopathies.<br>• Identify key clinical features and complications of both disorders.<br>• Interpret laboratory investigations including CBC, peripheral smear and hemoglobin electrophoresis.<br>• Outline principles of management.<br>• Discuss long-term management including screening, genetic counselling and prevention. | | | | |
| 4. | **Approach to patient with Bleeding disorders** | LGIS | Dr. Wajahat Sultan | Should know |
| **Class Learning outcomes**:<br>• Differentiate between various types of bleeding disorders.<br>• Correlate abnormalities in physiology of coagulation with etiology and clinical features of ITP/ Bleeding disorders/DIC.<br>• Outline relevant investigations and management plan. | | | | |
| 5. | **Clinical features and management of Hypersensitivity Reactions/ / Angioedema and anaphylaxis** | LGIS | Dr. Sohaib Ahmed | Must know |
| **Class Learning outcomes**:<br>• Relate the clinical presentation of hypersensitivity reaction, angioedema and anaphylaxis to its pathophysiology.<br>• Differentiate between different types of Rash and allergies.<br>• Enlist key management steps in emergencies like angioedema and anaphylaxis. | | | | |
| 6. | **Malaria – Clinical features, Diagnosis & Management** | LGIS | **Dr. Ayesha Rani** | Must know |
| **Class Learning outcomes**:<br>• Discuss the etiology and enumerate the symptoms and signs of Malaria<br>• Elaborate modes of transmission and the causative organism<br>• Enumerate complications of malaria<br>• outline diagnostic modalities and treatment options<br>• Propose prevention options including vaccination | | | | |
| 7. | **Dengue fever – Clinical features,** | LGIS | **Dr. Rubaba Khan** | Must know |

| | | | | |
|---|---|---|---|---|
| | **Diagnosis & Management** | | | |
| **Class Learning outcomes**:<br>● Discuss the etiology and enumerate the symptoms and signs of dengue fever<br>● Elaborate modes of transmission and the causative organism<br>● Diagnose complications of dengue fever based on clinical and characteristic features.<br>● Suggest diagnostic modalities and treatment options<br>● Propose prevention options including vaccination | | | | |
| 8. | **Clinical presentation of autoimmune diseases** | LGIS | **Dr.Sadia Fatima** | Could know |
| **Class Learning outcomes**:<br>• Identify patients with suspected autoimmune disease.<br>• Order appropriate screening tests.<br>• Refer for specialist care when indicated. | | | | |

# Pediatrics

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| **Haem + Immunology** | | | | |
| **1.** | Anaemia | LGIS | Dr. Qurat ul ain | Must Know |
| **Learning Outcomes with Assessment**<br>• Define anaemia in children<br>• Classify anaemia according to cause<br>• Diagnose and manage common anaemia in children (Iron deficiency, B12 deficiency, thalassemia)<br>**Assessment strategy: MCQ, SEQ, OCPE, Viva** | | | | |
| **2.** | Hyperbilirubinemia in neonates | LGIS | Dr. Faiqa Taj | Must Know |
| **Learning Outcomes with Assessment**<br>• Explain pathophysiology of neonatal hyperbilirubinemia due to AB0 + RH incompatibility<br>• Diagnose and treat hyperbilirubinemia in neonates<br>• Identify causes of direct + indirect Hyperbilirubinemia in neonates.<br>**Assessment strategy: MCQ, SEQ** | | | | |
| **Genetics +NS** | | | | |
| **3.** | Developmental delayed (identify Developmental delay) | LGIS | Dr. Tahir Mahmood | Must Know |
| **Learning Outcomes with Assessment**<br>• Identify milestones for development<br>• Evaluate developmental delay due to inherited disorders<br>• Outline a management plan for child with developmental delay. | | | | |
| **4.** | Shortness of breath in children | LGIS | Prof. Dr. Sohail Ashraf | Must Know |
| **Learning Outcomes with Assessment**<br>• Identify common causes of shortness of breath<br>• Assess severity of patients presenting with shortness of breath<br>• Develop management plans of patient with shortness of breath<br>• Recognize red flags of patient with shortness of breath<br>**Assessment strategy: MCQ, SEQ, OSCE** | | | | |
| **BLOCK IX** | | | | |
| **GIT** | | | | |
| **9** | Worm Infestation | LGIS | Dr. Sobia Noor | Must Know |
| **Learning Outcomes with Assessment**<br>• **Enlist common organism for worm infestation in children** | | | | |

- **Identify s/s related to infestation**
- **Diagnose and manage worm infestation in children**

**Assessment strategy: MCQ**

| **Infectious** | | | | |
|---|---|---|---|---|
| **10** | Tuberculosis in children | LGIS | Dr. Sundus Khan | Must know |

**Learning Outcomes with Assessment**

- Describe the epidemiology of childhood TB globally and in Pakistan
- Recognize clinical presentations and diagnostic approaches in children
- Explain treatment regimens including Paediatric dosing and management of DR-T.VB
- Understand prevention, contact

# 9. Structured Summary of Y3B-VIII M- XVII

## Genetics and Neurosciences-II module

| BLOCKS | BLOCK – VII |
|---|---|
| **Module** | **MODULE- XIV** |
| **DURATION** | **04 weeks** |
| **Prerequisite Module** | 2nd Prof. Exam |
| **Pharmacology** | Drugs acting on Central Nervous System |
| **Pathology** | The important morphological, pathogenic characteristic, lab diagnosis, virulence factors produced by pathogens causing CNS infections. Pathogenesis of genetic and pediatric disease with their clinical manifestations. |
| **Forensic Medicine** | Specific Poisons, Forensic Psychiatry, Regional injuries of head (scalp, skull, brain) and face, vertebral column and its contents, neck. |
| **Community Medicine** | Poliomyelitis, Snake bite, Meningitis , Injuries & Accidents |
| **Medicine** | Common neurological symptoms, |
| **Surgery** | • Early assessment and management of severe trauma<br>• Traumatic brain injury introduction & its assessment<br>• Cerebral contusion, fracture base of skull, extradural, subdural, subarachnoid Haemorrhage |

# 10. Course content

## Pharmacology

**Subject Learning Outcomes (SLO)**

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

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

**Block Learning Outcomes (BLO):**

**BLO-4:** Analyze the role of pharmacotherapy in various CNS disorders. (SLO-2, 3,4 ,5,6)

| S# | Topic | Educational Strategy | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| **1.** | **Introduction to the Pharmacology of CNS drugs / Central Neurotransmission** | LGIS | Dr. Ayesha Afzal (Assoc.Prof) | **Should Know** |
| **Learning outcomes:**<br>• Apply understanding of central neurotransmitters and their pathways to explain the mechanism of action of centrally acting drugs. (BLO-4) *MCQ/SEQ (S/F)* | | | | |
| **2.** | **Sedative Hypnotics** | Flipped Classroom/ LGIS | Prof Maj (R)Dr. Khalida Ajmal | **Must Know** |
| **Learning outcomes:**<br>• Appraise the pharmacological effects of Sedative/Hypnotics to their therapeutics. (BLO-4) *MCQ/ SEQ (S/F)* | | | | |
| **3.** | **Alcohols** | LGIS | Dr. Tajwar Assist Prof | **Must Know** |
| **Learning outcomes:** | | | | |

| | | | | |
|---|---|---|---|---|
| • Recommend the treatment of acute & chronic alcoholism. (BLO-4) *MCQ/SEQ (S)* | | | | |
| **4.** | **Anti-seizure drugs** | LGIS | Dr. Ayesha Afzal (Assoc. Prof) | **Must Know** |
| **Learning outcomes:**<br>• Analyze seizure type and patient profile to select appropriate anti-epileptic drugs and explain their mechanisms and monitoring. (BLO-4) *MCQ/ SEQ (S/F)* | | | | |
| **5** | **Pre-Anesthetic Medication** | LGIS | Dr. Saima Assoc. Prof | **Should Know** |
| **Learning outcomes:**<br>• Recognize the role of various drugs in pre- anesthetic medications. (BLO-4) *MCQ/ Assignment (F)* | | | | |
| **6.** | **General Anesthetics (Introduction, Intravenous & Inhalational GAs)** | Flipped Classroom/LGIS | Prof Maj (R) Dr. Khalida Ajmal | **Should Know** |
| **Learning outcomes:**<br>• Differentiate between inhalational and intravenous general anesthetics and justify their selection in surgical procedures based on patient status and procedure type. (BLO-4) *MCQ/SEQ (S/F)* | | | | |
| 7. | **Local Anesthetics** | Flipped Classroom | Dr. Ayesha Afzal (Assoc. Prof) | Must Know |
| **Learning outcomes:**<br>• Explain the mechanism and clinical application of local anesthetics for different procedures and pain management. (BLO-4) *MCQ/SEQ (S/F)* | | | | |
| 8. | **Opioids Agonist & antagonist** | LGIS/ Flipped class room | Prof Maj (R)Dr. Khalida Ajmal | **Must Know** |
| **Learning outcomes:**<br>• Explain the mechanism and clinical application of opioids in pain management. (BLO-4) *MCQ/ SEQ (S/F)* | | | | |
| 9. | **Drug Dependance** | LGIS | Dr. Tajwar (Assist. Prof) | **Nice to Know** |
| **Learning outcomes:**<br>• Outline the mechanisms underlying drug dependence and approaches for its management. (BLO-4) *MCQ/SEQ (S)* | | | | |
| **10** | **Anti-Parkinsonian Drugs** | Flipped Classroom | Dr. Saima Assoc. Prof | **Should Know** |
| **Learning outcomes:**<br>• Justify the use of dopaminergic and adjunct drugs in Parkinson's disease by correlating with its pathophysiology. (BLO-4) *MCQ/SEQ (S/F)* | | | | |
| **11** | **Anti-depressant drugs** | Flipped Classroom | Dr. Saima Assoc. Prof | **Must Know** |

| | | | | |
|---|---|---|---|---|
| | | /LGIS | | |
| **Learning outcomes:**<br>• Select appropriate classes of antidepressants and explain their use based on the neurochemical basis of depression and patient factors. (BLO-4) MCQ/SEQ (S/F) | | | | |
| **12** | **Antipsychotic Drugs** | LGIS/Flipped Classroom | Assoc. Prof Dr. Ayesha Afzal | **Should Know** |
| **Learning outcomes:**<br>• Differentiate classes of antipsychotics and justify their selection based on the type and severity of psychotic disorders. (BLO-4) *MCQ/SEQ (S)* | | | | |
| **13.** | **Drugs used in bipolar disorders & Mania** | LGIS | Assoc. Prof Dr. Ayesha Afzal | **Should Know** |
| **Learning outcomes:**<br>• Rationalize the use of drugs in bipolar affective disorders. (BLO-4) *MCQ/SEQ (S)* | | | | |
| **14.** | **CNS Stimulants** | LGIS | Dr. Tajwar Sultana | **Nice to Know** |
| **Learning outcomes:**<br>• Outline the uses & adverse effects of CNS stimulants. (BLO-4) *MCQ/ Assignment (F)* | | | | |
| **15.** | **Migraine, Serotonin agonists & antagonists** | LGIS | Asst. Prof Dr. Tajwar | **Must Know** |
| **Learning outcomes:**<br>• Strategize the management of migraine in accordance with the underlying disease mechanism. (BLO-2) *MCQ/SEQ (S/F)* | | | | |
| **16.** | **Skeletal Muscle relaxant** | LGIS | Assoc. Prof Dr. Saima | **Nice to Know** |
| **Learning Outcome:**<br>• Corelate the pharmacodynamics of non-depolarizing & depolarizing neuromuscular blockers to their therapeutics (NMB). (BLO-2) *MCQ/ SEQ(S/F)* | | | | |
| **15.** | **Module Test** | | | |

**Practical Work**

**Block Learning Outcomes:**

After completion of block, students should be able to:

- Justify the selection of priority drugs for certain indications and prescribe medicine accordingly.
- Counsel the patient on the use/adverse effects of administered drugs.
- Interpret and report the effects of CNS stimulants/depressants on frog.
- Calculate the different biostatistics parameters from the given data.

| S.# | Topic | Educational Strategy | Instructor | Importance (Must Know Good to Know |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | | | | Nice to Know) |
| 1. | **Prescription writing on Epilepsy** | Simulation & Role play in SGD | Assoc. Prof. Dr. Saima & Dr. Tajwar<br>All Lecturers | Must Know |
| **Learning outcomes:**<br>• Justify the selection of priority drugs for epilepsy and prescribe medicine accordingly. *Unobserved OSPE (F & S)*<br>• Counsel the patient on the use/adverse effects of anti-epileptic drugs. *Observed OSPE (F & S)* | | | | |
| 2. | **Prescription writing on Parkinsonism & Migraine** | Simulation & Role Play in SGD | Assoc Prof. Dr. Saima & Dr. Tajwar<br>All Lecturers | Must Know |
| **Learning outcomes:**<br>• Justify the selection of priority drugs for parkinsonism and prescribe medicine accordingly. *Unobserved OSPE (F & S)*<br>• Counsel the patient on the use/adverse effects of anti-parkinsonism drugs. *Observed OSPE (F & S)* | | | | |
| 3. | **Effect of CNS stimulants/depressants on frog** | Video assisted learning / in-vivo experimental learning in Practical | Assoc. Prof. Dr. Saima & Dr. Tajwar<br>All Lecturers | Must Know |
| **Learning outcomes:**<br>Interpret & report the effects of CNS stimulants/depressants on frog. *Observed OSPE (F & S)* | | | | |
| 4. | **Biostatistics** | SGD | Assoc. Prof. Dr. Saima & Dr. Tajwar<br>All Lecturers | Must Know |
| **Learning outcomes:**<br>• Calculate the different biostatistics parameters for a given data. *Unobserved OSPE (F & S)* | | | | |

# Case-Based Learning (CBLs)

**CBL No: *01 Sedative Hypnotics***

**Case Scenario:**

A 23-year-old male college student is brought to the ER in a drowsy state by his fellow colleague. The patient has a history of repeated episodes of sudden feelings of intense anxiety and fear that reach a peak within minutes for which he is taking lorazepam. Last night he took double dose of drug to relieve his symptoms. Now in the ER he is being managed with flumazenil intravenously.

**Learning Outcomes:**

- Correlate the pharmacological effects of sedative/hypnotic drugs to their clinical uses and identify the role of antidote in case of overdose.

**CBL No: *02 Anti-epileptics***

**Case Scenario:**

A young male patient Yasir was brought to the emergency department in an unconscious state. His mother said that he was found unconscious in his room with frothing from mouth. She also gave a history of tongue biting and urination. He was unconscious for the last 30 min and had another epileptic fit while her mother was giving the history.

**Learning Outcomes:**

- Select the anti-epileptics for the treatment of patient on the basis of various types of seizures.

**CBL No: *03 Opioids***

**Case Scenario**

A 25-year-old male is brought to the emergency department after having a road traffic accident with complaints of severe pain in right lower limb & inability to walk. There is no head injury, but his right femur is fractured. The attending physician gives him an injection of Morphine (an opioid) to relieve his pain.

**Learning Outcomes:**

- Correlate the mode of action and pharmacological effects of opioids to their therapeutic uses.

**CBL No: *04 Anti-Depressants***

**Case Scenario:**

A 50-year-old obese diabetic & hypertensive patient begins to experience changes in mood. He also suffers from glaucoma and stress urinary incontinence. He is losing interest in his work and lack the desire to play his daily tennis match. He is preoccupied with feelings of guilt, worthlessness and is uncomfortable in social gatherings. He also complains of muscle aches throughout his body. His family reported his increased aggression and one suicidal attempt last week.

**Learning Outcomes:**

- Relate the therapeutics of antidepressants to the various co-morbidities of depression patients.

# Learning Resources:

**Textbook:**

- Basic and Clinical Pharmacology by Bertram G Katzung 15th Edition

**Reference Books:**

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

3. **Online resources:**
   - https://www.youtube.com/
   - Pharmacology lectures by Dr. Najeeb
   - Pharmacology lectures by Kaplan
   - Pharmacology made easy
4. **Library resources:**
   - Tripathy KD, Essentials of Medical Pharmacology, 6th Edition.

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

**Teaching Faculty:**

| Name | Email address |
|---|---|
| Maj (R) Dr. Khalida Ajmal (HOD & Prof) | drkhalida@wahmedicalcollege.edu.pk |
| Dr. Ayesha Afzal (Assoc. Prof) | dr.ayeshaafzal@hotmail.com<br>drayeshaafzal@wahmedicalcollege.edu.pk |
| Dr. Saima (Assoc. Prof) | saima@wahmedicalcollege.edu.pk |
| Dr. Tajwar Sultana | tjwrsultana@gmail.com |
| Dr Batool Jahan | Batooljahan27@gmail.com |
| Dr Ahmad Kamran | iahmad2k15@gmail.com |
| Dr. Bushra Malik | bush83458@gmail.com |
| Dr. Zunaira Asghar Awan | zunaira.asghar97@gmail.com |
| Dr. Umaima Riaz | umaima.riaz99@gmail.com |

# General Pathology

**Subject Learning Outcomes (SLO):**

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

**Block Learning Outcomes (BLO):**

- Evaluate the nature and pattern of inheritance disorders involving single and multiple gene complexes.
- Correlate the congenital anomalies and syndromes with their pathophysiology.

| S. # | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1 | • Introduction to genetics<br>• Biochemical & molecular basis of Mendelian disorders.<br>• Cytogenetic disorders Multifactorial disordersDiagnosis of genetic disorders | LGIS/SDL /CBL | Prof. Dr Jamila and all faculty members | Must Know |
| **Learning Outcomes**<br>• Correlate the pathogenesis, laboratory findings, morphological features and clinic-pathologic consequences of genetic disorders.<br>• Classify different Mendelian disorders and identify respective biochemical and molecular defects.<br>• Classify cytogenetic disorders in autosomes and sex chromosomes.<br>• Identify the indications for prenatal and postnatal cytogenetic analysis.<br>• Interpret the result of cytogenetic tests. | | | | |

**Assessment strategy:**

- MCQ, SEQ / SAQ, Viva voce.

**References/ Learning resources:**

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

# Microbiology

**Block Learning Outcomes:**

- Correlate the mechanisms of disease production with clinical manifestations, diagnostic modalities, treatment and preventive strategies of important pathogens causing infections of CN system.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| **1.** . | Neisseria meningitidis | LGIS/SDL/CBL | Assoc.Prof Dr Tahira Tehseen and all faculty members | Must Know |
| **Learning Outcomes:**<br>• Explain the mechanisms of diseases production by Neisseria meningitidis which causes infections of CNS<br>• Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned bacteria.<br>**Assessment strategy:**<br>• MCQ, SEQ/ SAQ/Viva voce | | | | |
| 2. | Streptococcus pneumoniae | LGIS/SDL/CBL | Assoc.Prof Dr Tahira Tehseen and all faculty members | Must Know |
| **Learning Outcomes:**<br>• Explain the mechanisms of diseases production by Streptococcus pneumoniae which causes infections of CNS<br>• Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned bacteria.<br>**Assessment strategy:**<br>• MCQ, SEQ/ SAQ/Viva voce | | | | |
| 3. | Hemophilus, Listeria | LGIS/SDL/CBL | Associate. Prof Dr Lubna Ghazal and all faculty members | Must Know |
| **Learning Outcomes:**<br>• Explain the mechanisms of diseases production by Hemophilus and Listeria which causes infections of CNS | | | | |

- Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned bacteria. .

**Assessment strategy:**

- MCQ, SEQ/ SAQ/OSPE

| | | | | |
|---|---|---|---|---|
| 4. | Clostridium tetani, Clostridium botulinum | LGIS | Asstt. Prof Dr Naila Iqbal | Must Know |

**Learning Outcomes:**

- Explain the mechanisms of diseases production by Clostridium tetani and Clostridium botulinum which causes infections of CNS
- Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned bacteria.

**Assessment strategy:**

- MCQ, SEQ/ SAQ/Viva voce

| | | | | |
|---|---|---|---|---|
| 5. | Cryptococcus and Naegleria | LGIS | Associate. Prof Dr Lubna Ghazal | Must Know |

**Learning Outcomes:**

- Explain the mechanisms of diseases production by Cryptococcus and Naegleria which causes infections of CNS
- Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned parasite.

**Assessment strategy:**

- MCQ, SEQ/ SAQ/Viva voce

| | | | | |
|---|---|---|---|---|
| 6. | Viruses causing meningitis and encephalitis, Polio, Enteroviruses, Measles and mumps | LGIS/SDL/CBL | Associate. Prof Dr Lubna Ghazal All faculty members | Must Know |

**Learning Outcomes:**

- Describe the Viruses causing meningitis and encephalitis.
- Explain the mechanisms of diseases production by Viruses causing meningitis.
- Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned viruses.

**Assessment strategy:**

- MCQ, SEQ/ SAQ/Viva voce

| | | | | |
|---|---|---|---|---|
| 7. | Herpes simplex Viruses | LGIS | Assoc.Prof Dr Tahira Tehseen | Must Know |

**Learning Outcomes:**

- Describe the Herpes simplex virus.
- Explain the mechanisms of diseases production by Herpes simplex virus.

| | | | | |
|---|---|---|---|---|
| • Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned viruses.<br>**Assessment strategy:**<br>MCQ, SEQ/ SAQ/Viva voce | | | | |
| 8. | Prions and slow virus | LGIS | Associate. Prof Dr Lubna Ghazal | Must Know |
| 9. | Viruses causing Meningitis | LGIS/SDL/CBL | Associate. Prof Dr Lubna Ghazal/All faculty members | Must Know |
| **Learning Outcomes:**<br>• Describe the Prions and slow virus.<br>• Explain the mechanisms of diseases production by Prions and slow virus.<br>• Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned viruses.<br>**References/ Learning resources:**<br>• Review of Medical Microbiology and Immunology, Warren Levinson, 17th Edition<br>• Medical Microbiology, Jawetz, Melnick & Adelberg, 28th Edition | | | | |

## Microbiology Practicals

**Learning Outcomes:**
Perform and interpret laboratory diagnostic tests for identification of medically important pathogens causing infections of CNS.

| .S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | Identify bacteria based on their biochemical tests:<br>• Motility Test.<br>• Oxidase Test<br>• TSI and Urease Test | Practical | All faculty members | Must Know |
| 2. | Identify anaerobic jars used for growth of anaerobic bacteria. | Practical | All faculty members | |
| 3. | Interpretation of CSF | Practical | All faculty members | Must Know |

**Learning Outcomes:**

- Perform and interpret biochemical tests for identification of medically important bacteria.

**Assessment strategy:**

- OSPE

## General Pathology & Microbiology Case-Based Learning

## CBL 1: Genetic Disorders-I (Down Syndrome)

**Scenario:**

A clinician is called to evaluate the cause of weight loss and fever in a six years old female child with limited intelligence. On examination the child is found to have epicanthic folds, depressed nasal bridge with macroglossia. Examination of hands show short, broad hands and a single palmar crease. She has generalized lymphadenopathy with hepato-splenomegaly. Vital signs are normal except temperature that is 101 ℉.

**Laboratory investigations:**

Trisomy 21 on chromosomal analysis

WBC's: 100 $\times 10^{9}$/L

Peripheral film: blasts 23 % on peripheral examination

Bone marrow examination: replacement of normal bone marrow cells by blasts

**Learning outcomes:**

- Analyze the above scenario and conclude the diagnosis.
- Figure out the karyotypes which can be seen in this disease
- Describe the most likely cause of chromosomal abnormalities.
- Enumerate the other clinical features found in these cases.
- Enlist the common complications seen in this disease.
- Explain noninvasive method for prenatal diagnosis that can be used for this disease.

## CBL 2: Genetic Disorders-II

**History:** A-3-year-old child was brought to emergency department with severe pain in legs and fever for 01 day. He had similar episodes in the past. He has received narcotic analgesics and blood transfusion in the past.

**Examination**: On examination he was pale and spleen was not palpable

**Investigation:** Blood CP was done and peripheral film showed sickle shaped cell.

**Learning outcomes:**

- Analyze the above scenario and conclude the diagnosis?
- Justify his spleen was not palpable?
- Describe the genetic defect in this case?
- Discuss the mode of inheritance in this case?
- Draw a pedigree of this type of inheritance.
- Enlist the laboratory investigations which can be carried out in this case?

- Explain laboratory results in such a case?
- Enlist other complications which can occur in such a case?

## CBL 3: Meningitis

**Case scenario**:

(A patient with fever, headache and vomiting)

**History:**

A 15 years old male was admitted to the hospital with history of fever, headache and vomiting for two days and was in semiconscious state. A few days back he had suffered from upper respiratory infection.

**Examination:**

On examination temperature was 102°F with a pulse rate of 120/min. Bilateral sub-conjunctival hemorrhages were noted bilaterally. There was neck rigidity and Kerning's sign was positive. His breathing was laborious. Considering the diagnosis of meningitis, lumber puncture was carried out.

**Laboratory examination:**

- Blood complete picture yielded leukocytosis
- Cerebrospinal fluid analysis
    - On gross examination the fluid was turbid.
    - Chemically yielding a high protein and low glucose content.
    - Microscopy showed increased cell count, mostly neutrophils
    - Gram stain showed gram negative diplococci.
- Cerebrospinal fluid culture was carried out and blood for culture was requested.

**Treatment:**

- Considering meningitis, empirically injectable Cefotaxime was started. Dexamethasone was also given. The patient was treated with the antibiotic for seven days.

**Learning Outcomes:**

1. Analyze the case scenario to conclude a diagnosis.
2. Describe the pathogenesis of the disease in above mentioned scenario.
3. Explain the type of precautions you will adopt during his stay in hospital.
4. Enlist other pathogens which can cause meningitis.
5. Give the reason of turbidity of cerebrospinal fluid.
6. Enumerate the culture media which you will use for the culture of CSF.
7. Interpret other methods for the diagnosis of meningitis.
8. Justify the need of blood culture in this case.
9. Outline the treatment options in such patient.
10. Describe the prophylaxis for close contacts of this patient.
11. Discuss the possible complications of this infection.
12. Describe the preventive measures for this disease.

**Learning Resources:**

1. **Reference Books**

**Learning Resources:**

2. **Reference Books**

- Review of Medical Microbiology and Immunology, Warren Levinson, 17th Edition
- Medical Microbiology, Jawetz, Melnick & Adelberg, 28th Edition

**Online resources**

- www.cdc.gov

**Library resources**

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

**Teaching Faculty:**

| Name | Email address |
|---|---|
| Prof.Dr Jamila | Jamila1601@yahoo.com |
| Associate. Prof Dr Lubna Ghazal | lubna.doctor@gmail.com |
| Assoc.Prof Dr Tahira Tehseen | drtahira.tehseen7@gmail.com |
| Assist prof. Dr Naila Iqbal | dr.naila.ahmad@gmail.com |

# Forensic Medicine

## Subject Learning Outcomes (SLO):

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

1. Correlate the given medico legal with the cause, manner, mode and mechanism of death. (PLO1, PLO2)
2. Relate the relevant laws with the medico legal practice. (PLO5, PLO7)
3. Infer the given autopsy findings for writing a comprehensive medicolegal report. (PLO6, PLO7)
4. Describe the procedure of collection, preservation and transportation of biological specimens to Forensic Science Laboratory and relevant offices. (PLO6, PLO7)
5. Differentiate the plans of management in acute and chronic toxicological cases. (PLO1, PLO2)
6. Apply ethical principles of Forensic Medicine in the given situation. (PLO3, PLO4)

## Block Learning Outcomes (BLO)

- Describe medico legal aspects and other signs symptom, treatment plan of poisons of specific poisons/drugs prevailing in our society. (SLO 2,5,6)
- Distinguish between different types of insanity and limitations to civil and criminal responsibilities. (SLO2,6)
- Differentiate among various possible etiologies of regional injuries. ( SLO1,3)

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Specific Poisons** | LGIS | Dr. M.Iqbal | Must Know |
| **Learning Outcomes**:<br>● Explain sign and symptoms of Alcohol, Opiates, Hypnotics and Sedative, Stimulants, Cannabis, Venomous insects (snakes) (SEQ,MCQ)<br>● Discuss the treatment plans of specific poisons. (SEQ,MCQ) | | | | |
| 2. | **Forensic Psychiatry** | LGIS | Dr. M.Iqbal | Good to Know |
| **Learning Outcomes** :<br>● Explain True and feigned insanity(SEQ,MCQ)<br>● Describe Procedure of restrain of mentally ill(SEQ,MCQ)<br>● Discuss Limitations to civil and criminal responsibilities of mentally ill. (SEQ,MCQ)<br>● Employee the moral and ethical implications of medical procedures. (SEQ)<br>● Euthanasia (SEQ) | | | | |
| 3. | **Regional Injuries** | LGIS | Dr.Babur Rashid Chughtai | Must Know |
| **Learning Outcomes**:<br>● Explain various possible regional injuries due to road traffic accidents including head, face, vertebral column its contents, neck, abdomen, limbs, bones, joints. | | | | |

(SEQ,MCQ)

# Forensic Medicine and Toxicology Practical's

**Learning Outcomes:**

After completion of block, students should be able to know:

1. Autopsy types, objective, rules, techniques and procedure of post mortem examination.
2. How to write a certification of death.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Visit to THQ hosp Taxila** | Prac/Demo | All lecturer | Must know |
| **Learning Outcomes :**<br>● To know about ideal autopsy room and process of medico legal examination as well. ( VIVA,OSPE) | | | | |
| 2. | **PM 1 death due to poisoning. THQ hosp** | Prac/Demo | All lecturer | Must know |
| **Learning Outcomes :**<br>● To know how to perform PM examination in case of poisoning and write the report. ( VIVA,OSPE) | | | | |
| 3. | **PM 2 death due to burn. THQ hosp** | Prac/Demo | All lecturer | Must know |
| **Learning Outcomes :**<br>● To know how to perform PM examination in case ofburn and write the report. ( VIVA,OSPE) | | | | |
| 4. | **PM 3 death due to firearm. THQ hosp** | Prac/Demo | All lecturer | Must know |
| **Learning Outcomes :**<br>● To know how to perform PM examination in case of firearm injury and write the report. ( VIVA,OSPE) | | | | |

**Learning Resources**:

**2. Reference Books**

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

**2. Online resources**

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

**2. Library resources**

- Parikh's text book of Forensic medicine and Toxicology Dr C.K parikh
- Principles and practice of forensic medicine by Prof Dr Naseeb R Awan

- Simpson's Forensic Medicine Richard Shepherd

**Teaching faculty:**

| Name | Email address |
|---|---|
| Prof Dr. Babar Rashid Chughtai | brchughtai@gmail.com |
| Prof Dr. Muhammad Iqbal | drmiqbalkhan6@gmail.com |
| Dr. Sarah Pervez khan | Sarahpervez84@gmail.com |
| Dr. Misbah Amanat | Perfect_smile95@yahoo.com |
| Dr. Muhammad Kashif | dr.kashifclinic@gmail.com |
| Dr. Muhammad Usman Khan | muk_8@live.com |

## Community Medicine

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Genetics** | LGIS | Associate Prof. Dr. Khola Waheed | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Comprehend the concept of chromosomes and genes<br>• Understand the mechanisms of chromosomal abnormalities<br>• Classify the genetic disorders<br>• Recommend preventive and social measures<br>**Assessment strategy: MCQ, Viva** | | | | |
| 2. | **Drug Addiction** | LGIS | Lecturer Muhammad Saad ul Hassan | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Relate factors and hazards associated with drug abuse and smoking<br>• Differentiate the symptoms of different drug related addictions<br>• Recommend measures to control drug abuse and smoking in Pakistan.<br>• Explain the steps used to educate individuals to quit Substance abuse.<br>**Assessment strategy: MCQ, SEQ, OSPE, Viva** | | | | |
| **3.** | **Mental Health** | LGIS | Lecturer Muhammad Saad ul Hassan | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Recognize warning signs of poor mental health.<br>• Recommend preventive measures against mental health problems according to the given scenario<br>• List WHO criteria and Recommendations to improve mental health in countries<br>**Assessment strategy: MCQ, SEQ, OSPE, Viva** | | | | |
| **4.** | **Social Sciences** | LGIS | Lecturer Muhammad Saad ul Hassan | Good to Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Relate social etiology with individual and public health.<br>• Appreciate the role of interprofessional relationship in a hospital to form a social organization.<br>• Apply bio-psycho-social model on disease etiology and its prevention. | | | | |

| Assessment strategy: MCQ, Viva |
|---|

**Learning Resources:**

1. **Text Books**

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

2. **Reference Books**
    - Text book of Preventive and Social Medicine by Sunder Lal, Pankaj
    - Davidson Principles and Practice of Medicine
3. **Online resources**

    **Prevention of Drug addiction**

    **Smoking hazards**
4. **Library resources**
    - Notes/Handouts by Faculty
    - G classroom

    **Teaching Faculty:**

| Name | Email address |
|---|---|
| **Dr. Robina Mushtaq Rizvi** | **robinamushtaq@wahmedicalcollege.edu.pk** |
| **Dr. Khola Waheed** | kholawaheed@wahmedicalcollege.edu.pk |

# Surgery

**Preamble:**

Students will be taught history taking of CNS complaints and relevant examination in Medicine/Surgery rotations to enhance their clinical examination skills.Research methodology and Behavioral Sciences will be taught as a part of the longitudinal theme. Apart from attending daily scheduled sessions, students should engage in self-directed learning to achieve the desired objectives

**Learning Outcomes:**

At the end of this module, students should be able to:

- Apply their theoretical learning about genetics and neurosciences in relevant clinical scenarios encountered in subsequent years of training and practice

| Sr No. | Topics | Educational strategies | Name of instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Early Assessment and management of severe Trauma** | LGIS | Dr Saqib | |
| **Learning Outcomes:**<br>• Identify and assess severely injured patent, early treatment goals<br>• Summarize the role of permissive hypotension, principles of damage control surgery | | | | |
| 2. | **Traumatic Brain Injury introduction and its assessment** | LGIS | Dr Sohail | |
| **Learning Outcomes:**<br>• Summarize the physiology of cerebral blood flow, pathology of raised intracranial pressure, resuscitation, assessment, investigation and continuing care of head injured patients | | | | |
| 3. | **Cerebral Contusion, fracture base of skull, extradural, subdural and subarachnoid Haemorrhage** | LGIS | Asstt. Prof. Dr. M. Mehboob Alam | |
| **Learning Outcomes:**<br>• Summarize the prevention and detection of secondary intracranial and systemic inserts | | | | |
| 4. | **Ward visits** | | | |
| **Learning Outcomes:**<br>• Disorders Take history and perform examination of the patients with relevant | | | | |

# Medicine

**Subject Learning Outcomes:**

- Diagnose common medical conditions, suggest and formulate appropriate investigations, rationalize treatment plan and if appropriate, refer patient for specialist opinion/ management (PLO 1).
- Suggest preventive measure for the common Public Health Problem in the community (PLO5).
- Perform relevant bedside procedures (PLO 2).
- Convey relevant information and explanations accurately to patients, families, colleagues and other professionals (PLO 7).
- Understand medical ethics and its application pertaining to medicine and maintain the confidentiality of the patient (PLO 3).
- Adapt research findings appropriately to the individual patient situation or relevant patient population (PLO 4 & 6).

## Block Learning outcomes:

- Assess clinically and make differential diagnosis of patients presenting with common neurological symptoms (SLO 1).

| Sr No. | Topics | Educational strategies | Name of instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Approach to patient with headache** | LGIS | Prof. Muzamil Jamil | Should Know |
| **Class Learning outcomes**:<br>• Assess the patient with headache on the basis of etiology and pathophysiology.<br>• Differentiate various types of headache on the basis of clinical presentation.<br>• Elaborate pharmacologic treatment of acute condition. | | | | |
| 2. | **Approach to patient with loss of consciousness** | LGIS | Dr. Huma Hussain | Must know |
| **Class Learning outcomes**:<br>• Differentiate between awake and unconscious state<br>• Describe pathophysiological mechanism leading to unconsciousness<br>• Generate differential diagnosis of unconscious patient<br>• Enlist the investigations<br>• Outline emergency management of unconscious patient | | | | |
| 3. | **Approach to patient with seizures** | LGIS | Dr. Tazaeen Hina Kazmi | Must know |
| **Class Learning outcomes**: | | | | |

| | | | | |
|---|---|---|---|---|
| • Differentiate between different types of seizures on the basis of pathophysiology.<br>• Identify the cause and trigger factors associated with seizures.<br>• Recognize the clinical features of seizures<br>• Enlist the investigations of patient with suspected epilepsy<br>• Outline the drug treatment in emergency (status epilepticus) and later | | | | |
| 4. | **Epilepsy - Type, Diagnosis and treatment** | LGIS | Dr Junaid Ur Rehman | Should know |
| **Class Learning outcomes**:<br>• Classify seizure types.<br>• Interpret EEG and imaging reports.<br>• Differentiate focal from generalized seizures.<br>• Choose appropriate antiepileptic drugs.<br>• Construct a management plan including patient counselling. | | | | |
| 5. | **Approach to patient with Tremors / Movement disorder** | LGIS | Dr. Ayesha Rani | Could know |
| **Class Learning outcomes**:<br>• Enumerate types of tremors.<br>• Explain clinical differences between common movement disorders.<br>• Perform focused neurological examination.<br>• Identify likely aetiologias from clinical data.<br>• Select appropriate investigations.<br>• Design a diagnostic algorithm. | | | | |
| 6. | **Meningitis – Clinical features, Diagnosis & Management** | LGIS | Dr. Sadia Fatima | Should know |
| **Class Learning outcomes**:<br>• Identify the clinical features of meningitis<br>• Identify warning signs in CNS infection<br>• Describe pathogenesis of meningitis<br>• Outline the investigations and management plan. | | | | |

## Pediatrics

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| **GIT** | | | | |
| **1.** | Worm Infestation | LGIS | Dr. Sobia Noor | Must Know |
| **Learning Outcomes with Assessment**<br>• Enlist common organism for worm infestation in children<br>• Identify s/s related to infestation<br>• Diagnose and manage worm infestation in children<br>Assessment strategy: MCQ | | | | |
| **Infectious** | | | | |
| **2.** | Tuberculosis in children | LGIS | Dr. Sundus Khan | Must know |
| **Learning Outcomes with Assessment**<br>• Describe the epidemiology of childhood TB globally and in Pakistan<br>• Recognize clinical presentations and diagnostic approaches in children<br>• Explain treatment regimens including Paediatric dosing and management of DR-T.VB<br>• Understand prevention, contact | | | | |

# 11. Y3B-VIII M- XVIII Respiratory System Module

| BLOCKS | BLOCK – VII |
|---|---|
| **Module** | **M- XVIII Respiratory System Module** |
| **DURATION** | **03 weeks** |
| **Prerequisite Module** | 2nd Prof. Exam |
| **Pharmacology** | Anti-tuberculosis drugs, Drugs used for obstructive pulmonary disorders (Asthma, COPD), Expectorants & Anti-tussive |
| **Pathology** | The important morphological, pathogenic characteristic, lab diagnosis, virulence factors produced by pathogens causing respiratory infections. Pathogenesis of common respiratory diseases with their clinical manifestations. |
| **Community Medicine** | Respiratory disease and IMCI guide lines for Pneumonia |
| **Forensic Medicine** | Specific poisons, Regional Injuris, Heat, Cold, Electrical injuries, Violent deaths due to Asphyxia. |
| **Medicine** | Bleeding disorders, hypersensitivity reaction, common neurological symptom, common pulmonary diseases. |

# 12. Course content

## Pharmacology

### Subject Learning Outcomes (SLO)

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

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

### Block Learning Outcomes (BLO):

- **BLO-5:** Discuss the pharmacotherapy of cough, allergic disorders, obstructive pulmonary disorders asthma & COPD. (SLO-2, 3,4,5)

| S.# | Topic | Educational Strategy | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **H1-Blockers** | LGIS | Assoc. Prof Dr. Saima | Must Know |
| **Learning outcomes:**<br>Validate the use of antihistamines in various allergic disorders. (BLO-5) *MCQ /SEQ (S/F)* | | | | |
| 2. | **Drugs used for obstructive pulmonary disorders (Asthma, COPD)** | LGIS | Assoc. Prof Dr. Ayesha Afzal | Must Know |
| **Learning outcomes:**<br>• Develop a management plan for obstructive pulmonary disorders (Asthma, COPD) with justification. (BLO-5) *MCQ/ SEQ (S/F)* | | | | |
| 3. | **Anti-tuberculous drugs** | LGIS | Prof. Maj (R) Dr. Khalida Ajmal | Must Know |

| | | | | |
|---|---|---|---|---|
| **Learning outcomes:**<br>• Design and justify pharmacotherapy of tuberculosis. | | | | |
| 3. | **Expectorants & Anti-tussives** | LGIS | Assist Prof Dr. Abeera | Must Know |
| **Learning outcomes:**<br>Outline the pharmacotherapy of productive & non-productive cough. (BLO-5)<br>*MCQ/SEQ(S/F)* | | | | |

# Practical Work

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

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

| S.# | Topic | Educational Strategy | Instructor | Importance (**Must Know Good to Know Nice to Know**) |
|---|---|---|---|---|
| 1. | **Prescription writing on Allergic rhinitis** | Simulation & Role Play in SGD | Assoc Prof. Dr. Saima & Asst Prof. Dr. Tajwar<br>All Lecturers | Must Know |
| **Learning outcomes:**<br>• Write a suitable prescription for treatment of allergic rhinitis. *Unobserved OSPE (F & S)*<br>• Counsel the patient on the use/adverse effects of anti-TB drugs. *Observed OSPE (F & S)* | | | | |
| 2. | **Acute attack of Asthma** | Simulation & Role Play in SGD | Assoc Prof. Dr. Saima & Asst Prof. Dr. Tajwar<br>All Lecturers | Must Know |
| **Learning outcomes:**<br>• Write a suitable prescription for asthma after justifying the selection of a P- drug. *Unobserved OSPE (F & S)*<br>• Counsel the patient on the use/adverse effects of anti-asthmatics. *Observed OSPE (F & S)* | | | | |
| 3. | **Pulmonary Tuberculosis** | Simulation & Role Play in SGD | Assoc Prof. Dr. Saima & Asst Prof. Dr. Tajwar<br>All Lecturers | Must Know |
| **Learning outcomes:**<br>• Write a suitable prescription for asthma after justifying the selection of a P- drug. *Unobserved OSPE (F & S)*<br>• Counsel the patient on the use/adverse effects of anti-asthmatics. *Observed OSPE (F & S)* | | | | |
| | **End-block OSPE Y3B2 exam** | | | |

# Case-Based Learning (CBLs)

## CBL No: *01 Anti-tussive & Anti-histamines*

**Case Scenario:**

A 7-year-old child comes to general practitioner with complaints of excessive sneezing and recurrent bouts of cough. Child is having dry, hacking cough which makes him uncomfortable during sleep. He is also having symptoms of postnasal drip.

**Learning Outcomes:**

**The students should be able to:**

- Rationalize the treatment strategies for the management of different types of cough and allergies

## CBL No: *02 Asthma*

**Case Scenario:**

A known case of asthma presents to emergency with acute shortness of breath. She appears frightened and refuses to lie down but is not cyanotic. Her pulse is 120 bpm and respiratory rate is 32/min. On chest auscultation, there is both inspiratory and expiratory wheeze. She is already using albuterol inhaler frequently without improvement in her symptoms.

**Learning Outcomes:**

**The students should be able to:**

Evaluate the treatment strategy for the management of acute attack and chronic asthma.

## CBL No: *03 Anti-tuberculous Drugs*

A 45- year-old male has been diagnosed as a case of acute pulmonary tuberculosis (TB). His treatment regimen included multiple first line anti-TB drugs. He reports back to the medical unit after one year and X-ray chest reveals active lesion, indicating the resistance to treatment.

**Learning outcomes:**

Rationalize the treatment strategies for the management of latent tuberculosis, pulmonary tuberculosis and multi-drug resistance tuberculosis.

**Learning Resources:**

**Textbook:**

- Basic and Clinical Pharmacology by Bertram G Katzung 15th Edition

**Reference Books:**

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

5. **Online resources:**
   - https://www.youtube.com/
   - Pharmacology lectures by Dr. Najeeb
   - Pharmacology lectures by Kaplan
   - Pharmacology made easy
6. **Library resources:**
   - Tripathy KD, Essentials of Medical Pharmacology, 6th Edition.
   - Lippincott Illustrated Reviews Pharmacology 7th Edition
   - Current Medical Diagnosis and treatment- latest Edition
   - Oxford Handbook of clinical medicine by J.A. B. Collier-latest edition

- **Workbook and Casebook** for **Goodman and Gilman's** The Pharmacological Basis of Therapeutics: latest Edition

**Teaching Faculty:**

| Name | Email address |
|---|---|
| Maj (R) Dr. Khalida Ajmal (HOD & Prof) | drkhalida@wahmedicalcollege.edu.pk |
| Dr. Ayesha Afzal (Assoc. Prof) | dr.ayeshaafzal@hotmail.com<br>drayeshaafzal@wahmedicalcollege.edu.pk |
| Dr. Saima (Assoc. Prof) | saima@wahmedicalcollege.edu.pk |
| Dr. Tajwar Sultana | tjwrsultana@gmail.com |
| Dr Batool Jahan | Batooljahan27@gmail.com |
| Dr Ahmad Kamran | iahmad2k15@gmail.com |
| Dr. Bushra Malik | bush83458@gmail.com |
| Dr. Zunaira Asghar Awan | zunaira.asghar97@gmail.com |
| Dr. Umaima Riaz | umaima.riaz99@gmail.com |

## General Pathology

**Subject Learning Outcomes (SLO):**

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

**Block Learning Outcomes (BLO):**

- Justify the environmental factors contributing in common respiratory diseases.

| S. # | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | • Harmful effects of smoking and alcohol<br>• Harmful effects of radiation<br>• Occupational hazards | LGIS / CBL/SDL | Assoc.Prof. Dr Lubna Ehtizaz and all faculty members | Must Know |
| **Learning Outcomes:**<br>● Identify causes of environmental diseases and their effects on human body.<br><br>**Assessment strategy**<br>● MCQ, SEQ/SAQ, Viva Voce | | | | |

**References/ Learning resources:**

- Robbins & Cotran Pathological Basis of Diseases 10th Edition.

  Robbins Basic Pathology 10th Edition

## Microbiology

**Block Learning Outcomes:**

At the end of first block, the students of 3rd year MBBS should be able to

- Correlate the mechanisms of disease production with clinical manifestations, diagnostic modalities, treatment and preventive strategies of important pathogens causing infections of respiratory system.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | Mycobacterium tuberculosis | LGIS/SDL/ /CBL | Assoc Prof. Dr Tahira Tehseen and all faculty | Must know |

| | | | | |
|---|---|---|---|---|
| | | | members | |
| **Learning Outcomes:**<br>• Explain the mechanisms of diseases production by Mycobacterium tuberculosis.<br>• Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Bacteria.<br>**Assessment strategy:**<br><br>MCQ, SEQ/ SAQ/ Viva voce | | | | |
| 2. | Mycobacterium leprae | LGIS | Assoc Prof. Dr Tahira Tehseen | Must Know |
| **Learning Outcomes:**<br>• Explain the mechanisms of diseases production by Mycobacteriumleprae.<br>• Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Bacteria.<br>**Assessment strategy:**<br>MCQ, SEQ/ SAQ/ Viva voce | | | | |
| 3. | Atypical mycobacterium | LGIS/SDL/ CBL | Assoc. Prof. Dr Tahira Tehseen and all faculty members | Must Know |
| **Learning Outcomes:**<br>• Explain the mechanisms of diseases production by atypical mycobacterium.<br>• Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Bacteria.<br>**Assessment strategy:**<br><br>MCQ, SEQ/ SAQ/ Viva voce | | | | |
| 4. | Bacillus anthracis | LGIS | Assoc. Prof. Dr Tahira Tehseen | Must Know |
| **Learning Outcomes:**<br>• Explain the mechanisms of diseases production by Bacillus anthracis.<br>• Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Bacteria.<br>**Assessment strategy:**<br>• MCQ, SEQ/ SAQ/ Viva voce | | | | |
| 5. | Corynebacterium diphtheria | LGIS | Associate Prof. Dr Luba Ghazal | Must Know |
| **Learning Outcomes:**<br>• Explain the mechanisms of diseases production by Corynebacterium diphtheria.<br>• Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Bacteria.<br>**Assessment strategy:**<br>• MCQ, SEQ/ SAQ/ Viva voce | | | | |
| 6. | Bordetella pertussis and Legionella | LGIS | Associate Prof. Dr Luba Ghazal | Must Know |

**Learning Outcomes:**

- Explain the mechanisms of diseases production by Bordetella pertussis and Legionella.
- Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Bacteria.

**Assessment strategy:**

MCQ, SEQ/ SAQ/ Viva voce

| | | | | |
|---|---|---|---|---|
| 7. | Mycoplasma | LGIS | Asstt Prof. Dr Naila Iqbal | Must Know |

**Learning Outcomes:**

- Explain the mechanisms of diseases production by Mycoplasma.
- Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Bacteria.

**Assessment strategy:**

- MCQ, SEQ/ SAQ/ Viva voce

| | | | | |
|---|---|---|---|---|
| 8. | Influenza, parainfluenza, Rubella and other respiratory viruses | LGIS | Associate Prof. Dr Luba Ghazal | Must Know |

**Learning Outcomes:**

- Explain the mechanisms of diseases production by Influenza, parainfluenza, Rubella and other respiratory viruses.
- Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Viruses.

**Assessment strategy:**

- MCQ, SEQ/ SAQ/ Viva voce

| | | | | |
|---|---|---|---|---|
| 9. | Aspergillus and Mucor | LGIS | Asstt Prof. Dr Naila Iqbal | Must Know |

**Learning Outcomes:**

- Explain the mechanisms of diseases production by Aspergillus and Mucor.
- Identify the diseases, complications and laboratory diagnostic methods caused by above mentioned Fungi.

**Assessment strategy:**

- MCQ, SEQ/ SAQ/Viva voce

**References/ Learning resources:**

Review of Medical Microbiology and Immunology, Warren Levinson, 17th Edition

Medical Microbiology, Jawetz, Melnick & Adelberg, 28th Edition

## General Pathology Practical's

**Learning Outcomes:**

- Correlate the histopathological features of granuloma with the environmental disorders.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | Identify the following slide:<br>Granuloma | Practical/ SGD | All Faculty members | Must Know |
| **Assessment strategy:**<br>• OSPE | | | | |

**References/ Learning resources:**

•Robbins & Cotran Pathological Basis of Diseases 10th Edition.

•Robbins Basic Pathology 10th Edition.

## Microbiology Practicals

**Learning Outcomes:**

Practical Application of protective measures against environmental diseases.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | Perform steps of hand hygiene<br>Perform donning and doffing of PPE. | Practical | All faculty members | Must know |
| **Learning Outcomes:** Perform steps of hand hygiene and perform donning and doffing of PPE.<br>**Assessment strategy:** OSPE | | | | |
| 2. | Z N staining | Practical/ SGD | All Faculty members | Must know |
| **Learning Outcomes:**<br>• To know the principle and method of Z N staining.<br>• Microscopic interpretation of acid-fast bacilli.<br>**Assessment strategy:** OSPE | | | | |

## General Pathology & Microbiology Case-Based Learning

**Learning Resources:**

1. **Reference Books**
   a. Greenwood Medical Microbiology, 18th Edition
   b. Manual of Clinical Microbiology, 12th Edition
2. **Online resources**
   www.cdc.gov
3. **Library resources**
   - Foundations in Microbiology 10th edition Kathleen Talaro, Barry Chess

**Teaching Faculty:**

| Name | Email address |
|---|---|
| Dr Lubna Ehtizaz | lubnaehtizaz@yahoo.com |
| Dr Lubna Ghazal | lubna.doctor@gmail.com |
| Dr Tahira Tehseen | drtahira.tehseen7@gmail.com |
| Dr Naila Iqbal | dr.naila.ahmad@gmail.com |

# Forensic Medicine

## Subject Learning Outcomes (SLO):

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

1. Correlate the given medico-legal with the cause, manner, mode and mechanism of death. (PLO1, PLO2)
2. Relate the relevant laws with the medico legal practice. (PLO5, PLO7)
3. Infer the given autopsy findings for writing a comprehensive medicolegal report. (PLO6, PLO7)
4. Describe the procedure of collection, preservation and transportation of biological specimens to Forensic Science Laboratory and relevant offices. (PLO6, PLO7)
5. Differentiate the plans of management in acute and chronic toxicological cases. (PLO1, PLO2)
6. Apply ethical principles of Forensic Medicine in the given situation. (PLO3, PLO4)

## Block Learning Outcomes (BLO):

- Describe medico legal aspects and other signs symptom, treatment plan of poisons of specific poisons/drugs prevailing in our society.(SLO2,5,6)
- Differentiate among various possible etiologies of regional injuries of chest. (SLO1,3)
- Differentiate heat, cold and electrical injuries with emphasis on their medico legal aspects.(SLO1,3)
- Interpret concepts of violent deaths due to asphyxia and their medico legal implications.(SLO1,3)

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Special Toxicology** | LGIS,SDL | Dr. M. Iqbal | Must Know |
| • Discuss the signs and symptoms and treatment plan of volatile poisons and corrosives and their medico legal aspects. (SEQ,MCQ) | | | | |
| 2. | **Regional Injuries** | LGIS | Dr. Sarah Pervez khan | Must Know |
| • Explain etiologies of regional injuries of chest and their medicolegal aspects. (SEQ,MCQ) | | | | |
| 3. | **Heat, Cold, electrical injuries. DEA** | LGIS | Dr. Sarah Pervez khan | Good to Know |
| • Describe its classification, causes and medico legal aspects. (SEQ)<br>• Describe injuries due to burn, temperature, Electrocutions, lightening its types and medicolegal aspects.(SEQ,MCQ) | | | | |
| 4. | **Violent deaths due to Asphyxia** | LGIS,CBL | Dr. M. Iqbal | Good to Know |
| • Define, classify and describe causes of asphyxia.(SEQ) | | | | |

- Detect the anatomical, physiological, pathological signs of violent asphyxial deaths and its medico legal importance. (SEQ,MCQ)
- Differentiate between drowning, immersions, sea water & fresh water drowning, café-coronary syndrome, sexual asphyxia.(SEQ,MCQ)

# Forensic Medicine and Toxicology Practical's

**Learning Outcomes:**

- Identify different firearm Ammunitions, Classification, Nomenclature, Wound ballistics and medico-legal aspects.
- Discuss medico legal aspects of suicidal, Homicidal and Accidental hanging.
- Discuss medico legal aspects of death due to drowning.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | PM 4 death due to suicidal hanging. THQ hosp | Prac /demo | All lecturer | Must know |
| • To know how to perform PM examination in case of suicidal hanging and write the report. ( VIVA,OSPE) | | | | |
| 2. | PM 5 death due to firearm injury. THQ hosp | Prac /demo | All lecturer | Must know |
| • To know how to perform PM examination in case of firearm injury and write the report. ( VIVA,OSPE) | | | | |
| 3. | PM 6 death due to drowning. THQ hosp | Prac /demo | All lecturer | Must know |
| • To know how to perform PM examination in case of drowning and write the report. ( VIVA,OSPE) | | | | |

# Forensic Medicine and Toxicology CBL/PBL-1

Dead body of a 45-years-old male is recovered from a canal is brought to you for autopsy, wearing grey shalwar kameez ,eyes semi opened, mouth filled with muddy water, hypostasis is not obvious, rigor mortis is developing.

1) What is the classification of Drowning?
2) What is the cause of death in drowning?
3) What is immersion syndrome?
4) How will you prove that it is a case of AM drowning?

**Learning Outcome**: To know about classification, causes, medico-legal aspects of asphyxia due to drowning, and the difference between AM &PM drowning.

**Learning Resources**:

3. **Reference Books**
   - Parikh's text book of Forensic medicine and Toxicology Dr C.K parikh.

- Principles and practice of forensic medicine by Prof Dr Naseeb R Awan.
- Simpson's Forensic Medicine Richard Shepherd.

**2. Online resources**

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

**3. Library resources**

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

**4. Teaching faculty:**

| Name | Email address |
|---|---|
| Prof Dr. Babar Rashid Chughtai | brchughtai@gmail.com |
| Prof Dr. Muhammad Iqbal | drmiqbalkhan6@gmail.com |
| Dr. Sarah Pervez khan | Sarahpervez84@gmail.com |
| Dr. Misbah Amanat | Perfect_smile95@yahoo.com |
| Dr. Muhammad Kashif | dr.kashifclinic@gmail.com |
| Dr. Muhammad Usman Khan | muk_8@live.com |

# Community Medicine

**Learning Resources:**

**1. Text Books**

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

**2. Reference Books**

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

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to now Nice to Know) |
|---|---|---|---|---|
| 1. | **Respiratory diseases & IMCI guidelines for Pneumonia** | Flipped Classroom | Assistant Prof. Dr. Sadia Nadeem<br>Associate Prof. Dr. Khola Waheed | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Compare and contrast the epidemiological determinants, mode of transmission, spectrum, clinical presentations and investigations of respiratory diseases.<br>• Suggest strategies for disease control and prevention for every specific disease and in different scenarios.<br>**Assessment strategy: MCQ, SEQ, OSPE, Viva** | | | | |

**3. Online resources**

Respiratory infections
Respiratory tract infections
IMCI guidelines for Pneumonia

**4. Library resources**

- Notes/Handouts by Faculty
- G classroom

**Teaching Faculty:**

| Name | Email address |
|---|---|
| **Dr. Khola Waheed** | kholawaheed@wahmedicalcollege.edu.pk |
| **Dr. Sadia Nadeem** | sadianadeem@wahmedicalcollege.edu.pk |

# Research Module/Evidence-Based Medicine

**Learning Outcomes for 3rd Year Students**
**Subject Learning Outcomes**

1) Apply relevant statistic to conduct a house hold survey and a mini research project. (PLO 3,4,6,7,8)

**Block Learning Outcomes**

- Apply relevant statistics to conduct a house hold survey. (SLO 4,5)

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Distributions** | LGIS | Prof. Dr. S Sabah Imran | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Identify different types of distributions<br>• Illustrate distribution for the given data<br>**Assessment strategy: MCQ/SEQ/OSPE/Viva** | | | | |
| 2. | **Hypothesis testing** | LGIS | Prof. Dr. S Sabah Imran | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Differentiate between null and alternate hypothesis,<br>• Describe steps of hypothesis testing<br>• Indicate probable errors in hypothesis testing<br>**Assessment strategy: MCQ/SEQ/OSPE/Viva** | | | | |
| 3. | **Sampling techniques & Errors** | Flipped Classroom | Assoc. Prof Dr. Robina Mushtaq | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Define study population<br>• Describe inclusion and exclusion criteria for population selection<br>• Classify various sampling techniques<br>• Choose appropriate sampling technique in the given scenario<br>• Identify sampling errors<br>• Suggest the method to rectify identified error<br>**Assessment strategy: MCQ/SEQ/OSPE/Viva** | | | | |
| 4. | **House Hold Survey** | SGD | All Faculty | Must Know |
| **Learning Outcomes with Assessment strategy**<br>The students will be able to:<br>• Complete the household survey booklet accurately & independently provided by the department | | | | |

**Assessment strategy: Report writing.**

**Learning Resources:**

1. **Text Books**
   - Park's Textbook of Preventive and Social Medicine
   - Public Health and Community Medicine (Shah, Ilyas, Ansari, Irfan's)
2. **Reference Books**
   - Basic Methods of Medical Research (Indrayan)
   - Basic statistic for the Health Sciences (Jan. W. Kuzma)
   - How to design & evaluate research in education (Jack R. Fraenkel)
3. **Online resources**

   **Sampling techniques**

4. **Library resources**
   - Notes/Handouts by Faculty
   - G classroom

**Teaching Faculty:**

| Name | Email address |
|---|---|
| Prof. Dr. Musarat Ramzan | dean@wahmedicalcollege.edu.pk |
| Dr. S. Sabah Imran | sabahimran@wahmedicalcollege.edu.pk |
| Dr. Robina Mushtaq | robinamushtaq@wahmedicalcollege.edu.pk |

# Surgery

**Preamble:**

Students will be taught history taking of respiratory complaints and chest examination in Medicine/Surgery rotations to enhance their clinical examination skills.Research methodology and Behavioral Sciences will be taught as a part of the longitudinal theme. Apart from attending daily scheduled sessions, students should engage in self-directed learning to achieve the desired objectives

**Learning Outcomes:**

At the end of this module, students should be able to:

- Apply the knowledge of this module in relevant clinical scenarios encountered in subsequent years training and practice

| Sr No. | Topics | Educational strategies | Name of instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Thoracic trauma its investigation and management of immediate life-threatening injuries** | LGIS | Assoc. Prof. Dr Naeem Akhtar | |
| **Learning Outcomes:**<br>• Summarize the investigations of a patient of thoracic trauma and management of immediate life-threatening injuries | | | | |
| 2. | **Thoracic trauma potentially life-threatening injuries & emergency thoracic surgery** | LGIS | Prof. Brig® Dr.Muhammad Parvez | |
| **Learning Outcomes:**<br>• Summarize potentially life-threatening and emergency thoracic surgery | | | | |
| 3. | **Ward visits** | | | |
| **Learning Outcomes:**<br>• Take history and perform examination of the patients with relevant disorders | | | | |
| 4. | **Role of radiology in respiratory diseases** | LGIS | Assoc. Prof. Dr. Nadia Gull | |
| **Learning Outcomes:**<br>• Identify common radiological abnormalities on chest x-rays | | | | |

# Medicine

**Subject Learning Outcomes:**

- Diagnose common medical conditions, suggest and formulate appropriate investigations, rationalize treatment plan and if appropriate, refer patient for specialist opinion/ management (PLO 1).
- Suggest preventive measure for the common Public Health Problem in the community (PLO5).
- Perform relevant bedside procedures (PLO 2).
- Convey relevant information and explanations accurately to patients, families, colleagues and other professionals (PLO 7).
- Understand medical ethics and its application pertaining to medicine and maintain the confidentiality of the patient (PLO 3).
- Adapt research findings appropriately to the individual patient situation or relevant patient population (PLO 4 & 6).

## Block Learning outcomes:

- Perform clinical evaluation and make differential diagnosis of patients presenting with common pulmonary diseases (SLO 1).

| Sr No. | Topics | Educational strategies | Name of instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | **Bacterial pneumonia – Clinical features, Diagnosis & Management** | LGIS | Dr. Kanwal | Must know |
| **Class Learning outcomes**:<br>• Identify the clinical features of bacterial pneumonia<br>• Correlate clinical features with its etiology and pathophysiology<br>• Enlist the relevant investigation<br>• Devise management plan | | | | |
| 2. | **Bronchial asthma – Clinical features, Diagnosis & Management** | LGIS | Dr. Abidain Haider | Must know |
| **Class Learning outcomes**:<br>• Relate abnormalities of physiology of ventilation and respiration to obstructive pulmonary diseases<br>• Identify the clinical features of asthma<br>• Discuss the etiology and risk factors associated with asthma<br>• Enlist the investigations and outline the treatment plan | | | | |
| 3. | **Acute exacerbation of** | LGIS | **Dr. Sidla** | Must know |

| | | | | |
|---|---|---|---|---|
| | **COPD – Clinical features, Diagnosis & Management** | | **Rehman** | |
| **Class Learning outcomes:**<br>• Define Acute exacerbation of COPD and list triggers.<br>• Explain pathophysiology of exacerbations.<br>• Interpret ABG and chest X-ray.<br>• Grade severity of exacerbation.<br>• Enlist indications for NIV.<br>• Formulate emergency management plans**.** | | | | |
| 4. | **Pulmonary TB – Clinical features, Diagnosis & Management** | LGIS | **Dr. Abidain Haider** | Should know |
| **Class Learning outcomes**:<br>• Describe the epidemiology, transmission, and pathogenesis of pulmonary TB.<br>• Identify clinical features and risk factors in suspected TB patients.<br>• Interpret diagnostic investigations.<br>• Outline standard anti-tubercular treatment regimens, duration, and monitoring of therapy.<br>• Recognize complications and explain principles of infection control and patient counselling. | | | | |
| 5. | **Hospital acquired pneumonias - Diagnosis and Management** | LGIS | **Dr. Sidla Rehman** | Must know |
| **Class Learning outcomes**:<br>• Define Hospital acquired pneumonia and differentiate it from community acquired pneumonia and vantiltor associated pneumonia.<br>• Identify common risk factors and causative organisms of HAP.<br>• Interpret basic investigation.<br>• Outline the principals of management.<br>• Recognize complications and preventive strategies such as infection control measures. | | | | |
| 6. | **Acute Respiratory Failure, - Type 01 and Type 2** | LGIS | **Dr. Kanwal Shahid** | Must know |
| **Class Learning outcomes**:<br>• Define the acute respiratory failure and classify into Type-I and Type-II.<br>• Identify common causes and risk factors.<br>• Correlate the clinical features and pathophysiology.<br>• Interpret ABG findings.<br>• Outline the management.<br>• Recognize complications management strategies. | | | | |
| 7. | **Pleural effusion -** | LGIS | **Dr. Sidla** | Must know |

| | | | | |
|---|---|---|---|---|
| | **Diagnosis and management** | | **Rehman** | |
| **Class Learning outcomes**:<br>• Define pleural effusion and explain its basic pathophysiology<br>• Classify pleural effusion into transudative and exudative types with common causes.<br>• Identify clinical features<br>• Interpret basic investigations<br>• Outline management plan<br>• Recognize possible complications of pleural effusion and its procedures. | | | | |
| **Patient Safety** | | | | |
| 1. | **Medication safety** | LGIS | **Dr. Rubaba Khan** | Must know |
| **Class Learning outcomes**:<br>• Define medication safety and explain its importance in preventing adverse drug events.<br>• Describe principles of rational prescribing, including correct drug selection, dose, route, and duration.<br>• Identify common medication errors, their causes, and contributing system factors.<br>• Recognize high-risk drugs and vulnerable patient groups.<br>• Apply strategies to prevent adverse drug events.<br>• Demonstrate safe prescribing practices in clinical scenarios and ward settings. | | | | |

**Learning resources:**

1. **Reference Books**
   - Davidson's Principles and practice of Medicine
   - Kumar and Clarks Clinical Medicine
   - Macleod' Clinical Examination
   - Hutchison's clinical methods
2. **Online resources**
   www. Medscape.com

3. **Library resources**
   - Harrison's Principals of Internal Medicine 20th Edition (2018). McGraw Hill Education

**Teaching faculty and Student hours**

| Name | Email address |
|---|---|
| **Dr. Prof. Muzamil Jamil** | muzamiljml@gmail.com |
| **Dr. Rifat Yasmin** | rifatomer7@gmail.com |

**Assessment formats**

| Assessment strategies (Formative) | Assessment strategies (Summative) |
|---|---|
| **MCQs/SEQs** | MCQs/SEQs |

# Gynecology

**Subject Learning Outcomes (SLO):**

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

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

By the end this block students of 3rd Year must have introduction to Gynae/Obs and integration with other subjects.

1. Select proper treatment option for anemia in pregnancy according to gestational age.
2. Make prenatal diagnosis in case of thalassemia minor couples.
3. Explain mode of inheritance of different inherited disorder to patients in simulated environment.

| S.# | Topic | Educational Strategies | Instructor | Importance (Must Know Good to Know Nice to Know) |
|---|---|---|---|---|
| 1. | Anemia in Pregnancy 1 | LGIS | Dr. Khairun Nisa | Must Know |
| **Learning Outcomes with Assessment strategy**<br>**Formative Assessment (End of Block)**<br>• To identify common causes of anemia in pregnancy.<br>• To discuss nutritional deficiency anemia.<br>• To select proper treatment option for anemia in pregnancy according to gestational age. | | | | |
| 2. | Anemia in Pregnancy 2 | LGIS | Dr. Khairun Nisa | Must Know |
| **Learning Outcomes with Assessment strategy**<br>**Formative Assessment (End of Block)**<br>• To outline haemoglobinopathies in pregnancy.<br>• To make prenatal diagnosis in case of thalassemia minor couples.<br>• To recognize the importance of diagnosing thalassemia in pre conception clinic. | | | | |

| | | | | |
|---|---|---|---|---|
| 3. | Genetic Counselling 1 | LGIS | Dr. Sadia Ijaz | Good to Know |
| **Learning Outcomes with Assessment strategy**<br>**Formative Assessment (End of Block)**<br>• Enlist disease that needs genetic counselling.<br>• To recognize the importance of pre-conception clinic.<br>• To explain mode of inheritance of different inherited disorder. | | | | |
| 4. | Genetic Counselling 2 | LGIS | Dr. Ayesha Irfan | Good to Know |
| **Learning Outcomes with Assessment strategy**<br>**Formative Assessment (End of Block)**<br>• Outline the basic steps in diagnosing genetic disorders.<br>• To choose the investigation for diagnosing certain disorders.<br>• To select proper place for refreshing the couple for proper counselling and management. | | | | |
| 5. | Respiratory disease in pregnancy | LGIS | Dr. Iram Mushtaq | Nice to Know |
| **Learning Outcomes with Assessment strategy**<br>**Formative Assessment (End of Block)**<br>• To appreciate the physiological changes of pregnancy in respiratory system.<br>• To identify symptoms and signs of viral and bacterial pneumonia and able to prescribe treatment.<br>• To employee multidisciplinary approach in managing asthma in pregnancy.<br>• To predict signs of life-threatening asthma.<br>• To recognize steps in the management of acute exacerbation of asthma. | | | | |

**Learning Resources:**

**Reference books:**

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

**Recommended Readings:**

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

**Teaching faculty:**

| Name | Email address |
|---|---|
| Dr. Khairun Nisa | Khairunasif5@gmail.com |
| Dr. Iram Mushtaq | irmushtaq80@gmail.com |
| Dr. Sadia Ijaz | drsadiaijaz@gmail.com |
| Dr. Ayesha Irfan | nazayesha2021@gmail.com |

# Behavioral Sciences

**Subject Learning Outcomes (SLO):**

1. Recognize influence of culture and community on health behavior, perceptions and beliefs. (PLO 3, 5)
2. Practice patient centered behavioral guidance and interventions. (PLO 1, 5, 6)
3. Analyze the influence of social determinants on health outcomes and how physicians can use this knowledge in patient care. (PLO 3, 5, 6)
4. Practice professionalism and leadership qualities in clinical setup. (PLO 1,2,3,6)
5. Practice key personal traits, including self-awareness, emotional intelligence, empathy and effective communication skills in medical practice. (PLO 3, 1,7)

**Block Learning Outcomes (BLO):**

- Describe Common Psychiatric Disorders in General Health Settings
- Describe Panic Disorders
- Define Dissociation and possession states and delirium
- Apply Interviewing and Psychosocial Assessment in clinical settings

| Sr. No. | Topics | Educational Strategies | Name of instructor | Importance (Must Know Should Know Could Know) |
|---|---|---|---|---|
| 1. | Common Psychiatric Disorders: Mixed anxiety & Depression | LGIS | Ms. Zunaira Naveed | Should Know |
| **Learning Outcomes:**<br>• Describe common psychiatric disorders in general health settings | | | | |
| 2. | Panic Disorders | LGIS | Ms. Zunaira Naveed / Ms. Sara Rubab | Should Know |
| **Learning Outcomes:**<br>• Describe panic disorders in general health settings | | | | |
| 3. | Unexplained Somatic Complaints: Persistent Complainers | LGIS | Ms. Zunaira Naveed / Ms. Sara Rubab | Should Know |
| **Learning Outcomes:**<br>• Describe common psychiatric disorders in general hospital settings | | | | |
| 4. | Dissociative and Possession States | LGIS | Ms. Zunaira Naveed / Ms. Sara Rubab | Should know |
| **Learning Outcomes:**<br>• Define Dissociative and Possession states | | | | |
| 5. | Drug Abuse, Alcohol & | LGIS | Ms. Zunaira | Must know |

| | | | | |
|---|---|---|---|---|
| | Tobacco Use | | Naveed / Ms. Sara Rubab | |
| **Learning Outcomes:**<br>• Memorize Drug Abuse, Alcohol and Tobacco use | | | | |
| 6. | Suicide and Deliberate Self Harm (DSH) | LGIS | Ms. Zunaira Naveed / Ms. Sara Rubab | Should know |
| **Learning Outcomes:**<br>• Recall suicide and Deliberate Self Harm | | | | |
| 7. | Delirium | LGIS | Ms. Zunaira Naveed / Ms. Sara Rubab | Must know |
| **Learning Outcomes:**<br>• Describe delirium and its clinical relevance | | | | |
| 8. | History Taking | LGIS | All Faculty | Must know |
| **Learning Outcomes:**<br>• Demonstrate interviewing and History Taking | | | | |
| 9. | Assessment of Health Services and Patients' Perceptions | LGIS | Mr. Hassan Ali/ Mr. Saad Ul Hassan | Must know |
| **Learning Outcomes:**<br>• Interpret Assessment of Health Services and Patients' Perceptions | | | | |

**Learning Resources:**

- Handouts prepared by faculty.
- Online resources
- Lecture notes.

**Reference books:**

- Handbook of Behavioural Sciences by Mowadat H. Rana

**Teaching faculty:**

| Name | Email address |
|---|---|
| Ms. Zunaira Naveed | naveedzunie@gmail.com |
| Mr. Hassan Ali | ha55an.qau5@gmail.com |
| Ms. Sara Rubab | sararubab753@gmail.com |
| Mr. Saad Ul Hassan | Saadmirza101@gmail.com |
| Dr. Hira Munir | Hiramunir144@gmail.com |

**Assessment formats:**

| Assessment Strategies (Formative) | Assessment Strategies (Summative) |
|---|---|
| • Directly observed behaviors,<br>• Small group discussions,<br>• Reflective writing Portfolios<br>• MCQs, Home assignments, SAQs/SEQs | • Assignments,<br>• Case studies,<br>• Quiz, Presentations<br>• MCQs, SAQs/SEQs, OSPE, Viva |

# 13. Rules & regulations:

## I. Student's code of conduct

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

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

## WMC STUDENT CODE OF CONDUCT

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

# i. Attendance policy

a. Students are required to mark attendance for every class.

b. The attendance is compiled by respective department and submitted to student affairs by the 10th of each month.

c. Students Affair Department will compile the absent report and fine of Rs. 500/- for a lecture or for the whole day will be imposed on absent students. It is pertinent to mention here that fine is imposed on students to compel them to attend classes regularly and not to generate the funds.

d. A compiled attendance state of all students along with those having attendance less than 75% duly highlighted will be submitted to the Students Affairs Department on monthly as well as quarterly basis by the concerned departments.

e. At the end of academic year, a consolidated state of attendance of students will be submitted to Students Affair Department.

f. Departments will submit the list of those students having attendance less than 75% at the end of academic year.

g. Admission forms of students having attendance less than 75% will NOT be submitted to NUMS for appearing in Annual University Exams.

# 14. Study tips

Dear Students,

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


Review the material regularly, create a study schedule

Write it down

Test yourself

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


Improve memorization with Mnemonics

Incorporate auditory methods; use online podcasts



Use visuals, images, concept maps & illustration charts

Consider forming a study group or find an accountability buddy



Take strategic breaks

## 15. Feedback on the Study Guide

We value your feedback and will use it for improvement of this Study guide. Kindly provide feedback for this study guide. At the email:

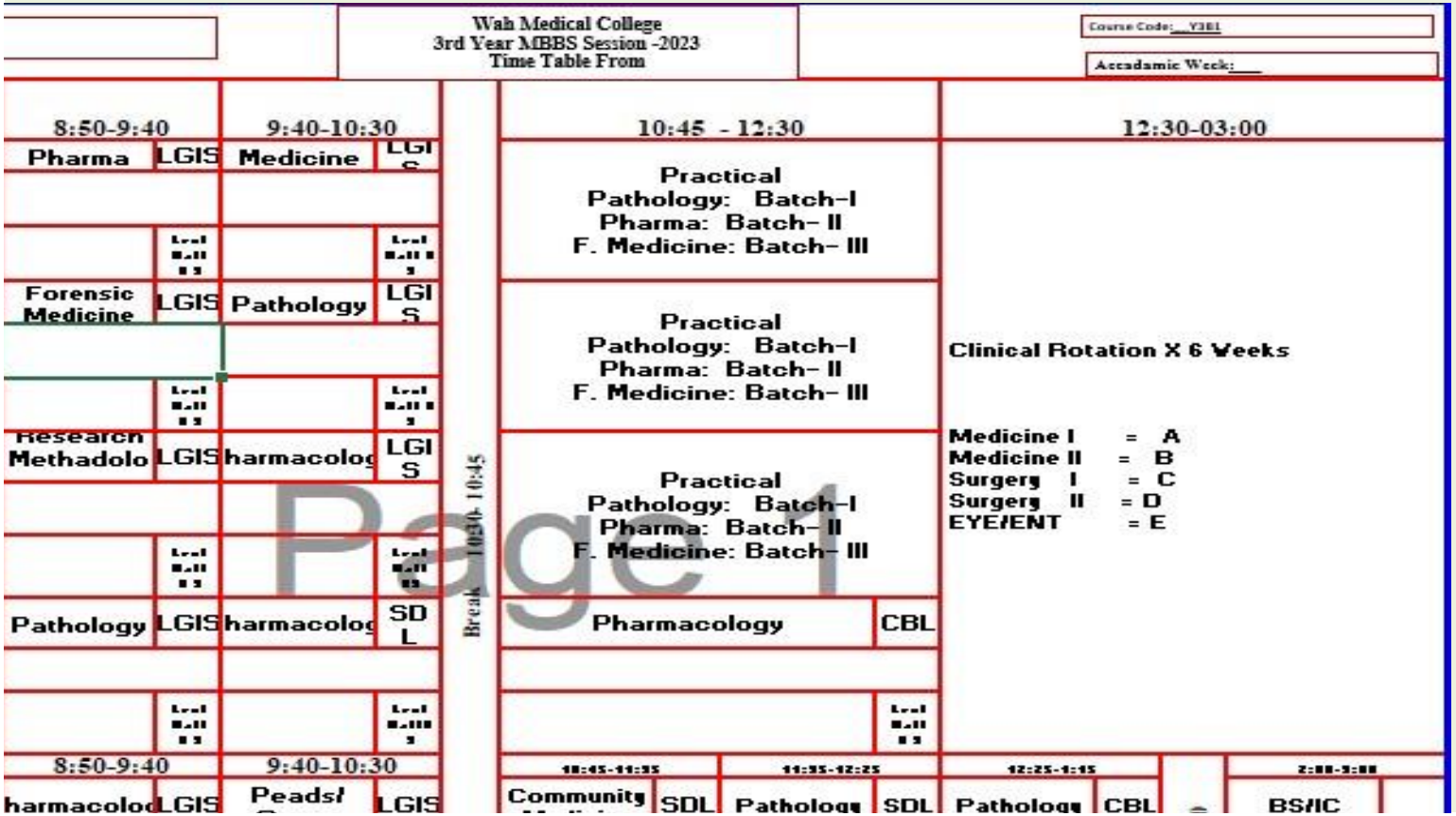
dme@wahmedicalcollege.edu.pk

dmewahmedicalcollege@gmail.com

## 16. References:

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

## 17. Time Table Template:



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

Course Code: Y3B1

Accadamic Week:

| 8:50-9:40 | | 9:40-10:30 | | | 10:45 - 12:30 | | 12:30-03:00 |
|---|---|---|---|---|---|---|---|
| Pharma | LGIS | Medicine | LGIS | | Practical<br>Pathology: Batch-I<br>Pharma: Batch- II<br>F. Medicine: Batch- III | | |
| Forensic Medicine | LGIS | Pathology | LGIS | | Practical<br>Pathology: Batch-I<br>Pharma: Batch- II<br>F. Medicine: Batch- III | | Clinical Rotation X 6 Weeks<br><br>Medicine I = A<br>Medicine II = B<br>Surgery I = C<br>Surgery II = D<br>EYE/ENT = E |
| Research Methadolo | LGIS | harmacolog | LGIS | | Practical<br>Pathology: Batch-I<br>Pharma: Batch- II<br>F. Medicine: Batch- III | | |
| Pathology | LGIS | harmacolog | SDL | | Pharmacology | CBL | |

| 8:50-9:40 | | 9:40-10:30 | | | 10:45-11:35 | | 11:35-12:25 | | 12:25-1:15 | | 2:00-3:00 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| harmacolod | LGIS | Peads/ | LGIS | | Community | SDL | Pathology | SDL | Pathology | CBL | BS/IC |