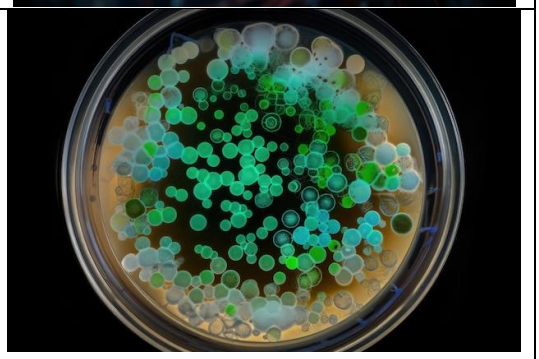
IBN-E-SINA UNIVERSITY MIRPURKHAS

STUDENT'S STUDY GUIDE
INFECTIOUS DISEASE MODULE
THIRD PROFESSIONAL MBBS

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1. DISCLAIMER

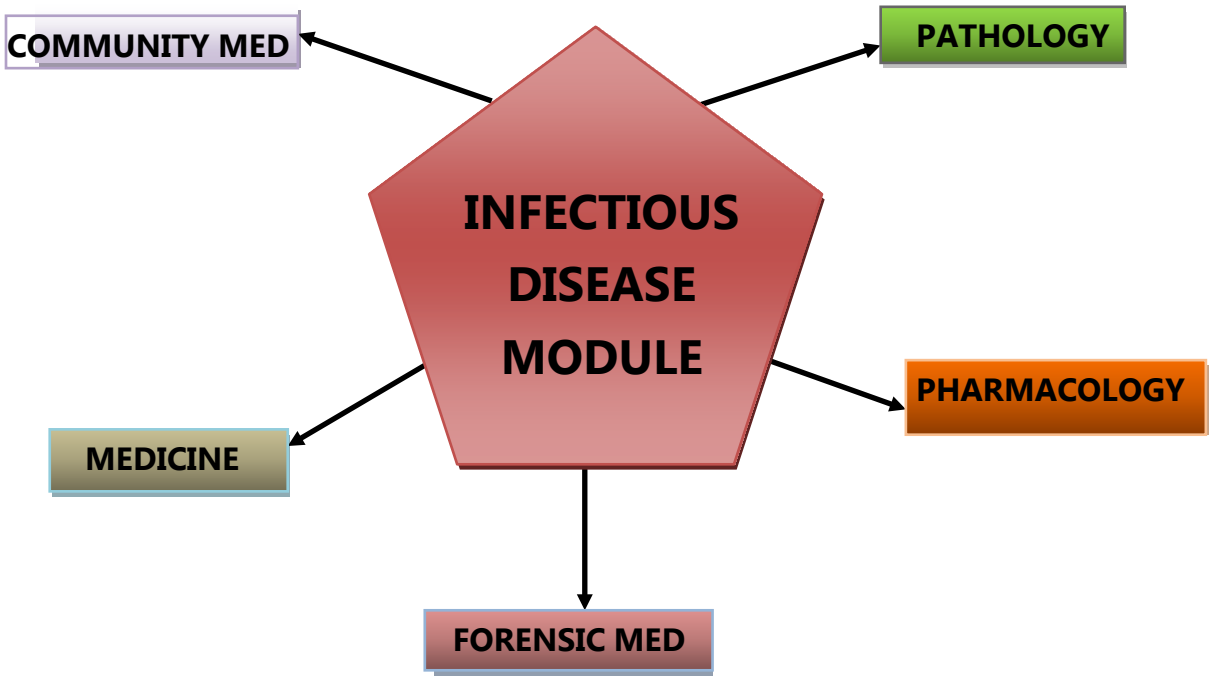
- Developing a study guide is a dynamic process and undergoes iteration according to the needs and priorities.
- This study guide is subjected to the change and modification over the whole academic year.
- However, students are advised to use it as a guide for respective modules.
- The time tables are for guiding purpose. It is to advise that final timetables are always displayed over the notice boards of each lecture hall.
- Students are encouraged to provide feedback via coordinator

2. CURRICULUM FRAMEWORK

An educational strategy known as integrated curriculum places a strong emphasis on interdisciplinary learning, in which students gain knowledge by integrating it from several topic areas. By integrating many subjects and disciplines into a cohesive curriculum, this method seeks to give students a more relevant and interesting learning experience. Integrated curriculum means that subjects are presented as a meaningful whole for better understanding of basic sciences in relation to clinical experience and application.

Integrated curriculum comprises of system-based modules such as CVS-II, Endocrine-II, Git and Liver-II, Hematology and oncology-II, Infectious Disease and Respiratory-II modules which link basic science knowledge to clinical problems.

INTEGRATING DISCIPLINES OF INFECTIOUS DISEASE MODULE



3. MODULE OVERVIEW

INFECTIOUS DISEASE MODULE DETAILS

Course	MBBS
Year	Third professional
Duration	7 weeks
Learning Outcomes	The competent Medical Practitioner
Competencies covered	To develop medical professionals who are well - versed, adept, and have the right mindset.
Module Assessment	End module formative assessment
Teaching Methods	Interactive Lectures, Demonstrations, Case Based Learning, Practical Lab, Small Group Discussions, Self-Study Sessions, E-Learning, Clinical rotations
Assessment Methods	MCQs, SEQs, OSPE, VIVA

INFECTIOUS DISEASE MODULE COMMITTEE

Sr. No	Names	Department	Designation
MODULE COORDINATOR			
1.	Dr. Bhawani Shankar	Pathology	Associate Professor
2.	Abid Laghari	Pharmacology	Lecturer
COMMITTEE MEMBERS			
1.	Prof: Dr. Syed Razi Muhammad	Surgery	Chancellor ISU
2.	Prof: Dr. Shams Ul Arfeen Khan	Biochemistry	Vice Chancellor ISU
3.	Prof: Dr. Aijaz Ahmed Memon	Surgery	Pro Vice Chancellor ISU

4. WHAT IS STUDY GUIDE

It is an aid to Inform students how student learning program of the module has been organized, tohelp students organize and manage their studies throughout the module and guide students on assessment methods, rules and regulations.

The study guide:

— Communicates information on organization and management of the module.

— This will help the student to contact the right person in case of any difficulty.

— Defines the objectives which are expected to be achieved at the end of the module.

— Identifies the learning strategies such as lectures, small group teachings.

Module objectives.

— Provides a list of learning resources such as books, computer-assisted learning programs, weblinks, and journals, for students to consult in order to maximize their learning.

— Highlights information on the contribution of continuous on the student's overall performance.

— Includes information on the assessment methods that will be held to determine every student's performance.

Achievement of objectives.

- Focuses on information pertaining to examination policy, rules and regulations.

5. LEARNING METHODOLOGIES

The following teaching/learning methods are used to promote better understanding

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
- Clinical Rotations
- Skills session
- Practicals
- Self-Directed Study

- **INTERACTIVE LECTURES:**

  Large group discussions are not the same as traditional lecture formats. When a teacher or instructor uses images, radiographs, patient interaction recordings, etc. to discuss a topic or typical clinical scenario, the lecture becomes interactive. When they are given tiny activities to do that allow them to apply the knowledge they have learned throughout the session and are asked questions, students actively participate in the learning process.

- **SMALL GROUP DISCUSSIONS (SGDS):**

  With the use of SGD, students can take an active role in their education, clarify ideas, develop psychomotor skills, and develop a positive attitude. Discussion themes, patient interviews, and clinical cases are used to design sessions in an organized manner. Pupils are inspired to express their ideas, apply the fundamental knowledge they have learned from lectures and independent study, and are encouraged to share their notions. In small groups, role play is a useful technique for acquainting pupils with real-world scenarios. Probing questions, rephrasing, and summarizing are used by the teacher to assist make the concepts obvious.

- **CASE-BASED LEARNING (CBL):**

  Learning is centered around a sequence of questions based on a clinical scenario in this small group discussion format. Students create new information by discussing and responding to the questions using pertinent prior knowledge from the clinical and fundamental health sciences modules. The relevant department will give the CBL.

- **CLINICAL EXPERIENCES:**

  Students examine patients in hospital wards, clinics, and outreach facilities in small groups, noting their signs and symptoms. This aids students in connecting their understanding of the module's basic and clinical sciences and getting ready for future practice.

- **CLINICAL ROTATIONS:**

  Students cycle through a variety of wards in small groups, including those in family medicine clinics, outreach centers, pediatrics, surgery, obstetrics and gynecology, ENT, and community medicine. In both inpatient and outpatient settings, students watch patients, get medical histories, and carry out clinical examinations under supervision. They also have the chance to watch medical professionals function as a team. Students can link their basic medical and clinical skills to a variety of clinical domains through these rotations.

- **SKILL SESSIONS:**

  Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

- **PRACTICALS:**

  Basic science practical related to pharmacology, microbiology, forensic medicine, and community medicine have been schedule for student learning.

- **SELF STUDY:**

  Self-directed learning is a process in which students take charge, either on their own or with assistance from others. Students chart their learning objectives and determine their areas of need for learning. They select and employ their own learning methodologies, and they independently assess the learning objectives.

6. INTRODUCTION

In the twenty-first century, infectious illnesses continue to pose a major threat to public health. According to WHO statistics, infectious diseases account for around 15 million fatalities globally annually, making them the second greatest cause of death. The "big three" AIDS, TB, and malaria, have been dubbed such due to their significant effects on the health of people worldwide.

The tale is the same at home. Together, these nations, including Pakistan, bear 95% of the burden of infectious diseases. On the list of nations with a high prevalence of tuberculosis, Pakistan is in fifth place out of twenty-two. Malaria also takes an astonishing one million lives on an annual average. The worst part is that Pakistan is still one of the two nations where polio is still endemic. Therefore, educating the general people about the value of vaccinations is crucial. The situation is made worse by a number of other elements, including a shortage of efficient prescription drugs, poor hand washing techniques, and congestion. The disease load rises as a result of general practitioners in Pakistan, an estimated 32% of them, not giving the right prescription.

As third-year medical students, it is crucial that you expand on your current awareness of the common infectious diseases, develop a deeper comprehension of and aptitude for identifying symptoms, and connect these to pertinent research and treatments.

6.1 RATIONALE

In our community, infectious infections are the most prevalent issues. Malnutrition and infectious illnesses are the leading causes of death in developing nations like Pakistan. If detected early enough, the majority of diseases are identifiable and treatable. A solid understanding of the microbiology of organisms and the diseases they cause is crucial for medical graduates. The reasoning behind the studies conducted to diagnose these illnesses should also be understood by the students. Along with the rationale behind treating common infections, they should be knowledgeable with the pharmacology of the numerous medications used to treat infectious diseases.

6.2 IBN E SINA UNIVERSITY (ISU) VISION:

To become a world-leading organization in rural health and social care research, training, recruitment and best evidence-based practice.

6.3 IBN E SINA UNIVERSITY (ISU) MISSION:

Our Mission is to inspire hope, and contribute to health and well-being by providing the best care to every patient through integrated clinical practice, education and research. To provide a focal point for the development and collation of high-quality research pertinent to rural health and wellbeing. To improve the training, recruitment and retention of a professional workforce within rural communities. To be recognized as an exemplar in rural health and wellbeing on the international stage. To establish a network of individuals and groups that support research, innovation and development in rural health and social care.

7. LEARNING OBJECTIVES

7.1 General Learning Outcomes:

At the end of this module, the students will be able to;

1. Explain the pathophysiology and clinical manifestations of prevalent microbial, viral, fungal, and bacterial infections.
2. Acknowledge how prevalent infectious diseases manifest clinically in the population.
3. Gather information and create a suitable study plan to arrive at a differential diagnosis.
4. For a diagnosis, evaluate the results of the investigations, exams, and history.
5. Apply the fundamentals of infectious illness management.
6. Acknowledge prognosis and preventive steps in order to counsel patients.
7. Possess knowledge of the prognosis and the ability to counsel patients appropriately.

7.2 Knowledge / Cognitive Domain

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

1. Become highly skilled in taking medical histories, doing physical examinations, making differential diagnoses, and utilizing the various diagnostic and procedural tools that medicine has to offer, such as therapeutic and palliative modalities, in an efficient manner.
2. Control the common, widespread illnesses in the community
3. List the most frequent medical emergencies.
4. Create a plan for preventing prevalent illnesses in your community.
5. Create a plan for referrals.
6. Make a prescription schedule.

7.3 Skills / Psychomotor Domain:

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

1. Show that you can do the disease-specific relevant examination.
2. Respond to frequent medical crises.
3. Learn how to provide first aid.
4. Do Basic Life Support (BLS).
5. Use the best evidence-based strategies for local health issues.

7.4 Attitude / Affective Domain:

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

1. Link to the vulnerability of careers and patients.
2. Exhibit responsible self-management.

3. Patients and their families can be empowered to take an active role in their care and facilitate joint decision-making by receiving counseling and education.
4. Show empathy for the patient and your coworkers.
5. Show in clinical treatment that you have an awareness of how psychological, social, and economic variables affect people's health and illnesses.

7.5 Outcomes of Infectious Disease Module

1. Knowledgeable
2. Skillful
3. Community Heath Promoter
4. Problem-solver
5. Professional
6. Researcher
7. Leader and Role Model

8. THEMES FOR INFECTIOUS DISEASE MODULE

SNO	Theme	Duration
1	**Revisit**	1 week
2	**Immuno-pathogenesis**	1 week
3	**Diagnostic approach to infection**	1 week
4	**Pyogenic bacteria I**	1 week
5	**Pyogenic bacteria II**	1 week
6	**Pyrexia of unknown origin**	1 week
7	**Parasitic infections**	1 week

9. SPECIFIC LEARNING OBJECTIVES THEME WISE

THEME 1: REVISIT

S. No	LEANING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESSMENT
	PATHOLOGY			
01	Enlist essential and non-essential components of a typical bacterial cell with their function	Bacterial Structure	Interactive Lecture	BCQ, SEQ, OSPE
02	Classify bacteria on the basis of Gram staining. Differentiate characteristics of gram- positive and gram-negative bacteria Define normal flora. Describe colonization of normal flora. Name the members of normal flora with their appropriate anatomical locations	Classification of bacteria & normal flora (human microbiota)	Interactive Lecture	BCQ, SEQ, OSPE
03	Define acute inflammation Describe the sequence of vascular changesDefine exudates and transudate and their mechanism of formation	General features of inflammation & vascular changes	Interactive Lecture	BCQ, SEQ, OSPE
04	Describe the acute inflammatory cells and their functions. Name the various types of chemical mediators and their role Describe the local and general clinical features of acute inflammation	Cellular events of Chemotaxis, phagocytosis	Interactive Lecture	BCQ, SEQ, OSPE
05	Define chronic Inflammation Describe the characteristic features and types of chronic Inflammation Define granuloma, mention a etiological classification of granuloma with examples	Chronic inflammation	Interactive Lecture	BCQ, SEQ, OSPE
06	Outline various methods for transfer of genetic information in bacterium. Describe the phases of bacterial growth.	Bacterial genetics & bacterial growth	Interactive Lecture	BCQ, SEQ, OSPE
07	State the criteria are used in viral classification Describe the characteristics of DNA and RNA viruses Describe structure of virus	Classification & structure of viruses	Interactive Lecture	BCQ, SEQ, OSPE
08	To demonstrate the principle & procedure of Gram's staining	Gram's staining	Practical	BCQ, SEQ, OSPE
	PHARMACOLOGY			
01	Describe the classification , mechanism of action & side effects of penicillin's	Beta lactam antibiotics	Interactive Lecture	BCQ, SEQ, OSPE
02	Describe the classification , mechanism of action & side effects of cephalosporin's & other cell wall synthesis inhibitors	Beta lactam antibiotics	Interactive Lecture	BCQ, SEQ, OSPE
	COMMUNITY MEDICINE			
01	To define communicable disease and other basic definitions regarding the infectious disease To differentiate between infection, contamination, pollution, infestation To classify the communicable disease To discuss the infectious disease control programs in Pakistan	Introduction to communicable disease and basic concept and infectious disease control program in Pakistan	Interactive Lecture	BCQ, SEQ, OSPE

02	To understand the chain of infection To describe the various route of transmission of infectious diseases To describe the preventive and control measures of infectious diseases	Chain of transmission & Its role in infectious disease control	Interactive Lecture	BCQ, SEQ, OSPE
03	To discuss the steps of investigation of epidemics (Epidemic endemic, pandemic and steps of investigation of epidemics, explain with examples)	Steps of investigation of epidemics	Interactive Lecture	BCQ, SEQ, OSPE
FORENSIC MEDICINE				
01	Define Forensic Medicine and Toxicology and its various branches Discuss the importance and utility of Forensic	INTRODUCTION Forensic Medicine	Interactive Lecture	BCQ, SEQ, OSPE

THEME 2: IMMUNO-PATHOGENESIS

SR. NO.	OBJECTIVES	TOPICS	TEACHING STRATEGY	ASSESS MENT
		PATHOLOGY		
01	Differentiate b/w true pathogens, opportunists and commensals List the routes of transmission of infection Describe colonization, pathogenesis, spread andexcretion of infectious agents.	Bacterial pathogenesis I	Interactive Lecture	BCQ, SEQ, OSPE
02	Differentiate b/w true pathogens, opportunists and commensals List the routes of transmission of infection Describe colonization, pathogenesis, spread andexcretion of infectious agents.	Bacterial pathogenesis II	Interactive Lecture	BCQ, SEQ, OSPE
03	Define viral pathogenesis. Describe the effect of virus infection on host cell. Explain specific and non-specific defense mechanism against viral infection.	Viral pathogenesis	Interactive Lecture	BCQ, SEQ, OSPE
04	Describe host defense mechanism against bacteria. Distinguish between passive & active adaptive immunity. To discuss the failure of host defense against infections.	Host defense against bacterial infection	Interactive Lecture	BCQ, SEQ, OSPE
05	Distinguish between innate and acquired immunity Describe the role of interferons, natural killercells, cytotoxic T cell in viral diseases Explain how interferons limit cell-to-cell spread of viruses.	Host defense against viral infection	Interactive Lecture	BCQ, SEQ, OSPE
06	To demonstrate the principle & procedure of Acid-fast staining.	Acid fast staining	Practical	BCQ, SEQ,
		PHARMACOLOGY		
01	Describe classification, mechanism of action & side effects of anti-viral drugs	Anti-viral drugs -1	Interactive Lecture	BCQs, SEQs
02		Anti-viral drugs-2	Interactive Lecture	BCQs, SEQs
		COMMUNITY MEDICINE		
01	To define arthropods and classify the wing and wingless insects. To discuss the Common disease transmitted bywing and wingless insects To discuss the Control and preventive measures of wing and wingless insects of medical importance To know Insecticides and their public health importance	Arthropods and their Public Health Importance	Interactive Lecture	BCQ, SEQ, OSPE
02	To discuss the problem statement of malaria To define the malaria and vectors of malariaThe describe the epidemiology of Malaria To discuss the preventive and control measures of malaria	Epidemiology & control measure of Malaria	Interactive Lecture	BCQ, SEQ, OSPE

FORENSIC MEDICINE				
01	Describe the composition, functions of Pakistan Medical & Dental Council at present and its role in medical education Define Privileges & obligations of registeredmedical practitioners	PM & DC	Interactive Lecture	BCQ, SEQ, OSPE
02	Define consent, types of consent & roles of consent in Medical Examination Describe Professional misconduct (Infamous conduct) Discuss Criteria for giving valid consent Define Doctrine of informed consent (Rule of full	Consent	Interactive Lecture	BCQ, SEQ, OSPE

THEME 3: DIAGNOSTIC APPROACH TO INFECTION

SR. NO.	OBJECTIVES	TOPICS	TEACHING STRATEGY	ASSESS MENT
		PATHOLOGY		
01	Describe the steps of viral replication Explain mode of replication of various RNA and DNA viruses.	Viral Replication	Interactive Lecture	BCQ, SEQ, OSPE
02	Compare and contrast the various methods used to diagnose bacterial diseases Describe various microscopic and culture techniques used for diagnosis Discuss molecular techniques in diagnosis of infectious diseases.	Laboratory diagnosis of bacterial diseases	Interactive Lecture	BCQ, SEQ, OSPE
03	Compare and contrast the various methods used to diagnose viral diseases Describe various microscopic and culture techniques used for diagnosis Discuss molecular techniques in diagnosis of infectious diseases.	Laboratory diagnosis of viral diseases	Interactive Lecture	BCQ, SEQ, OSPE
04	Define healing, repair and regeneration Describe the mechanisms of primary and secondary wound heal	Healing & Repair -1	Interactive Lecture	BCQ, SEQ, OSPE
05	Distinguish the differences between healing by first and secondary intention List the local and general factors influencing healing List the complications of wound healing	Healing & Repair -2	Interactive Lecture	BCQ, SEQ, OSPE
06	Distinguish between fungal & bacterial cell contrast sexual & asexual reproduction of fungi. Define dimorphism Describe pathogenesis, fungal toxins and lab diagnosis of fungi	Basic Mycology	Interactive Lecture	BCQ, SEQ, OSPE
07	Classify culture media Enlist various ingredients used for making culture media Demonstrate selective and biochemical test media	Culture Media	Practical	BCQ, SEQ, OSPE
		COMMUNITY MEDICINE		
01	To define the Leishminasis and its types To understand the epidemiology of Leishminasis To discuss the preventive and control measures of Leishminasis	Epidemiology & control measure of Leishmaniasis	Interactive Lecture	BCQ, SEQ, OSPE

02	To discuss the problem statement of influenza To understand the epidemiology of influenza To define and describe the mode of transmission of influenza To discuss the preventive and control measures of influenza	Epidemiology & control measure of Influenza	Interactive Lecture	BCQ, SEQ, OSPE
FORENSIC MEDICINE				
01	Define Injury, Hurt, Wound, Assault and Battery? Classify Injuries Describe Blunt weapon injuries- Abrasions, Bruises	**TRAUMATOLOGY** Injury	Interactive Lecture	BCQ, SEQ, OSPE
02	Describe Lacerated wounds, types, mechanism of production and medico legal significance Describe Sharp weapon injuries- Incised wounds, stab wounds with medico legal significance	TRAUMATOLOGY Wound	Interactive Lecture	BCQ,SEQ, OSPE
03	Discuss the general treatment / management of poisoning. Discuss the duties of doctor in a case of poisoning. Discuss the forensic aspects of poisons.	Management of Poison	Practical	BCQ,SEQ, OSPE

THEME 4: PYOGENIC BACTERIA I

SR. NO.	Objectives	Topics	Teaching Strategy	Assessment
		PATHOLOGY		
01	Enlist the species of Staphylococci Enlist the virulence factors & toxins. Describe pyogenic and toxin mediated diseases caused by staphylococcus aureus. Discuss lab diagnosis of staphylococci	Staphylococci	Interactive Lecture	BCQ, SEQ
02	Classify medically important streptococci Describe toxins, enzymes & hemolysins produced by streptococci. Discuss their pyogenic, toxigenic & post streptococcal diseases. Describe the lab diagnosis of streptococci.	Streptococci	Interactive Lecture	BCQ, SEQ
03	Describe morphology, pathogenesis, clinical features and lab diagnosis of Pneumococcus.	Pneumococci	Interactive Lecture	BCQ, SEQ
04	Enlist species of Neisseria . Describe their morphology, pathogenesis and laboratory diagnosis.	Neisseria	Interactive Lecture	BCQ, SEQ
05	Define Diphtheria & Listeriosis. Describe important properties, transmission, pathogenesis of diphtheria & Listeria. Discuss the laboratory diagnosis of Corynebacterium diphtheria & Listeria monocytogens.	Corynebacterium diphtheria & Listeria monocytogens	Interactive Lecture	BCQ, SEQ
06	Describe various microscopic and culture techniques used for diagnosis	Lab diagnosis of gram positive & negative cocci.	Practical	BCQ, SEQ, OSPE
		PHARMACOLOGY		
01	Describe classification, mechanism of action & side effects of Aminoglycosides	Antibiotics-1	Interactive Lecture	BCQ, SEQ, OSPE
02	Describe classification, mechanism of action & side effects of tetracyclines & chloromphenicol	Antibiotics-2	Interactive Lecture	BCQ, SEQ, OSPE
03	Describe classification, mechanism of action & side effects of macrolides	Antibiotics-3	Interactive Lecture	BCQ, SEQ, OSPE
04	Describe classification, mechanism of action & side effects flouroquinolones	Antibiotics-4	Interactive Lecture	BCQ, SEQ, OSPE
05	Describe classification, mechanism of action & side effects of sulfonamides & trimethoprim	Antibiotics-5	Interactive Lecture	BCQ, SEQ, OSPE

06	Construct a prescription for a patient with acute tonsillitis	Acute Tonsilitis	Practical	BCQ,OSPE
		COMMUNITY MEDICINE		
01	To define the yellow fever To understand the epidemiology of yellow fever To discuss the importance of yellow fever to Pakistan To discuss the preventive and control measures of yellows fever	Epidemiology & control measure of yellow fever	Interactive Lecture	BCQ, SEQ, OSPE
02	To discuss the problem statement of chicken pox To define chickenpox and describe the mode of transmission of chickenpox To understand the epidemiology of chickenpox To discuss the preventive and controlmeasures of chickenpox	**DROPLET INFECTIONS:** Epidemiology & control measure of Chickenpox	Interactive Lecture	BCQ, SEQ, OSPE
03	To discuss the problem statement of Measles, Mumps, Rubella To understand the epidemiology of Measles, Mumps, Rubella To define and describe the modes of transmission of Measles, Mumps, Rubella To describe diagnosis of mumps. To discuss the preventive and control measures of Measles, Mumps, Rubella	Epidemiology & control measure of Measles, Mumps, Rubella	Interactive Lecture	BCQ, SEQ, OSPE
		FORENSIC MEDICINE		
01	Define & classify Qisas and Diyat Act with interpretation of injuries accordingly	TRAUMATOLOGY Qisas & Diyat	Interactive Lecture	BCQ, SEQ, OSPE
02	Describe Complete and partial identification Describe Identification in living and dead bodies with examples Describe Determination of race Determine Sex and intersex states	PERSONAL IDENTITY –I Identification	Interactive Lecture	BCQ, SEQ, OSPE
03	Define food poisoning Describe what causes of food poisoning Explain the effects of food poisoning	Food Poisoning	Practical	BCQ, SEQ, OSPE

THEME 5: PYOGENIC BACTERIA II

S. No	Objectives	Topics	Teaching Strategy	Assessment
		PATHOLOGY		
01	Outline morphology, pathogenesis, clinical features and lab diagnosis of Bacillus	Bacillus	Interactive Lecture	BCQ, SEQ, OSPE
02	Classify clostridia Describe morphology, pathogenesis, clinical features and lab diagnosis of Clostridia	Clostridia	Interactive Lecture	BCQ, SEQ, OSPE
03	Enlist pathogenic strains of E. coli Describe morphology, virulence factors, cultural characteristics and Lab diagnosis of E.coli and Klebsiella	E.coli & Klebsiella	Interactive Lecture	BCQ, SEQ, OSPE
04	Classify different strains of Salmonella & Shigella Describe antigenic structure and virulence factor of salmonella & Shigella Discuss lab diagnosis of Salmonella & shigella	Salmonella & Shigella	Interactive Lecture	BCQ, SEQ, OSPE
05	Enlist various species of proteus and pseudomonas Describe pathogenesis and lab diagnosis	Proteus & Pseudomonas	Interactive Lecture	BCQ, SEQ, OSPE
06	Describe various microscopic and cultural characteristics used for diagnosis	Lab diagnosis of gram positive bacilli (rods).	Practical	BCQs, SEQs, OSPE
		MEDICINE		
01		Typhoid fever	Interactive Lecture	BCQ, SEQ, OSPE
02		Gastroenteritis / Diarrhea / Dysentery	Interactive Lecture	BCQ, SEQ, OSPE
		COMMUNITY MEDICINE		
01	To discuss the problem statement of typhoid fever To define the typhoid fever To understand the epidemiology of typhoid fever To discuss the preventive and control measures of Typhoid fever	Epidemiology & control measure of Typhoid	Interactive Lecture	BCQ, SEQ, OSPE
02	To discuss the problem statement of Whooping Cough To understand the epidemiology of Whooping Cough To define Whooping Cough and describe the mode of transmission of Whooping	Epidemiology & control measure of Whooping Cough	Interactive Lecture	BCQ, SEQ, OSPE
	Cough To discuss the preventive and control measures of Whooping Cough			

03	To discuss the problem statement of amoebiasis To Know public health importance of amoebiasis To discuss the Important factors of Agent/Host/Environment responsible for occurrence of amoebiasis To discuss the preventive and control measures of amoebiasis	Epidemiology and control measure of Amoebiasis	Interactive Lecture	BCQ, SEQ, OSPE
FORENSIC MEDICINE				
01	Describe Parameters of identification	Parameter of Identification	Interactive Lecture	BCQ, SEQ,
02	Determine Age estimation in medico legal cases by General examination Discuss Medico legal importance of age	Age	Interactive Lecture	BCQ, SEQ, OSPE
03	Classify corrosive poisons. Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to: Caustics Inorganic – sulphuric, nitric, and hydrochloric acids; Organic- Carbolic Acid (phenol), Oxalic and acetylsalicylic acids	Corrosives	Practical	BCQ, SEQ,

THEME 6: PYREXIA OF UNKNOWN ORIGIN

S. NO	OBJECTIVES	TOPICS	TEACHING STRATEGY	ASSESS MENT
		PATHOLOGY		
01	Describe the important properties, transmission, pathogenesis, clinical findings and lab diagnosis of wall less & filamentous bacteria	Mycoplasma & actinomycetes	Interactive Lecture	BCQs, SAQs, OSPE
02	Classify the obligate intracellular parasite -Describe the important properties, transmission, pathogenesis, clinical findings and lab diagnosis of Chlamydia & Rickettsia	Chlamydia & Rickettsia	Interactive Lecture	BCQs, SAQs, OSPE
03	Classify the medically important Spirochetes. -Describe the important properties, transmission & clinical findings. -Discuss the lab diagnosis of Syphilis	Spirochetes (Treponema, Borrelia, Leptospira)	Interactive Lecture	BCQs, SAQs, OSPE
04	Classify Herpes virus Describe pathogenesis, clinical presentation and lab diagnosis of herpes virus	Herpes Viruses	Interactive Lecture	BCQs, SAQs, OSPE
05	Define Dengue fever Describe vector, life cycle and clinical manifestation of dengue virus Discuss mode of transmission, pathogenesis and clinical feature of polio virus	Dengue & polio virus	Interactive Lecture	BCQs, SAQs, OSPE
06	Describe various microscopic and culture techniques used for diagnosis	Lab diagnosis of gram negative bacilli (rods)	Practical	BCQs, SEQs, OSPE
		PHARMACOLOGY		
01	Describe the different drug options for treatment of dengue fever	Anti-viral drugs for dengue fever	Interactive Lecture	BCQs, SAQs,
02	Construct a prescription for a patient with Malaria	Malaria	Practicle	BCQs,
		COMMUNITY MEDICINE		
01	To know the burden of hookworm infestation To describe the epidemiological determinants related to agent/host/ environment To discuss the various preventive and control measures of hookworm infestation	Epidemiology and control measure of hookworm infestation	Interactive Lecture	BCQs, SAQs, OSPE
02	To discuss the problem statement of Meningitis To understand the epidemiology of Meningitis To define Meningitis and describe the mode of transmission of Meningitis To discuss the preventive and control measures of Meningitis	Epidemiology & control measure of Meningitis	Interactive Lecture	BCQs, SAQs, OSPE

03	To discuss the problem statement of dengue fever To discuss the type of dengue fever To understand the epidemiology of dengue fever To discuss the preventive and control measures of dengue fever	Epidemiology & control measure of Dengue Fever	Interactive Lecture	BCQ, SEQ, OSPE
	FORENSIC MEDICINE			
01	Define Forensic Odontology & its medico legal importance	Odontology	Interactive Lecture	BCQs, SAQs, OSPE
02	Define Forensic Radiology & its medico legal importance	Radiology	Interactive Lecture	BCQs, SAQs, OSPE
03	Describe Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination	Chlorinated Comp	Interactive Lecture	BCQs, SAQs, OSPE
	MEDICINE			
01		Syphilis	Interactive Lecture	BCQs, SAQs,
02		Dengue Fever	Interactive Lecture	BCQs, SAQs,
	RADIOLOGY			
01	Describe briefly the Hazards of imaging and interpreting images	Radiological Hazards	Interactive Lecture	BCQs,

THEME 7: PARASITIC INFECTIONS

S. NO	OBJECTIVES	TOPICS	TEACHING STRATEGY	ASSESSMENT
		PATHOLOGY		
01	Describe structure of HIV. Discuss clinical stages of HIV infection Outline opportunistic infection in late stage of AIDS	HIV	Interactive Lecture	BCQs, SAQs, OSPE
02	Describe the life cycle and important properties of Toxoplasma. Relate the pathogenesis to the clinical features and lab Diagnosis of Toxoplasmosis.	Toxoplasma	Interactive Lecture	BCQs, SAQs, OSPE
03	Classify the medically important trematodes. Describe the life cycle , clinical features & lab diagnosis	Trematodes (flukes)	Interactive Lecture	BCQs, SAQs, OSPE
04	Classify the medically important tissue Nematodes. Describe their important properties Clinical findings and laboratory diagnosis.	Tissue Nematodes (wuchereria, Onchocerca, Loa, Dracunculus)	Interactive Lecture	BCQs, SAQs, OSPE
05	Classify & explain the important properties, transmission, pathogenesis, clinical findings and lab diagnosis of cutaneous, systemic and opportunistic fungi.	Cutaneous, systemic and opportunistic mycoses.	Interactive Lecture	BCQs, SAQs, OSPE
06	Define Sterilization and Disinfection. List various methods used for sterilization and disinfection	Sterilization & disinfection	**Practical**	BCQ, SEQ
		PHARMACOLOGY		
01	Describe the antiviral drugs used for treatment of HIV with their mechanisms and side effects.	Antiretroviral drugs	Interactive Lecture	BCQs, SAQs,
02	Classify anti helminths drugs with their mechanism and side effects	Anti-parasitic drugs	Interactive Lecture	BCQs, SAQs,
		COMMUNITY MEDICINE		
01	To discuss the problem statement of Sexually Transmitted disease & HIV/AIDS To define Sexually Transmitted disease & HIV/AIDS To understand the epidemiology of Sexually Transmitted disease & HIV/AIDS To discuss the preventive and control measures of Sexually Transmitted disease & HIV/AIDS	Epidemiology & control measure of Sexually Transmitted disease (STDs) & HIV/AIDS	Interactive Lecture	BCQ, SEQ, OSPE
		FORENSIC MEDICINE		
01	Describe Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to hydrogen cyanide & derivatives	**Veg Poison:** Hydrocyanic acid & Cyanides	Practical	BCQs, SAQs, OSPE

02	Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Arsenic, lead, mercury, copper, iron, cadmium and thallium.	**Metallic Poisons:** Arsenic, Mercury poisoning & Lead Poisoning	Practical	BCQs, SAQs, OSPE
MEDICINE				
01		AIDS	Interactive Lecture	BCQs, SAQs,
RADIOLOGY				
01	Describe briefly the wasteful use of radiology	Radiological waste	Interactive Lecture	BCQs,

9.1 TAGGED SUBJECTS

Topic	Contents	Learning Objectives	Teaching Method	Module	Hours	Assessment
PROFESSIONALISM AND BEHAVIORAL SCIENCES						
Attributes of professionalism	Differences between empathy and sympathy	Discriminate between empathy and sympathy	group discussion/ Role play	Infection and inflammation	2	MCQ,
RESEARCH						
Purpose and Process of Research	Steps of research process	Explain the steps involved in the research process	Lecture	Infection and inflammation	1	MCQ
Identifying study question	Brainstorming for identifying a research topic. Selecting a general topic Narrowing from a broad general topic to a more specific focused area of research	Develop a list and mind map of possible research topics	Lecture/SGD	Infection and inflammation	2	Assignment
Literature review	Types of literature review					
	Strategies of literature review					
	Search engines and their limitations such as google, google scholar ,PubMed Databases for thesis, abstracts, full text article Difference between the various sources	2 Select a single topic of interest from the list 3 Review the literature	Lecture/SGD Small group discussion	Infection and inflammation	2	Assignment

	of information Selecting information for academic writing					
	Academic reading and writing					
	Develop an evidence table					
	Formulate / refine research question from gaps from evidence table					

9.2 CLINICAL SCIENCES SUBJECTS

INFECTIOUS DISEASE MODULE				
S. No	**Clinical Sciences Subjects**	**Learning Objectives**	**Hours**	**Learning strategy**
1.	**ANAESTHESIA** Drugs used in Anesthesia	Intravenous Anesthetic agents	1	Lecture
		Inhalational Anesthetic agents	1	Lecture
		Muscle relaxation and artificial ventilation during general anesthesia	1	Lecture
		Monitoring and care of patient during general anesthesia	2	Skill Session
2.	**CRITICAL CARE** Infectious Diseases	Fever in an ICU patient	1	Lecture
		Use of antimicrobials for treatment of infectious diseases in ICU	1	Lecture
		Viral Hemorrhagic Fevers and viral infections	1	Lecture
		Severe sepsis	1	Lecture
3.	**ORTHOPAEDICS & TRAUMA**	Nerve repair	1	Lecture
		Tendon repair	1	Lecture
		Osteotomies	1	Lecture
		Arthrodesis	1	Lecture
4.	**UROLOGY** UTI and Urinary calculi	Investigations & management of Kidney Stones	2	SGD
		Pathogenesis, etiology and investigation of pyonephritis	1	Lecture
		Investigations and management of UTI	1	Lecture
		Investigations and management of Cystitis	1	Lecture
5.	**FAMILY MEDICINE** Care of Elderly	Falls Assessments	1	Lecture
		Poly Pharmacy	1	Lecture
		Palliative care	1	Lecture
		Pain and symptom control	1	Lecture
		Psychosocial Support	1	Lecture

9.3 CLINICAL ROTATION SCHEDULE

Duration	9 weeks	11 weeks	8 weeks	8 weeks
Disciplines	Medicine	Surgery	Gynae/Obs	Paeds
Total hours*	117	143	104	104

* 2.6 Clinical rotation hours per day

The above mentioned clinical rotation schedule is to be followed by every student throughout the year. Groups of students are decided by the Hospital Administration.

10. TEACHING HOURS ALLOCATION

S. No	Subject	Hours	Practical Hours
1	Pathology	38	14
2	Pharmacology	12	4
3	Forensic medicine	14	10
4	Community medicine	17	-
5	Medicine	5	-
6	CBL (Pathology)*	14	-
7	CBL (Pharmacology)*	14	-
8	Radiology	2	-
9	Anesthesia	5	-
10	Critical Care	4	-
11	Orthopaedics & Trauma	4	-
12	Urology	5	-
13	Family Medicine	5	-
	Total hours	**139**	**28**

*Minimum 2 hours are allotted for each CBL session per Module

S. No	Tagged Subject	Teaching Hours
1	Professionalism and Behavioral Sciences	2
2	Research	5
	Total hours	**7**

11. EXAMINATION AND METHODS OF ASSESSMENT

11.1 EXAMINATION RULES AND REGULATIONS

- Student must report to examination hall/venue, in time for smooth conduction of the exams.
- No student will be allowed to enter the examination hall after 10 minutes of scheduled examination time.
- No students will be allowed to sit in exam without College ID Card, and Lab Coat
- Students must sit according to their roll numbers mentioned on the seats.
- Student must bring their own stationary items (Pen, Pencil, Eraser, and Sharpener) – Sharing is prohibited
- Any disturbance or Indiscipline in the exam hall/venue is not acceptable.
- Students must not possess any written material or communicate with their fellow students
- Cell phones are strictly not allowed in examination hall. If any student is found with cell phone in any mode (silent, switched off or on) he/she will be **not be allowed to continue their exam.**
- **No student is allowed to leave the examination hall before half the time is over, paper is handed over to the examiner and properly marking the attendance**.

11.2 ASSESSMENT

11.2.1 Internal: Total 10% (20 marks)

- Students will be assessed comprehensively through multiple methods to determine achievement of module objectives through two methods: Module examination and Graded assessment by Individual department
    - **Module Examination**: It will be scheduled on completion of each module. The method of examination comprises theory exam (which includes SEQs and MCQs) and OSPE / OSCE exam (which includes static and interactive stations).
    - **Graded Assessment by individual department**: It includes weekly MCQs tests on Survive online LMS program, viva, practical, weekly theme based assignments, post-test discussion sessions, peer assessments, presentations, small group activities such as CBL, ward activities, examinations and log books, all of which have specific marks allocation.
- Marks of both modular examination and graded assessment will constitute 10% weightage.
- 10% marks of internal evaluation will be added to the ISU annual professional exam.
- The marks distribution is based on Formative Assessment done individually by all the concerned departments. It may include:
- NOTE: **at least 75% attendance is mandatory** to appear in the annual university

examination.

- Exam branch is responsible to maintain the attendance record for Main Campus in coordination with all the concerned departments.

11.2.2 University Annual Exam: Total 90%

- Annual Exam has 90% marks in total
- It includes theory and OSPE / OSCE.
- Each written paper consists of 100 MCQs and 10 SEQs and internal assessment marks will be added to the final marks.

11.3 METHODS OF ASSESSMENT

11.3.1 Multiple Choice Questions

- Single best type MCQs having five options with one correct answer and four distractors are part of assessment.
- Total 100 MCQs are included which are formulated through the table of specification from learning objectives of Module interactive lectures.
- Time duration for MCQs will be 1 and half hour.
- MCQs are used to assess objectives covered in each module.
- Students after reading the statement / scenarios select one appropriate response from the given options.
- Correct answer carries one mark, and incorrect will be marked zero. Rule of negative marking is not applicable.
- Students attempt the MCQs exam on Computer screen on Moodle / LMS program in IT Lab.

11.3.2 Short Essay Questions (SEQs):

- Short-answer questions are structured way of asking open-ended questions that require students to create their answers based on their knowledge.
- Commonly used in examinations to assess the depth of knowledge and understanding.
- Includes 10 questions each carrying 10 marks.
- Time Duration for Essay type paper is 2 hours.
- Questions are selected from the specific learning objectives of the specific ongoing module.

11.3.3 OSPE / OSCE

- Each student will be assessed on the same content and have same time to complete the task.
- Time allocated for each station is five minutes as per Examination rules of Ibn e Sina University, Mirpurkhas
- All students are rotated through the same stations.

- OSPE / OSCE Comprises of 15 - 20 stations.
- Each station may assess a variety of diagrammatic identifications and clinical tasks. These tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are Interactive, observed, unobserved (static) and rest stations.
  - Interactive Stations:
    - In this station, examiner ask questions related to the task within the allocated time.
  - Observed Stations:
    - In observed stations, internal or external examiner don't interact with candidate and just observe the performance of the skills or procedures.
  - Unobserved (static) Stations:
    - It will be static stations in which there may be models, specimens, multiple identification points, X-ray, Labs reports, flowcharts, pictures, or clinical scenarios (to assess cognitive domain) with related questions for students will be used to answer on the provided answer copy.
  - Rest station
    - It is a station where there is no task given and in this time student can organize his/her thoughts

11.3.4 ASSIGNMENTS

- An online assignment on the Ibn-e-Sina University moodle uploaded according to the topic of the week.
- All assignments should be checked by the teacher who has taken the lecture on the topic during the same week.
- The assignment should cover enough material to include the requirement of the curriculum and syllabus, so the student should be able to answer the annual examination questions by revising these notes (assignments) only.
- The assignments are checked and graded also with comment to guide, motivate and encourage the students to work whole heartedly. Frequent guidance and motivation will go a long way in improving the students' performance.
- Assignments of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.5 WEEKLY TESTS

- The weekly tests are conducted for all classes. The tests are conducted online and are on topics displayed on the portal (Moodle). It consists of 35 MCQs. 5 MCQs will be from the previous weeks (slightly altered to change the answer or the right option). Everyone taking lectures, submit two MCQs to the Chairperson of the department who will check and pass them to the class moderator. MCQs can also be sent directly to the class moderator, who submits the MCQs to IT department for final placement on the moodle.

- The MCQs are not merely simple recall, but test higher level of cognition. As far as possible, they test an important concept related to one of the topics of the week.
- It is different from the summative assessment (Annual or Semester Examinations) in that the goal of summative assessment is to evaluate student's learning at the end of an instructional unit by comparing it against some standard or benchmark, to decide if the student can be promoted or not, whereas the goal of these weekly tests is to check the understanding of the students on the important concepts related to the topics that have been displayed on the portal for the week, the teachers have taught them and the students have made assignments on them.
- Results of weekly tests of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.6 POST-TEST DISCUSSION (PTD)

- Every student has to prepare a special assignment where he/she selects all the questions he/she got wrong. Then he/she makes 3 boxes. In box A he/she writes the questions he/she got wrong in his/her own words, highlighting and underlining the keywords. In box B the student explains why he/she has chosen this answer. In box C the student mentions what he/she has learnt after reading the explanation and how the concept has got clear now.
- The moderator will check, assess and grade PTD
- Next day, the class moderator of the class conducts a class where he/she discusses the mistakes committed and the post-test assignments submitted in detail with the class
- PTD assignments of the whole Professional year MBBS are counted as in Internal Assessment.

12. GRADING POLICY

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	**A+**
75-79	4.0	**A**
70-74	3.7	**A-**
67-69	3.3	**B+**
63-66	3.0	**B**
60-62	2.7	**B-**
56-59	2.3	**C+**
50-55	2.0	**C**
<50 Non gradable	0	**N**

- A student obtaining GPA less than 2.0 (50%) is declared fail or Non gradable

13. ASSESMENT BLUEPRINT

INFECTIOUS DISEASE MODULE

Assessment is based on Table of Specification (TOS)

	ASSESMENT	TOOLS	MARKS
MODULE EXAM	THEORY	MCQ's	100
		SEQ's	100
	OSPE	OSPE Static	50
		OSPE Interactive	50
		Total	300

14. RECOMMENDED BOOKS

PHARMACOLOGY

- **LIPPINCOTT ILLUSTRATED REVIEWS: PHARMACOLOGY**
  KAREN WHALEN, CARINDA FEILD, RAJAN RADHAKRISHNAN
  7TH EDITION

- **KATZUNG & TREVOR'S PHARMACOLOGY: EXAMINATION & BOARD REVIEW**
  ANTHONY J. TREVOR, BERTRAM G. KATZUNG, MARIEKE KNUIDERING-HALL
  12th EDITION

GENERAL PATHOLOGY

- **ROBBINS & COTRAN PATHOLOGIC BASIS OF DISEASE**
  VINAY KUMAR, ABUL K. ABBAS, JON C. ASTER
  10TH EDITION

- **BRS PATHOLOGY (BOARD REVIEW SERIES)**
  ARTHUR S. SCHNEIDER, PHILIP A. SZANTO
  5THTH EDITION

MICROBIOLOGY

- **REVIEW OF MEDICAL MICROBIOLOGY & IMMUNOLOGY**
  WARREN E. LEVINSON
  14th EDITION

PARASITOLOGY

- **PARASITOLOGY: PROTOZOOLOGY AND HELMINTHOLOGY**
  K.D. CHATTERJEE
  13th EDITION

FORENSIC MEDICINE AND TOXICOLOGY

- **PRINCIPLES AND PRACTICE OF FORENSIC MEDICINE**
  NASEEB AWAN
  2ND EDITION

- **PARIKH'S TEXTBOOK OF MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY**
  PARIKH, C.K
  6TH EDITION

- **SIMPSON'S FORENSIC MEDICINE**
  KNIGHT B
  11TH EDITION

- **TAYLOR'S PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE**
  TAYLOR
  VOLUME 1

COMMUNITY MEDCINE

- **PARK'S TEXTBOOK OF PREVENTIVE AND SOCIAL MEDICINE**
  K. PARK
  26TH EDITION

- **TEXT BOOK OF COMMUNITY MEDICINE & PUBLIC HEALTH**
  ILYAS SHAH ANSARI
  8TH EDITION

IBN-E-SINA UNIVERSITY MIRPURKHAS
FACULTY OF BASIC MEDICAL SCIENCES

Course Feedback Form

Course Title: _____

Semester/Module_____ Dates:_____

Please fill the short questionnaire to make the course better.

Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained.

THE DESIGN OF THE MODLUE

A. Were objectives of the course clear to you? Y ☐ N ☐

B. The course contents met with your expectations
l. Strongly disagree 5. Strongly agree ☐

C. The lecture sequence was well-planned
l. Strongly disagree 5. Strongly agree ☐

D. The contents were illustrated with
l. Too few examples 5. Adequate examples ☐

E. The level of the course was
l. Too low 5. Too high ☐

F. The course contents compared with your expectations
l. Too theoretical 5. Too empirical ☐

G. The course exposed you to new knowledge and practices
l. Strongly disagree 5. Strongly agree ☐

H. Will you recommend this course to your colleagues?
l. Not at all 5. Very strongly ☐

THE CONDUCT OF THE MODLUE

A. The lectures were clear and easy to understand
l. Strongly disagree 5. Strongly agree ☐

B. The teaching aids were effectively used
l. Strongly disagree 5. Strongly agree ☐

C. The course material handed out was adequate
l. Strongly disagree 5. Strongly agree ☐

D. The instructors encouraged interaction and were helpful
l. Strongly disagree 5. Strongly agree ☐

E. Were objectives of the course realized? Yes ☐ No ☐

F. Please give overall rating of the course

90% - l00%	( )	60% - 70%	( )
80% - 90%	( )	50% - 60%	( )
70% - 80%	( )	below 50%	( )

Please comment on the strengths of the course and the way it was conducted.

Please comment on the weaknesses of the course and the way it was conducted.

Please give suggestions for the improvement of the course.

Optional – Your name and contact address:

Thank you!!

IBN-E-SINA UNIVERSITY MIRPURKHAS

STUDENT'S STUDY GUIDE
HEMATOLOGY & ONCOLOGY-II MODULE
THIRD PROFESSIONAL MBBS



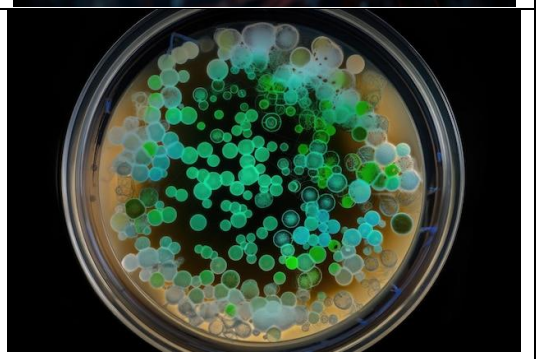




TABLE OF CONTENTS

1. DISCLAIMER

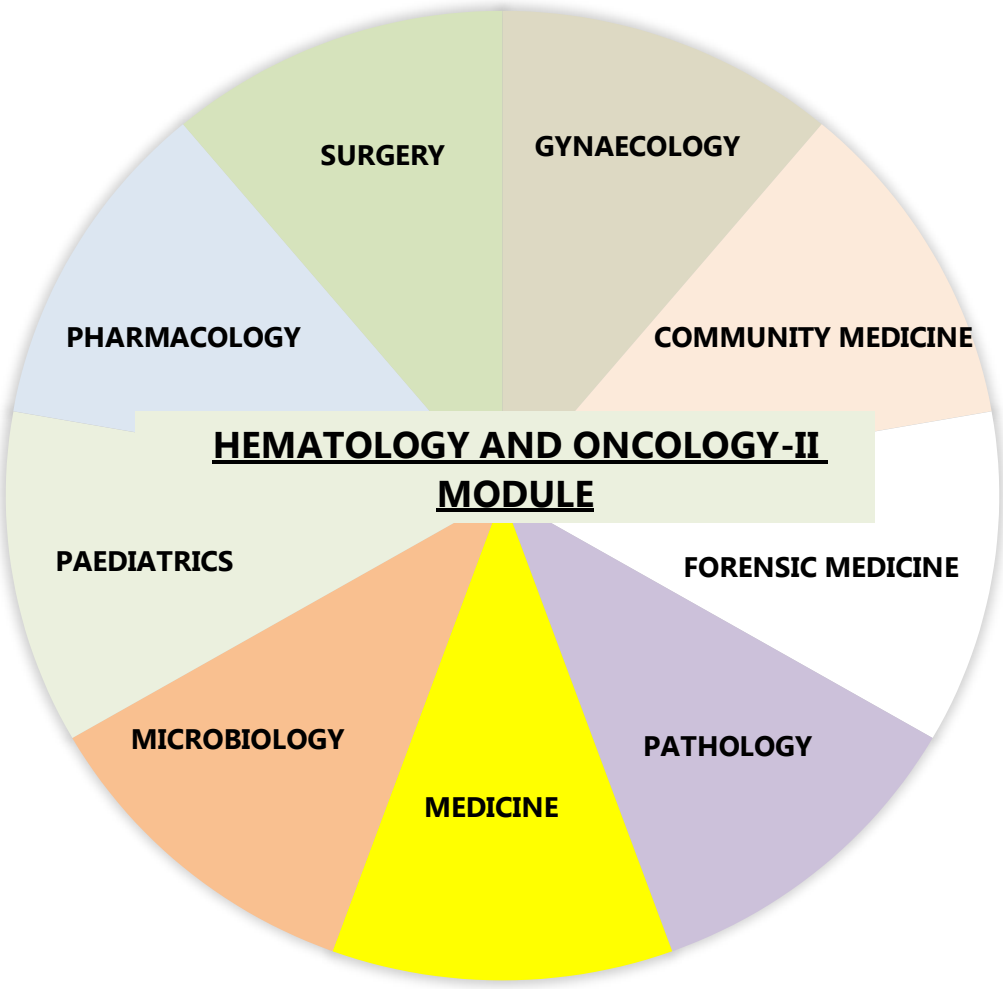
- Developing a study guide is a dynamic process and undergoes iteration according to the needs and priorities.
- This study guide is subjected to the change and modification over the whole academic year.
- However, students are advised to use it as a guide for respective modules.
- The time tables are for guiding purpose. It is to advise that final timetables are always displayed over the notice boards of each lecture hall.
- Students are encouraged to provide feedback via coordinator

2. CURRICULUM FRAMEWORK

An educational strategy known as integrated curriculum places a strong emphasis on interdisciplinary learning, in which students gain knowledge by integrating it from several topic areas. By integrating many subjects and disciplines into a cohesive curriculum, this method seeks to give students a more relevant and interesting learning experience. Integrated curriculum means that subjects are presented as a meaningful whole for better understanding of basic sciences in relation to clinical experience and application.

Integrated curriculum comprises of system-based modules such as CVS-II, Endocrine-II, Git and Liver-II, Hematology and oncology-II, Infectious Disease and Respiratory-II modules which link basic science knowledge to clinical problems.

INTEGRATING DISCIPLINES OF HEMATOLOGY AND ONCOLOGY-II MODULE



3. MODULE OVERVIEW

HEMATOLOGY AND ONCOLOGY-II MODULE DETAILS

Course	MBBS
Year	Third professional
Duration	6 weeks
Learning Outcomes	The competent Medical Practitioner
Competencies covered	To develop medical professionals who are well - versed, adept, and have the right mindset.
Module Assessment	End module formative assessment
Teaching Methods	Interactive Lectures, Demonstrations, Case Based Learning, Practical Lab, Small Group Discussions, Self-Study Sessions, E-Learning, Clinical rotations
Assessment Methods	MCQs, SEQs, OSPE, VIVA

HEMATOLOGY AND ONCOLOGY-II MODULE COMMITTEE

Sr. No	Names	Department	Designation
MODULE COORDINATOR			
1.	Dr. Bhawani Shankar	Pathology	Associate Professor
2.	Abid Laghari	Pharmacology	Lecturer
COMMITTEE MEMBERS			
1.	Prof: Dr. Syed Razi Muhammad	Surgery	Chancellor ISU
2.	Prof: Dr. Shams Ul Arfeen Khan	Biochemistry	Vice Chancellor ISU
3.	Prof: Dr. Aijaz Ahmed Memon	Surgery	Pro Vice Chancellor ISU

4. WHAT IS STUDY GUIDE

It is an aid to Inform students how student learning program of the module has been organized, tohelp students organize and manage their studies throughout the module and guide students on assessment methods, rules and regulations.

The study guide:

— Communicates information on organization and management of the module.

— This will help the student to contact the right person in case of any difficulty.

— Defines the objectives which are expected to be achieved at the end of the module.

— Identifies the learning strategies such as lectures, small group teachings.

Module objectives.

— Provides a list of learning resources such as books, computer-assisted learning programs, weblinks, and journals, for students to consult in order to maximize their learning.

— Highlights information on the contribution of continuous on the student's overall performance.

— Includes information on the assessment methods that will be held to determine every student's performance.

Achievement of objectives.

- Focuses on information pertaining to examination policy, rules and regulations.

5. LEARNING METHODOLOGIES

The following teaching/learning methods are used to promote better understanding

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
- Clinical Rotations
- Skills session
- Practicals
- Self-Directed Study

- **INTERACTIVE LECTURES:**

  Large group discussions are not the same as traditional lecture formats. When a teacher or instructor uses images, radiographs, patient interaction recordings, etc. to discuss a topic or typical clinical scenario, the lecture becomes interactive. When they are given tiny activities to do that allow them to apply the knowledge they have learned throughout the session and are asked questions, students actively participate in the learning process.

- **SMALL GROUP DISCUSSIONS (SGDS):**

  With the use of SGD, students can take an active role in their education, clarify ideas, develop psychomotor skills, and develop a positive attitude. Discussion themes, patient interviews, and clinical cases are used to design sessions in an organized manner. Pupils are inspired to express their ideas, apply the fundamental knowledge they have learned from lectures and independent study, and are encouraged to share their notions. In small groups, role play is a useful technique for acquainting pupils with real-world scenarios. Probing questions, rephrasing, and summarizing are used by the teacher to assist make the concepts obvious.

- **CASE-BASED LEARNING (CBL):**

  Learning is centered around a sequence of questions based on a clinical scenario in this small group discussion format. Students create new information by discussing and responding to the questions using pertinent prior knowledge from the clinical and fundamental health sciences modules. The relevant department will give the CBL.

- **CLINICAL EXPERIENCES:**

  Students examine patients in hospital wards, clinics, and outreach facilities in small groups, noting their signs and symptoms. This aids students in connecting their understanding of the module's basic and clinical sciences and getting ready for future practice.

- **CLINICAL ROTATIONS:**

  Students cycle through a variety of wards in small groups, including those in family medicine clinics, outreach centers, pediatrics, surgery, obstetrics and gynecology, ENT, and community medicine. In both inpatient and outpatient settings, students watch patients, get medical histories, and carry out clinical examinations under supervision. They also have the chance to watch medical professionals function as a team. Students can link their basic medical and clinical skills to a variety of clinical domains through these rotations.

- **SKILL SESSIONS:**

  Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

- **PRACTICALS:**

  Basic science practical related to pharmacology, microbiology, forensic medicine, and community medicine have been schedule for student learning.

- **SELF STUDY:**

  Self-directed learning is a process in which students take charge, either on their own or with assistance from others. Students chart their learning objectives and determine their areas of need for learning. They select and employ their own learning methodologies, and they independently assess the learning objectives.

6. INTRODUCTION

Welcome to Module II on Hematology. The basic knowledge of cancer, chemotherapeutic medicines, and preventive measures is the goal of this module. In order to address a variety of hematological and immuno-hematological problems in adults and children, the module is also intended to give students a foundational understanding of hematological diseases. Students will gain knowledge on taking medical histories, examining patients, interpreting laboratory test results, differential diagnosis, treatment plans, and prognostic values for various illnesses.

6.1 RATIONALE

Understanding blood, immunity, and inflammation is crucial because blood maintains homeostasis, supplies micronutrients, delivers oxygen to tissues, and activates the body's defense mechanisms against pathogens and disorders. These processes are encountered on a daily basis. Students must always review their prior knowledge of physiology, histology, and biochemistry in order to gain the fundamental knowledge needed to deal with patients who have hematological disorders. This includes taking histories, examining patients, and learning about sampling techniques, pertinent laboratory tests, their interpretations, treatment plans, and prognostic values of various hematological, immunological, and immuno-haematological disorders of adults and children.

6.2 IBN E SINA UNIVERSITY (ISU) VISION:

To become a world-leading organization in rural health and social care research, training, recruitment and best evidence-based practice.

6.3 IBN E SINA UNIVERSITY (ISU) MISSION:

Our Mission is to inspire hope, and contribute to health and well-being by providing the best care to every patient through integrated clinical practice, education and research. To provide a focal point for the development and collation of high-quality research pertinent to rural health and wellbeing. To improve the training, recruitment and retention of a professional workforce within rural communities. To be recognized as an exemplar in rural health and wellbeing on the international stage. To establish a network of individuals and groups that support research, innovation and development in rural health and social care.

7. LEARNING OBJECTIVES

7.1 General Learning Outcomes:

After the completion of this module, the students should be able to:

1. To define neoplasia and explain the pathophysiology that surrounds it.
2. To explain the principles underlying cancer diagnosis and treatment
3. Sort the consequences of anemia on an adult's or child's physique (presentation).
4. Analyze the significance of innate immunological and hematological abnormalities (enzyme deficiencies, hemoglobinopathies, and RBC membrane defects).
5. Determine the underlying cause of hemostatic problems in both adults and children: platelets and coagulation disorders.
6. To diagnose hemolytic illness in a newborn, obtain a history, do an examination, and interpret basic lab results (RH, ABO, minor group incompatibility).
7. Examine the patient and take their history if they have a fever, lymphadenopathy, or hepato splenomegaly.
8. Analyze simple laboratory results to identify lymphomas and leukemia.
9. Identify and establish a correlation between the non-neoplastic diseases of WBCs and history and examination.
10. Identify and establish a correlation between the non-neoplastic diseases of WBCs and history and examination.
11. Identify the clinical signs and link them with the lab results and history of myeloproliferative diseases, such as polycythemia and CML.
12. Determine how pharmacology—the study of drugs—relates to bleeding problems and anemia.
13. Role of a healthy diet in preventing blood diseases in the population.
14. Identify the typical causes of anemia that are common in our community.

7.2 Knowledge / Cognitive Domain

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

1. To explain neoplasia, including its genesis, pathophysiology, molecular basis, cancer diagnosis, and treatment.
2. Describe the clinical manifestations, pathogenesis, and diagnostic methodology of the several red cell diseases.
3. Describe the etiology, clinical manifestations, and method of diagnosis of bleeding diseases.
4. To explain the newborn's hemolytic illness (RH, ABO, minor group incompatibility).
5. To explain the biology and etiology of hepatosplenomegaly and lymphadenopathy
6. help explain the variations among hematological cancers.
7. to explain graft rejection and transplantation.

8. to explain what blood parasites are.
9. Determine how pharmacology—the study of drugs—relates to bleeding problems and anemia.
10. To explain the immunomodulators and immunosuppressants involved in transplantation
11. A healthy diet plays a key role in preventing blood diseases in the population.
12. Identify the typical causes of anemia that are common in our community.

7.3 Skills / Psychomotor Domain:

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

1. Completing actual tasks in an orderly and secure manner as directed.
2. Make accurate observations and note them down.
3. Patient's general physical examination.
4. Analysis of cancer diagnostic test results.
5. Interpretation of lab results in order to get an anemia diagnosis.
6. Interpretation of lab results in order to get an anemia diagnosis.
7. Carry out compatibility testing and manual blood grouping using the tube method.
8. Interpretation of the immunohistochemical and morphological characteristics of non-Hodgkin and Hodgkin lymphomas.
9. Interpretation of test results in the diagnosis of leukemia, both acute and chronic.

7.4 Attitude / Affective Domain:

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

1. Respect oneself and one's peers, both when providing and receiving comments.
2. to show patients compassion and understanding.
3. counseling for hereditary anemias to patients and their families.
4. counseling families for thalassemia prenatal diagnosis.
5. providing family and patient counseling regarding hematological malignancies.
6. Develop your ability to communicate while keeping a sense of duty to your patients.
7. Showcase appropriate laboratory procedures.

7.5 Outcomes of Hematology and Oncology-II Module

1. Knowledgeable
2. Skillful
3. Community Heath Promoter
4. Problem-solver
5. Professional
6. Researcher
7. Leader and Role Model

8. THEMES FOR HEMATOLOGY AND ONCOLOGY-II MODULE

SNO	Themes	Duration
1	**Oncology**	1 week
2	**Pallorness (Anaemia)**	1 week
3	**Hemostatic abnormalities and blood transfusion**	1 week
4	**Lymphadenopathy**	1 week
5	**Haematological Malignancies**	1 week
6	**Immunological disorders & Transplantation**	1 week

9. SPECIFIC LEARNING OBJECTIVES THEME WISE

THEME 1: ONCOLOGY

PATHOLOGY				
S. NO	**LEARNING OBJECTIVES**	**TOPIC**	**TEACHING STRATEGY**	**ASSESSMENT**
01	• Describe the definition of neoplasia. • Describe the nomenclature of neoplasia.	Haem-S2-Path-1 NEOPLASIA	Interactive Lecture	BCQs, SEQs, Structured Viva
02	• To describe the Characteristic of benign & Malignant tumor • To know Pathways of spread, seeding,lymphatic and haematogenous spread	Haem-S2-Path-2 CHARACTERISTIC FEATURES OF TUMOR	Interactive Lecture	BCQs, SEQs, Structured Viva
03	• Normal cell cycles and fundamental principal of cancer regarding cycle • Essential alterations in malignant transformation • Steps of cell proliferation Protooncogenes and growth factors and their receptors	Haem-S2-Path-3 MOLECULAR BASIS OFCANCER -I	Interactive Lecture	BCQs, SEQs, Structured Viva
04	• Two-hit hypothesis of knudson • Tumor suppressor genes • Cellular changes in tumor cells • DNA repair defects • Homing of tumor cells • Development of sustained angiogenesis	Haem-S2-Path-4 MOLECULAR BASIS OFCANCER -II	Interactive Lecture	BCQs, SEQs, Structured Viva
05	• To discuss Epidemiology of cancers • To discuss Different types ofcarcinogens • To discuss the Mechanism of action ofradiation carcinogen	Haem-S2-Path-5 CARCINOGENIC AGENTS (Radiation Carcinogenesis)	Interactive Lecture	BCQs, SEQs, Structured Viva
06	• To discuss the Mechanism of action of chemical & viral carcinogen	Haem-S2-Path-6 CARCINOGENIC AGENTS (Chemical &Viral Carcinogenesis)	Interactive Lecture	BCQs, SEQs, Structured Viva
07	• To discuss Clinical features of cancer. • To discuss Grading and staging of cancer. • To discuss diagnostic methods used forCancer.	Haem-S2-Path-7 Diagnostic approach ofNeoplasia	Practical	BCQs, SEQs, Structured Viva

08	• Classify the tumor Viruses • Describe the role of tumor viruses inmalignant transformation. • Discuss the mechanism involved incarcinogenesis.	Haem-S2-Micb-1 Tumor Viruses	Interactive Lecture	BCQs, SEQs, Structured Viva
PHARMACOLOGY				
09	• Classify the Anticancer Drugs. • Describe the mechanism of action, indication, adverse effects, drug-druginteractions.	Hem2-S2-Pharm-1 Anti-cancer Drugs-I	Interactive Lecture	BCQs, SEQs, Structured Viva
10	• Describe the mechanism of resistanceof Anticancer Drugs. • Describe the general principles of combination chemotherapy in thetreatment of cancer	Hem2-S2-Pharm-2 Anti-cancer Drugs-II	Interactive Lecture	BCQs, SEQs, Structured Viva
COMMUNITY MEDICINE				
11	• To define occupational health. • To discuss the occupational healthhazard • To discuss the occupational healthservices in Pakistan • To describe the legislation ofoccupational health in Pakistan	Introduction to occupational healthand safety	Interactive Lecture	BCQs, SEQs, Structured Viva
FORENSIC MEDICINE				
12		Wound-4	Interactive Lecture	BCQs, SEQs, Structured Viva
13		Ballistics 1		
14		Methods of Identification		

THEME 2: PALLORNESS

PATHOLOGY				
S. NO	**LEARNING OBJECTIVES**	**TOPIC**	**TEACHING STRATEGY**	**ASSESSMENT**
01	• To enlist the causes, clinical features and laboratory diagnosis of iron deficiency & Megaloblastic anemias.	Haem-S2-Path-8 Nutritional Anemias	Interactive Lecture	BCQs, SEQs, Structured Viva
02	• To Enlist the causes, pathogenesis, clinical features and laboratory diagnosis of Aplastic anemia.	Haem-S2-Path-9 Aplastic anemia	Interactive Lecture	BCQs, SEQs, Structured Viva
03	• To discuss the pathogenesis, clinical features and laboratory diagnosis of Hereditary spherocytosis & G6PDdeficiency	Haem-S2-Path-10 Haemolytic Anemia	Interactive Lecture	BCQs, SEQs, Structured Viva
04	• To explain pathogenesis of haemoglobinopathies. • To identify morphological features on peripheral blood smear.	Haem-S2-Path-11 Haemoglobinopathies	Interactive Lecture	BCQs, SEQs, Structured Viva
05	• Define Malaria and classify malarial parasites. • Describe life cycle of malarial parasites. • Differentiate between Benign and Malignant Tertian malaria. • Discuss complications of Plasmodium Falciparum.	Haem-S2-Micb-2 Plasmodium	Interactive Lecture	BCQs, SEQs, Structured Viva
06	• Interpretation of CBC. • To discuss the Peripheral film findings of different types of anemia. • To discuss the different tests used for the diagnosis of Anemia.	Haem-S2-Path-12 Laboratory diagnosis of Anemia	Practical	BCQs, SEQs, Structured Viva
PHARMACOLOGY				
06	• Classify the drugs used in Iron Deficiency Anemia • Describe the Mechanism Of Action, Indications, Contraindications, Adverse Effects And Drug Interactions Of Various Drugs used to treat the Iron Deficiency Anemia	Haem-S2-Pharm-3 Oral & injectable iron in iron deficiency anemia	Interactive Lecture	BCQs, SEQs, Structured Viva
07	• Classify the drugs used in Vitamin B12 and Folic Acid Deficiency Anemia. • Describe the Mechanism Of Action, Indications, Contraindications, Adverse Effects And Drug Interactions	Haem-S2-Pharm-4 Vit. B12 & Folic acid in Macrocytic anemia	Interactive Lecture	BCQs, SEQs, Structured Viva

	of Various Drugs used to treat the B12 and Folic Acid Deficiency Anemia			
08	• Classify anti-malarial drugs with their mechanism and side effects	Haem-S2-Pharm-5 Anti-malarial drugs	Interactive Lecture	BCQs,SEQs, OSPE
09	• Write prescription for a patient at risk of developing iron-deficiency anemia	Haem-S2-Pharm-P1 Iron Deficiency Anemia	Practicle	BCQs,OSPE
10	• Write prescription for a patient at risk of developing iron-deficiency Thalasemia	Haem-S2-Pharm-P2 Thalasemia	Practicle	BCQs,OSPE
MEDICINE				
11		Approach To A Patient With Anemia & management	Interactive Lecture	BCQs, SEQs, Structured Viva
PAEDIATRICS				
12	• Assess, classify and manage child with anemia	Anaemia in children	Interactive Lecture	BCQs, SEQs, Structured Viva
13	• Assess, classify and manage childwith Thalassaemia	Thalassaemia	Interactive Lecture	BCQs, SEQs, Structured Viva
GYNAE/OBSTETRICS				
14		Anaemia in Pregnancy	Interactive Lecture	BCQs, SEQs, Structured Viva
COMMUNITY MEDICINE				
15	• To discuss the agriculture health hazards • To define pneumoconiosis • To differentiate the types of pneumoconiosis on basis of dust • To discuss the preventative and control measures of pneumoconiosis	Occupational health hazards in agricultural workers	Interactive Lecture	BCQs, SEQs, Structured Viva
FORENSIC MEDICINE				
16		Negligence	Interactive Lecture	BCQs, SEQs, Structured Viva
17		Ballistics 2		
18		Dactylography		

THEME 3: HEMOSTATIC ABNORMALITIES & BLOOD TRANSFUSION

PATHOLOGY				
S. No	**LEARNING OBJECTIVES**	TOPIC	**TEACHING STRATEGY**	**ASSESSMENT**
01	• Overview of normal haemostatsis • Discuss Quantitative & Qualitative platelets disorders. • To discuss ITP and diagnosis.	Haem-S2-Path-13 Platelets disorders	Interactive Lecture	BCQs, SEQs, StructuredViva
02	• Define & enlist the causes microangiopathic hemolytic anemias • Define and explain Thrombotic Thrombocytopenic Perpura(TTP) and Hemolytic Ureamic Syndrome (HUS) • Define and explain Dissemminate Intravascular Coagulopathy (DIC)	Haem-S2-Path-14 MAHA (Microangiopathic hemolytic anemia)	Interactive Lecture	BCQs, SEQs, StructuredViva
03	• Overview of inherited & acquired coagulation disorders • Discuss the pathogenesis and pathophysiology of hemophilia A & B, VWD. • Diagnose hemophilia based on clinical features and laboratory findings	Haem-S2-Path-15 Coagulation disorders (haemophilia, vWD)	Interactive Lecture	BCQs, SEQs, StructuredViva
04	• To discuss the thrombosis, pathogenesis, types and fate of thrombosis. • To Define Embolism, its types and morphological features of Embolism.	Haem-S2-Path-16 Thromboembolism	Interactive Lecture	BCQs, SEQs, StructuredViva
05	• Discuss and perform different laboratory tests for diagnosis of bleeding disorders	Haem-S2-Path-17 Laboratory diagnosis of Bleeding disorders	Practical	BCQs, SEQs, StructuredViva
PHARMACOLOGY				
06	• Classify the coagulants drugs. • Describe the mechanism of action, clinical uses, adverse effects, drug interactions and contraindications of the coagulant drugs.	Hem-S2- Pharm-5 The Coagulants	Interactive Lecture	BCQs, SEQs, StructuredViva
07	• Classify the Anticoagulants drugs. • Describe the mechanism of action, clinical uses, adverse effects, drug interactions and contraindications of the Anticoagulant drugs.	Hem-S2-Pharm-6 Anti-Coagulants	Interactive Lecture	BCQs, SEQs, StructuredViva

08	• Classify the thrombolytic drugs. • Describe the mechanism of action, clinical uses, adverse effects, drug interactions and contraindications of the Thrombolytic drugs.	Hem-S2-Pharm-7 Thrombolytic drugs	Interactive Lecture	BCQs, SEQs, Structur edViva

MEDICINE				
09		Approach to a patient with bleeding disorders	Interactive Lecture	BCQs, SEQs, Structur edViva
10		Approach to a patient with Thrombotic disorders	Interactive Lecture	BCQs, SEQs, Structur edViva
11		Management of Blood transfusion reactions	Interactive Lecture	BCQs, SEQs, Structur edViva
PAEDIATRICS				
12	• Approach to a patient with inherited bleeding disorders	Bleeding disorders	Interactive Lecture	BCQs, SEQs, Structur edViva
13	• Diagnosis of hemolytic disease of new born, Rh incompatibility	HDN	Interactive Lecture	BCQs, SEQs, Structur edViva
COMMUNITY MEDICINE				
14	• To discuss the industrial health hazards. • To define lead poisoning • To discuss the preventive and control measures of lead poisoning	Occupational health hazards in industrial workers. Lead poisoning	Interactive Lecture	BCQs, SEQs, Structur edViva
FORENSIC MEDICINE				
15		Professional Secrecy & Misconduct	Interactive Lecture	BCQs, SEQs, Structured Viva
16		Ballistics 3		
17		Trace evidence		
SURGERY				
18		Deep Venous Thrombosis	Interactive Lecture	BCQs, SEQs, Structur edViva

THEME 4: LYMPHADENOPATHY

PATHOLOGY				
S. NO	**LEARNING OBJECTIVES**	**TOPIC**	**TEACHING STRATEGY**	**ASSESSMENT**
01	• Describe lymphoma, its etiology & classification. • Discuss the pathogenesis, types and morphological features of Hodkin lymphoma	Haem-S2-Path-18 Hodgkin Lymphoma	Interactive Lecture	BCQs, SEQs, Structured Viva
02	• Describe Non-hodgkins lymphoma • The classification and staging of non hodgkins lymphomas. • Discuss the pathogenesis, clinical features and diagnosis of Chronic lymphocytic leukemia	Haem-S2-Path-19 Non-Hodgkin Lymphoma-I	Interactive Lecture	BCQs, SEQs, Structured Viva
03	• Brief Discussion of Burkitt, follicular and DLBCL lymhoma.	Haem-S2-Path-20 Non-Hodgkin Lymphoma-II	Interactive Lecture	BCQs, SEQs, Structured Viva
04	• Discuss the pathogenesis, clinical features and laboratory diagnosis of Multiple Myeloma	Haem-S2-Path-21 Multiple Myeloma	Interactive Lecture	BCQs, SEQs, Structured Viva
05	• To see the Morphological features, Immunohistochemical findings of Lymphoma	Haem-S2-Path-22 Practical approach towards lymphoma	Practical	BCQs, SEQs, Structured Viva
MEDICINE				
06		Approach to patient with lymphadenopathy with or without splenomegaly	Interactive Lecture	BCQs, SEQs, Structured Viva
SURGERY				
07		Lymphedema	Interactive Lecture	BCQs, SEQs, Structured Viva
08		Disorders of Spleen & Splenectomy	Interactive Lecture	BCQs, SEQs, Structured Viva
FORENSIC MEDICINE				
09		Euthanasia	Interactive Lecture	BCQs, SEQs, Structured Viva
10		Firearm 1		
11		Mass Disaster identification/ Identification of Dead		

THEME 5: HAEMATOLOGICAL MALIGNANCIES

PATHOLOGY				
S. NO	**LEARNING OBJECTIVES**	**TOPIC**	**TEACHING STRATEGY**	**ASSESSMENT**
01	• Overview and classification of Acute leukemias • Describe the pathogenesis, clinical features and laboratory diagnosis of Acute Myeloid leukemia.	Haem-S2-Path-23 Acute Myeloid leukemia	Interactive Lecture	BCQs, SEQs, Structured Viva
02	• Describe the pathogenesis, clinical features and laboratory diagnosis of Acute Lymphoblastic leukemia.	Haem-S2-Path-24 Acute Lymphoblastic Leukemia	Interactive Lecture	BCQs, SEQs, Structured Viva
03	• The classification of Myeloproliferative disorders • Discuss the pathogenesis, clinical features and laboratory diagnosis of Chronic myeloid Leukemia.	Haem-S2-Path-25 Myeloproliferative disorders	Interactive Lecture	BCQs, SEQs, Structured Viva
04	• Morphological features of acute & chronic leukemia.	Haem-S2-Path-26 Laboratory diagnosis 0f Acute & Chronic Leukemia	Practical	BCQs, SEQs, Structured Viva
MEDICINE				
05	• Describe the laboratory investigations of acute leukemia.	Approach to patient with Acute Leukeima	Interactive Lecture	BCQs, SEQs, Structured Viva
06	• Describe the laboratory investigations of Chronic leukemia	Approach to patient with Chronic Leukeima	Interactive Lecture	BCQs, SEQs, Structured Viva
PAEDIATRICS				
07		Acute Leukemia	Interactive Lecture	BCQs, SEQs, Structured Viva
FORENSIC MEDICINE				
08		Law related to Drugs/ Drugs Act	Interactive Lecture	BCQs, SEQs, Structured Viva
09		Firearm 2		
10		Forensic Serology 1		

COMMUNITY MEDICINE				
11	• To define ergonomics • To discuss the importance of ergonomics in occupational health • To describe the absenteeism • To discuss the medical methods of prevention of occupational hazards. • To discuss the engineering methods of prevention of occupational hazards	Preventive measures of occupational health hazards	Interactive Lecture	BCQs, SEQs, Structured Viva

THEME 6: IMMUNOLOGICAL DISORDERS

PATHOLOGY				
S. NO	**LEARNING OBJECTIVES**	**TOPIC**	**TEACHING STRATEGY**	**ASSESSMENT**
01	• Define hypersensitivity reaction • Describe Pathogenesis of four types of hypersensitivity reactions with examples.	Haem-S2-Path-28 Hypersensitivity Reactions	Interactive Lecture	BCQs, SEQs, Structured Viva
02	• Discuss immunodeficiency and its causes and clinical features.	Haem-S2-Path-29 Immunodeficiency disorders	Interactive Lecture	BCQs, SEQs, Structured Viva
03	• Discuss tolerance. • Define Autoimmune disorders • Describe the etiology, Pathogenesis and clinical features of autoimmune disorders.	Haem-S2-Path-30 Autoimmune Disorders	Interactive Lecture	BCQs, SEQs, Structured Viva
05	• Definition of Transplantation • Types of transplantation • Sources of bone marrow transplantation. • Define Rejection & mechanism of different types of rejections.	Haem-S2-Path-31 Transplantation& Rejection	Interactive Lecture	BCQs, SEQs, Structured Viva
06	• Define hemoflagellates. • Enumerate the medically important species of Leishmania & Trypanosoma. • Describe vector, life cycle, pathogenesis clinical manifestation and lab diagnosis of Leishmaniasis & Trypanosomiasis.	Haem-S2-Mic-3 Trypanosoma & Leishmania	Interactive Lecture	BCQs, SEQs, Structured Viva
08	• Discuss the immunoassay techniques	Haem-S2-Path-27 Immunoassay technique	Practical	OSPE
PHARMACOLOGY				
09	• Classify Antihistamine agents. • Describe the Mechanism Of Action, Indications, Adverse Effects And Drug Interactions Of Antihistamines	Haem-S2-Pharm-7 Anti-Histamine	Interactive Lecture	BCQs, SEQs, Structured Viva
10	• Classify the Immunosuppressant and Immunomodulating drugs. • Describe the mechanism of action, indications & adverse effects of	Haem-S2-Pharm-8 Immuno modulating drugs	Interactive Lecture	BCQs, SEQs, Structured Viva

	Immunosuppressant and Immunomodulating drugs.			
MEDICINE				
11		Approach to patient with Autoimmune disorders	Interactive Lecture	BCQs, SEQs, Structured Viva
FORENSIC MEDICINE				
12		Firearm 3		BCQs, SEQs, Structured Viva
13		Forensic Serology 2		
COMMUNITY MEDICINE				
Field Visit				

9.1 TAGGED SUBJECTS

Topic	Contents	Learning Objectives	Teaching Method	Module	Hours	Assessment
COMMUNICATION SKILLS						
Principles of ethics	Privacy and confidentiality of the patients, Medico-legal and cultural aspects	Display privacy and confidentiality of the patients keeping in view a-cultural traits b- medico-legal law cases	Role play, Hospital teaching	Blood 2	3	MCQ
Confidentiality	Confidentiality of colleagues and patients Appropriate use of social media	Ensuring confidentiality	Lecture/Role play, Group Discussion	Blood 2	2	MCQ
RESEARCH						
Academic Reading and writing and Plagiarism	Grammar	Plagiarism Checking and report interpretation	Practical Small group discussion Practical	Blood 2	2	MCQ
Academic integrity		Define academic integrity. Define plagiarism. Explain how to avoid plagiarism. List and explain software used to check plagiarism. Develop writing skills with Grammarly checker				

9.2 CLINICAL SCIENCES SUBJECTS

HEMATOLOGY AND ONCOLOGY – II MODULE				
S. No	**Clinical Sciences Subjects**	**Learning Objectives**	**Hours**	**Learning strategy**
1.	**ANAESTHESIA** Blood Component therapy	Describe hemorrhage during the surgical procedure Describe post-operative anemia Describe thrombocytopenia	1 1 1	Lecture Lecture Lecture
2.	**CRITICAL CARE** Hematological Diseases	Disorders of hemostasis in the critically ill patient Thombocytopenia in ICU Transfusion therapy: Blood components and complications of transfusions Antithrombotic pharmacotherapy	1 1 1 1	Lecture Lecture Lecture Lecture
3.	**ORTHOPAEDICS & TRAUMA** Tumour Surgery	Bone Tumours Tumour surgery including amputations Limb Salvage Surgery Graded responsibilities in patient care	1 1 1 1	Lecture Lecture Lecture Lecture
4.	**UROLOGY** Tumours of Urinary tract	Benign tumors of Kidneys and Ureters (etiology, pathogenesis) Malignant tumors of kidneys and ureters (etiology, pathogenesis)	1 2	Lecture SGD
5.	**FAMILY MEDICINE**	Vaccinations EPI program Cost-effective prescribing Rational use of antibiotics How to write a prescription	1 1 1 1 1	Lecture Lecture Lecture Lecture Lecture

9.3 CLINICAL ROTATION SCHEDULE

Duration	9 weeks	11 weeks	8 weeks	8 weeks
Disciplines	Medicine	Surgery	Gynae/Obs	Paeds
Total hours*	117	143	104	104

* 2.6 Clinical rotation hours per day

The above mentioned clinical rotation schedule is to be followed by every student throughout the year. Groups of students are decided by the Hospital Administration.

10. TEACHING HOURS ALLOCATION

S. No	Subject	Hours	Practical Hours
1	Pathology	28	12
2	Pharmacology	8	4
3	Forensic medicine	6	-
4	Community medicine	5	-
5	Medicine	8	-
6	Paediatrics	5	-
7	Microbiology	3	-
8	Gynaecology	1	-
9	Surgery	3	-
10	CBL (Pathology)*	12	-
11	CBL (Pharmacology)*	12	-
12	Anesthesia	3	-
13	Critical Care	4	-
14	Orthopaedics & Trauma	4	-
15	Urology	3	-
16	Family medicine	5	-
	Total hours	**110**	**16**

*Minimum 2 hours are allotted for each CBL session per Module

S. No	Tagged Subject	Teaching Hours
1	Communication Skills	5
2	Research	2
	Total hours	**7**

11. EXAMINATION AND METHODS OF ASSESSMENT

11.1 EXAMINATION RULES AND REGULATIONS

- Student must report to examination hall/venue, in time for smooth conduction of the exams.
- No student will be allowed to enter the examination hall after 10 minutes of scheduled examination time.
- No students will be allowed to sit in exam without College ID Card, and Lab Coat
- Students must sit according to their roll numbers mentioned on the seats.
- Student must bring their own stationary items (Pen, Pencil, Eraser, and Sharpener) – Sharing is prohibited
- Any disturbance or Indiscipline in the exam hall/venue is not acceptable.
- Students must not possess any written material or communicate with their fellow students
- Cell phones are strictly not allowed in examination hall. If any student is found with cell phone in any mode (silent, switched off or on) he/she will be **not be allowed to continue their exam.**
- **No student is allowed to leave the examination hall before half the time is over, paper is handed over to the examiner and properly marking the attendance.**

11.2 ASSESSMENT

11.2.1 Internal: Total 10% (20 marks)

- Students will be assessed comprehensively through multiple methods to determine achievement of module objectives through two methods: Module examination and Graded assessment by Individual department
    - **Module Examination**: It will be scheduled on completion of each module. The method of examination comprises theory exam (which includes SEQs and MCQs) and OSPE / OSCE exam (which includes static and interactive stations).
    - **Graded Assessment by individual department**: It includes weekly MCQs tests on Survive online LMS program, viva, practical, weekly theme based assignments, post-test discussion sessions, peer assessments, presentations, small group activities such as CBL, ward activities, examinations and log books, all of which have specific marks allocation.
- Marks of both modular examination and graded assessment will constitute 10% weightage.
- 10% marks of internal evaluation will be added to the ISU annual professional exam.
- The marks distribution is based on Formative Assessment done individually by all the concerned departments. It may include:

- NOTE: **at least 75% attendance is mandatory** to appear in the annual university examination.
- Exam branch is responsible to maintain the attendance record for Main Campus in coordination with all the concerned departments.

11.2.2 University Annual Exam: Total 90%

- Annual Exam has 90% marks in total
- It includes theory and OSPE / OSCE.
- Each written paper consists of 100 MCQs and 10 SEQs and internal assessment marks will be added tothe final marks.

11.3 METHODS OF ASSESSMENT

11.3.1 Multiple Choice Questions

- Single best type MCQs having five options with one correct answer and four distractors are part of assessment.
- Total 100 MCQs are included which are formulated through the table of specification from learning objectives of Module interactive lectures.
- Time duration for MCQs will be 1 and half hour.
- MCQs are used to assess objectives covered in each module.
- Students after reading the statement / scenarios select one appropriate response from the given options.
- Correct answer carries one mark, and incorrect will be marked zero. Rule of negative marking is not applicable.
- Students attempt the MCQs exam on Computer screen on Moodle / LMS program in IT Lab.

11.3.2 Short Essay Questions (SEQs):

- Short-answer questions are structured way of asking open-ended questions that require students to create their answers based on their knowledge.
- Commonly used in examinations to assess the depth of knowledge and understanding.
- Includes 10 questions each carrying 10 marks.
- Time Duration for Essay type paper is 2 hours.
- Questions are selected from the specific learning objectives of the specific ongoing module.

11.3.3 OSPE / OSCE

- Each student will be assessed on the same content and have same time to complete the task.
- Time allocated for each station is five minutes as per Examination rules of Ibn e Sina University, Mirpurkhas

- All students are rotated through the same stations.
- OSPE / OSCE Comprises of 15 - 20 stations.
- Each station may assess a variety of diagrammatic identifications and clinical tasks. These tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are Interactive, observed, unobserved (static) and rest stations.
  - Interactive Stations:
    - In this station, examiner ask questions related to the task within the allocated time.
  - Observed Stations:
    - In observed stations, internal or external examiner don't interact with candidate and just observe the performance of the skills or procedures.
  - Unobserved (static) Stations:
    - It will be static stations in which there may be models, specimens, multiple identification points, X-ray, Labs reports, flowcharts, pictures, or clinical scenarios (to assess cognitive domain) with related questions for students will be used to answer on the provided answer copy.
  - Rest station
    - It is a station where there is no task given and in this time student can organize his/her thoughts

11.3.4 ASSIGNMENTS

- An online assignment on the Ibn-e-Sina University moodle uploaded according to the topic of the week.
- All assignments should be checked by the teacher who has taken the lecture on the topic during the same week.
- The assignment should cover enough material to include the requirement of the curriculum and syllabus, so the student should be able to answer the annual examination questions by revising these notes (assignments) only.
- The assignments are checked and graded also with comment to guide, motivate and encourage the students to work whole heartedly. Frequent guidance and motivation will go a long way in improving the students' performance.
- Assignments of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.5 WEEKLY TESTS

- The weekly tests are conducted for all classes. The tests are conducted online and are on topics displayed on the portal (Moodle). It consists of 35 MCQs. 5 MCQs will be from the previous weeks (slightly altered to change the answer or the right option). Everyone taking lectures, submit two MCQs to the Chairperson of the department who will check and pass them to the class moderator. MCQs can also be sent directly to the class moderator, who submits the MCQs to IT department for final placement on the moodle.

- The MCQs are not merely simple recall, but test higher level of cognition. As far as possible, they test an important concept related to one of the topics of the week.
- It is different from the summative assessment (Annual or Semester Examinations) in that the goal of summative assessment is to evaluate student's learning at the end of an instructional unit by comparing it against some standard or benchmark, to decide if the student can be promoted or not, whereas the goal of these weekly tests is to check the understanding of the students on the important concepts related to the topics that have been displayed on the portal for the week, the teachers have taught them and the students have made assignments on them.
- Results of weekly tests of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.6 POST-TEST DISCUSSION (PTD)

- Every student has to prepare a special assignment where he/she selects all the questions he/she got wrong. Then he/she makes 3 boxes. In box A he/she writes the questions he/she got wrong in his/her own words, highlighting and underlining the keywords. In box B the student explains why he/she has chosen this answer. In box C the student mentions what he/she has learnt after reading the explanation and how the concept has got clear now.
- The moderator will check, assess and grade PTD
- Next day, the class moderator of the class conducts a class where he/she discusses the mistakes committed and the post-test assignments submitted in detail with the class
- PTD assignments of the whole Professional year MBBS are counted as in Internal Assessment.

12. GRADING POLICY

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	**A+**
75-79	4.0	**A**
70-74	3.7	**A-**
67-69	3.3	**B+**
63-66	3.0	**B**
60-62	2.7	**B-**
56-59	2.3	**C+**
50-55	2.0	**C**
<50 Non gradable	0	**N**

- A student obtaining GPA less than 2.0 (50%) is declared fail or Non gradable

13. ASSESMENT BLUEPRINT

HEMATOLOGY AND ONCOLOGY-
II MODULE

Assessment is based on Table of Specification (TOS)

	ASSESMENT	TOOLS	MARKS
MODULE EXAM	THEORY	MCQ's	100
		SEQ's	100
	OSPE	OSPE Static	50
		OSPE Interactive	50
		Total	300

14. RECOMMENDED BOOKS

PHARMACOLOGY

- **LIPPINCOTT ILLUSTRATED REVIEWS: PHARMACOLOGY**
  KAREN WHALEN, CARINDA FEILD, RAJAN RADHAKRISHNAN
  7TH EDITION

- **KATZUNG & TREVOR'S PHARMACOLOGY: EXAMINATION & BOARD REVIEW**
  ANTHONY J. TREVOR, BERTRAM G. KATZUNG, MARIEKE KNUIDERING-HALL
  12th EDITION

GENERAL PATHOLOGY

- **ROBBINS & COTRAN PATHOLOGIC BASIS OF DISEASE**
  VINAY KUMAR, ABUL K. ABBAS, JON C. ASTER
  10TH EDITION

- **BRS PATHOLOGY (BOARD REVIEW SERIES)**
  ARTHUR S. SCHNEIDER, PHILIP A. SZANTO
  5THTH EDITION

MICROBIOLOGY

- **REVIEW OF MEDICAL MICROBIOLOGY & IMMUNOLOGY**
  WARREN E. LEVINSON
  14th EDITION

PARASITOLOGY

- **PARASITOLOGY: PROTOZOOLOGY AND HELMINTHOLOGY**
  K.D. CHATTERJEE
  13th EDITION

FORENSIC MEDICINE AND TOXICOLOGY

- **PRINCIPLES AND PRACTICE OF FORENSIC MEDICINE**
  NASEEB AWAN
  2ND EDITION

- **PARIKH'S TEXTBOOK OF MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY**
  PARIKH, C.K
  6TH EDITION

- **SIMPSON'S FORENSIC MEDICINE**
  KNIGHT B
  11TH EDITION

- **TAYLOR'S PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE**
  TAYLOR
  VOLUME 1

COMMUNITY MEDCINE

- **PARK'S TEXTBOOK OF PREVENTIVE AND SOCIAL MEDICINE**
  K. PARK
  26TH EDITION

- **TEXT BOOK OF COMMUNITY MEDICINE & PUBLIC HEALTH**
  ILYAS SHAH ANSARI
  8TH EDITION

IBN-E-SINA UNIVERSITY MIRPURKHAS
FACULTY OF BASIC MEDICAL SCIENCES

Course Feedback Form

Course Title: _____

Semester/Module_____ Dates:_____

Please fill the short questionnaire to make the course better.

Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained.

THE DESIGN OF THE MODLUE

A. Were objectives of the course clear to you? Y ☐ N ☐

B. The course contents met with your expectations
l. Strongly disagree 5. Strongly agree ☐

C. The lecture sequence was well-planned
l. Strongly disagree 5. Strongly agree ☐

D. The contents were illustrated with
l. Too few examples 5. Adequate examples ☐

E. The level of the course was
l. Too low 5. Too high ☐

F. The course contents compared with your expectations
l. Too theoretical 5. Too empirical ☐

G. The course exposed you to new knowledge and practices
l. Strongly disagree 5. Strongly agree ☐

H. Will you recommend this course to your colleagues?
l. Not at all 5. Very strongly ☐

THE CONDUCT OF THE MODLUE

A. The lectures were clear and easy to understand
l. Strongly disagree 5. Strongly agree ☐

B. The teaching aids were effectively used
l. Strongly disagree 5. Strongly agree ☐

C. The course material handed out was adequate
l. Strongly disagree 5. Strongly agree ☐

D. The instructors encouraged interaction and were helpful
l. Strongly disagree 5. Strongly agree ☐

E. Were objectives of the course realized? Yes ☐ No ☐

F. Please give overall rating of the course

90% - l00%	( )	60% - 70%	( )
80% - 90%	( )	50% - 60%	( )
70% - 80%	( )	below 50%	( )

Please comment on the strengths of the course and the way it was conducted.

Please comment on the weaknesses of the course and the way it was conducted.

Please give suggestions for the improvement of the course.

Optional – Your name and contact address:

Thank you!!

IBN-E-SINA UNIVERSITY MIRPURKHAS

STUDENT'S STUDY GUIDE
RESPIRATORY-II MODULE
THIRD PROFESSIONAL MBBS



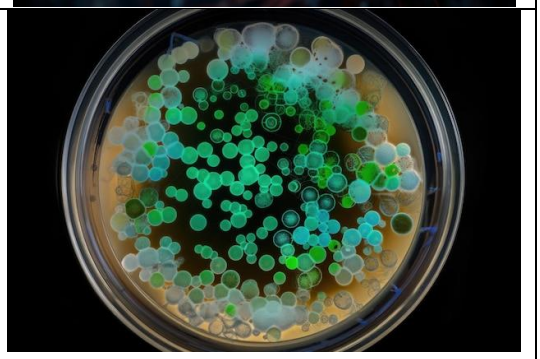




TABLE OF CONTENTS

1. DISCLAIMER

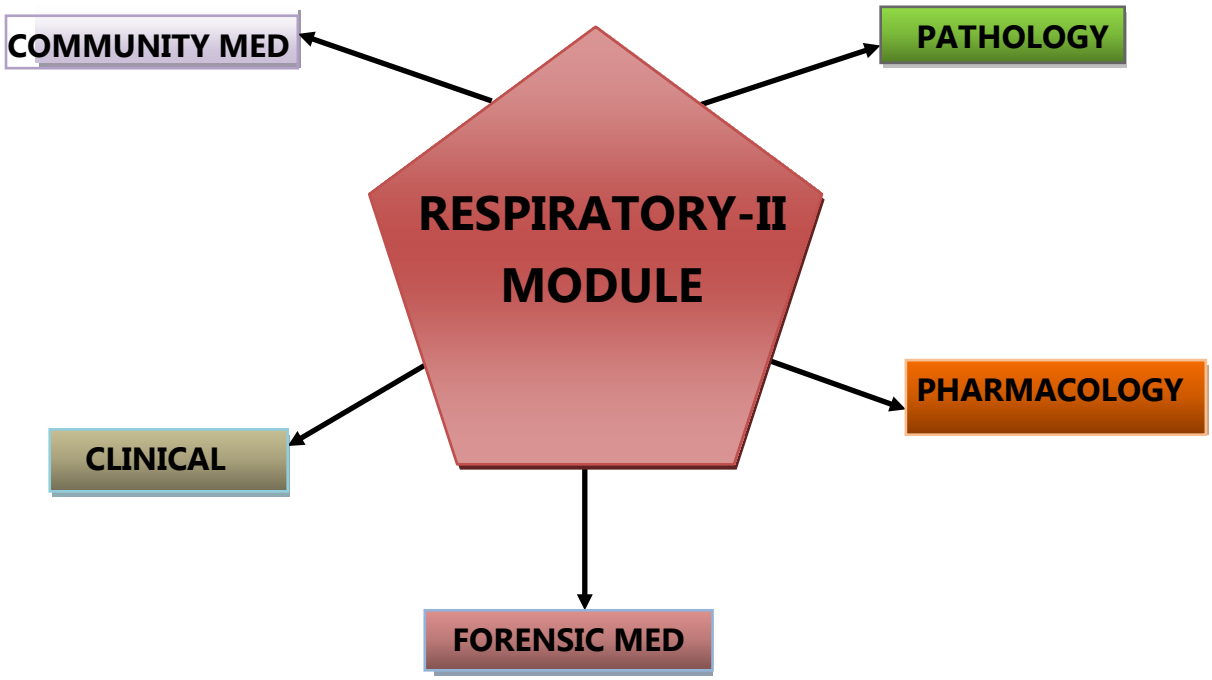
- Developing a study guide is a dynamic process and undergoes iteration according to the needs and priorities.
- This study guide is subjected to the change and modification over the whole academic year.
- However, students are advised to use it as a guide for respective modules.
- The time tables are for guiding purpose. It is to advise that final timetables are always displayed over the notice boards of each lecture hall.
- Students are encouraged to provide feedback via coordinator

2. CURRICULUM FRAMEWORK

An educational strategy known as integrated curriculum places a strong emphasis on interdisciplinary learning, in which students gain knowledge by integrating it from several topic areas. By integrating many subjects and disciplines into a cohesive curriculum, this method seeks to give students a more relevant and interesting learning experience. Integrated curriculum means that subjects are presented as a meaningful whole for better understanding of basic sciences in relation to clinical experience and application.

Integrated curriculum comprises of system-based modules such as CVS-II, Endocrine-II, Git and Liver-II, Hematology and oncology-II, Infectious Disease and Respiratory-II modules which link basic science knowledge to clinical problems.

INTEGRATING DISCIPLINES OF RESPIRATORY-II MODULE



3. MODULE OVERVIEW

RESPIRATORY-II MODULE DETAILS

Course	MBBS
Year	Third professional
Duration	4 weeks
Learning Outcomes	The competent Medical Practitioner
Competencies covered	To develop medical professionals who are well - versed, adept, and have the right mindset.
Module Assessment	End module formative assessment
Teaching Methods	Interactive Lectures, Demonstrations, Case Based Learning, Practical Lab, Small Group Discussions, Self-Study Sessions, E-Learning
Assessment Methods	MCQs, SEQs, OSPE, VIVA

RESPIRATORY-II MODULE COMMITTEE

Sr. No	Names	Department	Designation
MODULE COORDINATOR			
1.	Dr. Bhawani Shankar	Pathology	Associate Professor
2.	Abid Laghari	Pharmacology	Lecturer
COMMITTEE MEMBERS			
1.	Prof: Dr. Syed Razi Muhammad	Surgery	Chancellor ISU
2.	Prof: Dr. Shams Ul Arfeen Khan	Biochemistry	Vice Chancellor ISU
3.	Prof: Dr. Aijaz Ahmed Memon	Surgery	Pro Vice Chancellor ISU

4. WHAT IS STUDY GUIDE

It is an aid to Inform students how student learning program of the module has been organized, tohelp students organize and manage their studies throughout the module and guide students on assessment methods, rules and regulations.

The study guide:

— Communicates information on organization and management of the module.

— This will help the student to contact the right person in case of any difficulty.

— Defines the objectives which are expected to be achieved at the end of the module.

— Identifies the learning strategies such as lectures, small group teachings.

Module objectives.

— Provides a list of learning resources such as books, computer-assisted learning programs, weblinks, and journals, for students to consult in order to maximize their learning.

— Highlights information on the contribution of continuous on the student's overall performance.

— Includes information on the assessment methods that will be held to determine every student's performance.

Achievement of objectives.

- Focuses on information pertaining to examination policy, rules and regulations.

5. LEARNING METHODOLOGIES

The following teaching/learning methods are used to promote better understanding

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
- Clinical Rotations
- Skills session
- Practicals
- Self-Directed Study

- **INTERACTIVE LECTURES:**

  Large group discussions are not the same as traditional lecture formats. When a teacher or instructor uses images, radiographs, patient interaction recordings, etc. to discuss a topic or typical clinical scenario, the lecture becomes interactive. When they are given tiny activities to do that allow them to apply the knowledge they have learned throughout the session and are asked questions, students actively participate in the learning process.

- **SMALL GROUP DISCUSSIONS (SGDS):**

  With the use of SGD, students can take an active role in their education, clarify ideas, develop psychomotor skills, and develop a positive attitude. Discussion themes, patient interviews, and clinical cases are used to design sessions in an organized manner. Pupils are inspired to express their ideas, apply the fundamental knowledge they have learned from lectures and independent study, and are encouraged to share their notions. In small groups, role play is a useful technique for acquainting pupils with real-world scenarios. Probing questions, rephrasing, and summarizing are used by the teacher to assist make the concepts obvious.

- **CASE-BASED LEARNING (CBL):**

  Learning is centered around a sequence of questions based on a clinical scenario in this small group discussion format. Students create new information by discussing and responding to the questions using pertinent prior knowledge from the clinical and fundamental health sciences modules. The relevant department will give the CBL.

- **CLINICAL EXPERIENCES:**

  Students examine patients in hospital wards, clinics, and outreach facilities in small groups, noting their signs and symptoms. This aids students in connecting their understanding of the module's basic and clinical sciences and getting ready for future practice.

- **CLINICAL ROTATIONS:**

  Students cycle through a variety of wards in small groups, including those in family medicine clinics, outreach centers, pediatrics, surgery, obstetrics and gynecology, ENT, and community medicine. In both inpatient and outpatient settings, students watch patients, get medical histories, and carry out clinical examinations under supervision. They also have the chance to watch medical professionals function as a team. Students can link their basic medical and clinical skills to a variety of clinical domains through these rotations.

- **SKILL SESSIONS:**

  Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

- **PRACTICALS:**

  Basic science practical related to pharmacology, microbiology, forensic medicine, and community medicine have been schedule for student learning.

- **SELF STUDY:**

  Self-directed learning is a process in which students take charge, either on their own or with assistance from others. Students chart their learning objectives and determine their areas of need for learning. They select and employ their own learning methodologies, and they independently assess the learning objectives.

6. INTRODUCTION

This is the Respiratory-2 module. Welcome. This amazing module will be crucial to your future careers as physicians. With its interactive exercises, this module aims to make learning engaging and effective for you. By combining the study of fundamental pharmacology, pathology associated with respiratory system illnesses, and their pertinent clinical applications, this module offers a fundamental understanding (Horizontal Integration). Additionally, community medicine and forensic medicine (vertical integration). We are better preparing you for your future work as a doctor by using this technique, since patients will come to you with issues that are not labeled according to a specific discipline.
We have revised the basic science curriculum to center it around a few significant health-related scenarios (real-life events) that third-year medical students are likely to face in order to support your integrated learning. To help you understand the material and learn more effectively, you will be required to consider the situations and take part in case-based learning sessions. It will also assist you in concentrating on the goals you have set for yourself in relation to the lectures, exercises, and tutorials that are scheduled for this module.

6.1 RATIONALE

Respiratory system illnesses are widespread worldwide. Morbidity and death are avoided when acute respiratory conditions like COPD and asthma are diagnosed and treated promptly. It is crucial to identify and treat COPD and asthma illnesses as soon as possible in order to lessen the burden of disability on society. Diagnosis and treatment depend on an understanding of the anatomy, physiology, and interaction between the respiratory system and illness pathogenesis.

6.2 IBN E SINA UNIVERSITY (ISU) VISION:

To become a world-leading organization in rural health and social care research, training, recruitment and best evidence-based practice.

6.3 IBN E SINA UNIVERSITY (ISU) MISSION:

Our Mission is to inspire hope, and contribute to health and well-being by providing the best care to every patient through integrated clinical practice, education and research. To provide a focal point for the development and collation of high-quality research pertinent to rural health and wellbeing. To improve the training, recruitment and retention of a professional workforce within rural communities. To be recognized as an exemplar in rural health and wellbeing on the international stage. To establish a network of individuals and groups that support research, innovation and development in rural health and social care.

7. LEARNING OBJECTIVES

7.1 General Learning Outcomes:

At the end of this module, the students will be able to;

1. Understand the normal and abnormal structures and functions of respiratory system.
2. Interpret the biochemical changes in the body related to the respiratory system with reference of some common respiratory disorders.
3. Take history and perform a satisfactory physical examination of the respiratory system.
4. Describe normal changes that occur in respiratory system functioning from infancy to old age.
5. Formulate an appropriate plan for evaluating patients with respiratory signs and symptoms to achieve a reasonable differential diagnosis and to develop an investigative and management plan.
6. Diagnose, manage and prevent common respiratory diseases

7.2 Knowledge / Cognitive Domain

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

1. Explain various lower respiratory tract infections
2. Explain obstructive respiratory diseases.
3. Describe various Granulomatous lung diseases
4. Prescribe medication according to guidelines for common respiratory disorders.
5. Describe medico legal aspect of asphyxial death.
6. Describe respiratory tract diseases of public health importance with emphasis on agent factors, epidemiology, preventive and control measures.
7. Describe management of common respiratory problems.

7.3 Skills / Psychomotor Domain:

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

1. Demonstrate the ability to perform the disease specific relevant examination
2. Respond to common medical emergencies
3. Master the skill of first aid
4. Perform BLS
5. Apply the best evidenced practices for local health problems

7.4 Attitude / Affective Domain:

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

1. Respect oneself and one's peers, both when providing and receiving comments.
2. To show patients compassion and understanding.

3. Develop your ability to communicate while keeping a sense of duty to your patients.
4. Showcase appropriate laboratory procedures.

7.5 Outcomes of Respiratory-II Module

1. Knowledgeable
2. Skillful
3. Community Heath Promoter
4. Problem-solver
5. Professional
6. Researcher
7. Leader and Role Model

8. THEMES FOR RESPIRATORY-II MODULE

SNO	Themes	Duration
1	**Lung Injury, Edema, Collapse & Obstructive Pulmonary diseases**	1 week
2	**Chronic diffuse Interstitial/Restrictive Lung diseases**	1 week
3	**Vascular and Infectious Diseases.**	1 week
4	**Lung Tumors and Pleural diseases**	1 week

9. SPECIFIC LEARNING OBJECTIVES

PATHOLOGY

S. NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
01	Types & causes of Atelectasis Types & causes of pulmonary edema Define acute lung injury Describe the causes of ARDS Discuss the characteristic features, morphology and pathogenesis of ARDS Describe its consequences and clinical course	**RESP-II-PATH-1** Pulmonary Edema, ARDS & Atelectasis	Demonstration	BCQs, SAQs, OSPE, Viva
02	Define Obstructive lung disease(OPD) Classify types of OPD Describe etiology pathogenesis & clinical features of chronic bronchitis + emphysema	**RESP-II-PATHO-2** Obstructive lung Diseases-I	Demonstration	BCQs, SAQs, OSPE, Viva
03	Describe categories of ASTHMA Explain pathogenesis Discuss the immunological mechanisms of bronchial asthma andits triggering factors -Gross features & morphological Features Define BRONCHIECTASIS Describe its causes, pathogenesis and Gross & morphological features	**RESP-II-PATHO-3** Obstructive lung diseases-II	Demonstration	BCQs, SAQs, OSPE, Viva
04	Describe major categories Explain the pathogenesis, morphology and clinical course of its important types idiopathic pulmonary fibrosis Non-specific Interstitial Pneumonia Cryptogenic organizing Pneumonia	**RESP-II-PATHO-4** Chronic diffuse interstitial lung diseases I- Restrictive lung diseases	Demonstration	BCQs, SAQs, OSPE, Viva

05	Describe major categories Explain the etiology, pathogenesis, gross, histological features of its important types like -Coal worker Pneumoconiosis .Silicosis, Asbestos-related diseases	**RESP-II-PATHO-5** Chronic diffuse interstitial lung diseases II-Pneumoconiosis	Demonstration	BCQs, SAQs, OSPE, Viva
06	Explain the etiology, pathogenesis, gross, histological features of Sarcoidosis -Hypersensitivity Pneumonitis -Pulmonary Eosinophilia	**RESP-II-PATHO-6** Chronic diffuse interstitial lung diseases III: Granulomatous Diseases	Demonstration	BCQs, SAQs, OSPE, Viva
07	Smoking-related -Desquamative Interstitial Pneumonia -PAP (Pulmonary Alveolar Proteinosis) -Respiratory bronchiolitis-associatedILD	**RESP-II-PATHO-7** Chronic diffuse interstitial lung diseases IV & smoking-related	Interactive Lecture	BCQs, SAQs, OSPE, Viva
08	Explain the etiology, Pathogenesis & histological features of - Pulmonary Thromboembolism, HTN Good pasture syndrome	**RESP-II-PATHO-8** Pulmonary Thromboembolism, HTN & important Hemorrhagic Syndromes	Interactive Lecture	BCQs, SAQs, OSPE, Viva
09	Explain the pathogenesis of granuloma formation Describe the five different clinical patterns of tuberculosis Define primary and secondary tuberculosis Describe lab diagnosis and complications	**RESP-II-PATHO-9** Tuberculosis	Demonstration	BCQs, SAQs, OSPE, Viva
10	Explain histological features of - Squamous dysplasia & Carcinoma in situ -Atypical adenomatous hyperplasia -Adenocarcinoma in situ -Diffuse idiopathic pulmonary neuroendocrine cell hyperplasia (DIPNECH)	**RESP-II-PATHO-10** Tumors Of Lung- 1	Interactive Lecture	BCQs, SAQs, OSPE, Viva

11	Explain the etiology, pathogenesis, gross, histological features of -Squamouscell carcinoma, Adenocarcinoma Neuroendocine carcinomas	**RESP-II-PATHO-11** Tumors Of Lung-2	Interactive Lecture	BCQs, SAQs, OSPE, Viva
12	Explain the etiology, Pathogenesis and Clinical features of Pleural Effusion Pneumothorax Explain the etiology, Pathogenesis and Microscopic features of - Benign Tumors → Solitary fibrous tumor Malignant Tumors →Mesothelioma	**RESP-II-PATHO-12** Pleural diseases	Demonstration	BCQs, SAQs, OSPE, Viva
13		**RESP-II-PATHO-13** Pleural Fluid For DR	Practical	BCQ's, SAQ's OSPE, VIVA
14		**RESP-II-PATHO-14** Inflammatory Diseases of Lung	Practical	
15		**RESP-II-PATHO-15** Obstructive Diseases of Lung	Practical	
16		**RESP-II-PATHO-16** Tumors of Lung	Practical	

PHARMACOLOGY

S. NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESSMENT
01	Classify the drugs used as Anti-tussive. Describe the mechanism of action, side effects of Anti-tussive drugs	**RESP-II-PHARMA-1** Drugs used as Anti-tussive	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02	Classify the drugs used in TB Describe the mechanism of action andside effects of 1st and 2nd line anti-TB drugs	**RESP-II-PHARMA-2** Drugs used in TB	Interactive Lecture	
03	Classify the drugs used in Asthma and COPD. Describe the mechanism of action, side effects of beta-2 receptor Agonists, Phosphodiesterase inhibitors, Leukotrienes Pathway Inhibitors and Discuss the role of corticosteroids in asthma.	**RESP-II-PHARMA-3** Drugs used in Asthma and COPD I	Interactive Lecture	
04		**RESP-II-PHARMA-4** Drugs used in Asthma and COPD II	Interactive Lecture	
05	Write the proper prescription for Pulmonary Tuberculosis	**RESP-II-PHARMA-P1** Anti-TB Drugs	Practical	OSPE,
06	Write the proper prescription for Asthma	**RESP-II-PHARMA-P2** Anti-Asthmatic Drugs	Practical	OSPE,

COMMUNITY MEDICINE

S.NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
01		**RESP-II-COMM MED-1** Methods of purification of water, Slow sand& rapid sand filters	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02		**RESP-II-COMM MED-2** World Health Organization (W.H.O) criteriafor purification of water/surveillance	Interactive Lecture	
03		**RESP-II-COMM MED-3** Hydrological cycle & sources of water pollution	Interactive Lecture	
04		**RESP-II-COMM MED-4** Health Hazards arising from consumingpolluted water; water borne disease	Interactive Lecture	
05		**RESP-II-COMM MED-5** Radiation Hazards	Interactive Lecture	
06		**RESP-II-COMM MED-6** Disposal of waste Introduction, Public Health importance ofwaste management. methods of collection & disposal of refuse	Interactive Lecture	
07		**RESP-II-COMM MED-7** Methods of disposal of human excreta & sewage	Interactive Lecture	
08		**RESP-II-COMM MED-8** Hospital Waste management	Interactive Lecture	
09		**RESP-II-COMM MED-9** Healthful housing	Interactive Lecture	
10		**RESP-II-COMM MED-10** Noise pollution	Interactive Lecture	
11		**RESP-II-COMM MED-11** Effect of health and cold extremes	Interactive Lecture	

FORENSIC MEDICINE

S.NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
01		**RESP-II-FOR MED-1** Legal Terminology	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02		**RESP-II-FOR MED-2** Autopsy 1	Interactive Lecture	
03		**RESP-II-FOR MED-3** Asphyxia (Intro)	Interactive Lecture	
04		**RESP-II-FOR MED-4** Evidence	Interactive Lecture	
05		**RESP-II-FOR MED-5** Autopsy 2	Interactive Lecture	
06		**RESP-II-FOR MED-6** Hanging & Throttling	Interactive Lecture	
07		**RESP-II-FOR MED-7** Medico legal Documents 1 (Medico legal Reports)	Interactive Lecture	
08		**RESP-II-FOR MED-8** Autopsy 3	Interactive Lecture	
09		**RESP-II-FOR MED-9** Suffocation, Smothering & Chocking	Interactive Lecture	
10		**RESP-II-FOR MED-10** Medico legal Documents 2 (Post-Mortem Reports)	Interactive Lecture	
11		**RESP-II-FOR MED-11** Autopsy 4	Interactive Lecture	
12		**RESP-II-FOR MED-12** Strangulation	Interactive Lecture	
13		**RESP-II-FOR MED-13** Alcohol	Demonstrati on / Tutorial Classes / Lab	BCQ's, SAQ's OSPE, VIVA
14		**RESP-II-FOR MED-14** Opium/Heroin/Cocaine		
15		**RESP-II-FOR MED-15** Fumigants		
16		**RESP-II-FOR MED-16** Hydrogen sulphide		

CLINICAL CLASSES

S.NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
01	Approach to child with Wheezing	**RESP-II PAEDIATRICS:** Asthma in Children	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02		**RESP-II PULMONOLOGY I:** **Obstructive lung diseases** A. Asthma B. COPD C. Bronchiectasis	Interactive Lecture	
03		**RESP-II PULMONOLOGY II:** **Pleural diseases** A. Pneumothorax B. Empyema	Interactive Lecture	
04		**RESP-II CARDIOTHORACIC SURGERY:** Chest Intubation in Trauma Patients	Interactive Lecture	

9.1 TAGGED SUBJECTS

Topic	Contents	Learning Objectives	Teaching Method	Module	Hours	Assessment
COMMUNICATION SKILLS						
Dealing with patients	Professional behavior while dealing with patients	Adhere to professional behavior while dealing with patients	Group Discussion, Hospital teaching	Respiratory 2	2	MCQ
LEADERSHIP AND MANAGEMENT						
Power dynamics	Power dynamics Power and empower	Delegate powers to juniors and team mates	Lecture, and Role Play	Respiratory 2	1	MCQ,

9.2 CLINICAL SCIENCES SUBJECTS

RESPIRATORY –II MODULE				
S. No	**Clinical Sciences Subjects**	**Learning Objectives**	**Hours**	**Learning Strategy**
1.	**ANAESTHESIA** Patient Monitoring during Anesthesia	Monitoring and care of patient during general anesthesia	2	Skills Session
		Recovery from Anesthesia	2	Skills Session
		Acute Pain management	1	Lecture
		Chronic Pain management	1	Lecture
2.	**ORTHOPAEDICS & TRAUMA**	Application of plaster and paris cast	1	Lecture
		Skeletal traction / skin traction	1	Lecture
		Use of orthopedic instrument	1	Lecture
		Post-operative management	1	Lecture
3.	**FAMILY MEDICINE** Common Respiratory problems	Upper Respiratory Tract Infections	1	Lecture
		Community Acquired Pneumonia	1	Lecture
		TB	1	Lecture
		Occupational Respiratory diseases	1	Lecture
		Acute Respiratory presentations	1	Lecture

9.3 CLINICAL ROTATION SCHEDULE

Duration	9 weeks	11 weeks	8 weeks	8 weeks
Disciplines	Medicine	Surgery	Gynae/Obs	Paeds
Total hours*	117	143	104	104

* 2.6 Clinical rotation hours per day

The above mentioned clinical rotation schedule is to be followed by every student throughout the year. Groups of students are decided by the Hospital Administration.

10. TEACHING HOURS ALLOCATION

S. No	Subject	Hours	Practical Hours
1	Pathology	20	8
2	Pharmacology	4	4
3	Forensic medicine	16	-
4	Community medicine	11	-
5	Pediatrics	1	-
6	Pulmonology	2	-
7	Cardiothoracic Surgery	1	-
8	CBL (Pathology)*	8	-
9	CBL (Pharmacology)*	8	-
10	Anesthesia	6	-
11	Orthopaedics & Trauma	4	-
12	Family Medicine	5	-
	Total hours	**86**	**12**

*Minimum 2 hours are allotted for each CBL session per Module

S. No	Tagged Subject	Teaching Hours
1	Communication Skills	2
2	Leadership and Management	1
	Total hours	**3**

11. EXAMINATION AND METHODS OF ASSESSMENT

11.1 EXAMINATION RULES AND REGULATIONS

- Student must report to examination hall/venue, in time for smooth conduction of the exams.
- No student will be allowed to enter the examination hall after 10 minutes of scheduled examination time.
- No students will be allowed to sit in exam without College ID Card, and Lab Coat
- Students must sit according to their roll numbers mentioned on the seats.
- Student must bring their own stationary items (Pen, Pencil, Eraser, and Sharpener) – Sharing is prohibited
- Any disturbance or Indiscipline in the exam hall/venue is not acceptable.
- Students must not possess any written material or communicate with their fellow students
- Cell phones are strictly not allowed in examination hall. If any student is found with cell phone in any mode (silent, switched off or on) he/she will be **not be allowed to continue their exam.**
- **No student is allowed to leave the examination hall before half the time is over, paper is handed over to the examiner and properly marking the attendance.**

11.2 ASSESSMENT

11.2.1 Internal: Total 10% (20 marks)

- Students will be assessed comprehensively through multiple methods to determine achievement of module objectives through two methods: Module examination and Graded assessment by Individual department
    - **Module Examination**: It will be scheduled on completion of each module. The method of examination comprises theory exam (which includes SEQs and MCQs) and OSPE / OSCE exam (which includes static and interactive stations).
    - **Graded Assessment by individual department**: It includes weekly MCQs tests on Survive online LMS program, viva, practical, weekly theme based assignments, post-test discussion sessions, peer assessments, presentations, small group activities such as CBL, ward activities, examinations and log books, all of which have specific marks allocation.
- Marks of both modular examination and graded assessment will constitute 10% weightage.
- 10% marks of internal evaluation will be added to the ISU annual professional exam.
- The marks distribution is based on Formative Assessment done individually by all the concerned departments. It may include:

- NOTE: **at least 75% attendance is mandatory** to appear in the annual university examination.
- Exam branch is responsible to maintain the attendance record for Main Campus in coordination with all the concerned departments.

11.2.2 University Annual Exam: Total 90%

- Annual Exam has 90% marks in total
- It includes theory and OSPE / OSCE.
- Each written paper consists of 100 MCQs and 10 SEQs and internal assessment marks will be added tothe final marks.

11.3 METHODS OF ASSESSMENT

11.3.1 Multiple Choice Questions

- Single best type MCQs having five options with one correct answer and four distractors are part of assessment.
- Total 100 MCQs are included which are formulated through the table of specification from learning objectives of Module interactive lectures.
- Time duration for MCQs will be 1 and half hour.
- MCQs are used to assess objectives covered in each module.
- Students after reading the statement / scenarios select one appropriate response from the given options.
- Correct answer carries one mark, and incorrect will be marked zero. Rule of negative marking is not applicable.
- Students attempt the MCQs exam on Computer screen on Moodle / LMS program in IT Lab.

11.3.2 Short Essay Questions (SEQs):

- Short-answer questions are structured way of asking open-ended questions that require students to create their answers based on their knowledge.
- Commonly used in examinations to assess the depth of knowledge and understanding.
- Includes 10 questions each carrying 10 marks.
- Time Duration for Essay type paper is 2 hours.
- Questions are selected from the specific learning objectives of the specific ongoing module.

11.3.3 OSPE / OSCE

- Each student will be assessed on the same content and have same time to complete the task.
- Time allocated for each station is five minutes as per Examination rules of Ibn e Sina University, Mirpurkhas

- All students are rotated through the same stations.
- OSPE / OSCE Comprises of 15 - 20 stations.
- Each station may assess a variety of diagrammatic identifications and clinical tasks. These tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are Interactive, observed, unobserved (static) and rest stations.
  - Interactive Stations:
    - In this station, examiner ask questions related to the task within the allocated time.
  - Observed Stations:
    - In observed stations, internal or external examiner don't interact with candidate and just observe the performance of the skills or procedures.
  - Unobserved (static) Stations:
    - It will be static stations in which there may be models, specimens, multiple identification points, X-ray, Labs reports, flowcharts, pictures, or clinical scenarios (to assess cognitive domain) with related questions for students will be used to answer on the provided answer copy.
  - Rest station
    - It is a station where there is no task given and in this time student can organize his/her thoughts

11.3.4 ASSIGNMENTS

- An online assignment on the Ibn-e-Sina University moodle uploaded according to the topic of the week.
- All assignments should be checked by the teacher who has taken the lecture on the topic during the same week.
- The assignment should cover enough material to include the requirement of the curriculum and syllabus, so the student should be able to answer the annual examination questions by revising these notes (assignments) only.
- The assignments are checked and graded also with comment to guide, motivate and encourage the students to work whole heartedly. Frequent guidance and motivation will go a long way in improving the students' performance.
- Assignments of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.5 WEEKLY TESTS

- The weekly tests are conducted for all classes. The tests are conducted online and are on topics displayed on the portal (Moodle). It consists of 35 MCQs. 5 MCQs will be from the previous weeks (slightly altered to change the answer or the right option). Everyone taking lectures, submit two MCQs to the Chairperson of the department who will check and pass them to the class moderator. MCQs can also be sent directly to the class moderator, who submits the MCQs to IT department for final placement on the moodle.

- The MCQs are not merely simple recall, but test higher level of cognition. As far as possible, they test an important concept related to one of the topics of the week.
- It is different from the summative assessment (Annual or Semester Examinations) in that the goal of summative assessment is to evaluate student's learning at the end of an instructional unit by comparing it against some standard or benchmark, to decide if the student can be promoted or not, whereas the goal of these weekly tests is to check the understanding of the students on the important concepts related to the topics that have been displayed on the portal for the week, the teachers have taught them and the students have made assignments on them.
- Results of weekly tests of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.6 POST-TEST DISCUSSION (PTD)

- Every student has to prepare a special assignment where he/she selects all the questions he/she got wrong. Then he/she makes 3 boxes. In box A he/she writes the questions he/she got wrong in his/her own words, highlighting and underlining the keywords. In box B the student explains why he/she has chosen this answer. In box C the student mentions what he/she has learnt after reading the explanation and how the concept has got clear now.
- The moderator will check, assess and grade PTD
- Next day, the class moderator of the class conducts a class where he/she discusses the mistakes committed and the post-test assignments submitted in detail with the class
- PTD assignments of the whole Professional year MBBS are counted as in Internal Assessment.

12. GRADING POLICY

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	**A+**
75-79	4.0	**A**
70-74	3.7	**A-**
67-69	3.3	**B+**
63-66	3.0	**B**
60-62	2.7	**B-**
56-59	2.3	**C+**
50-55	2.0	**C**
<50 Non gradable	0	**N**

- A student obtaining GPA less than 2.0 (50%) is declared fail or Non gradable

13. ASSESMENT BLUEPRINT

REPIRATORY-II MODULE

Assessment is based on Table of Specification (TOS)

	ASSESMENT	TOOLS	MARKS
MODULE EXAM	THEORY	MCQ's	100
		SEQ's	100
	OSPE	OSPE Static	50
		OSPE Interactive	50
		Total	300

14. RECOMMENDED BOOKS

PHARMACOLOGY

- **LIPPINCOTT ILLUSTRATED REVIEWS: PHARMACOLOGY**
  KAREN WHALEN, CARINDA FEILD, RAJAN RADHAKRISHNAN
  7TH EDITION

- **KATZUNG & TREVOR'S PHARMACOLOGY: EXAMINATION & BOARD REVIEW**
  ANTHONY J. TREVOR, BERTRAM G. KATZUNG, MARIEKE KNUIDERING-HALL
  12th EDITION

GENERAL PATHOLOGY

- **ROBBINS & COTRAN PATHOLOGIC BASIS OF DISEASE**
  VINAY KUMAR, ABUL K. ABBAS, JON C. ASTER
  10TH EDITION

- **BRS PATHOLOGY (BOARD REVIEW SERIES)**
  ARTHUR S. SCHNEIDER, PHILIP A. SZANTO
  5THTH EDITION

MICROBIOLOGY

- **REVIEW OF MEDICAL MICROBIOLOGY & IMMUNOLOGY**
  WARREN E. LEVINSON
  14th EDITION

PARASITOLOGY

- **PARASITOLOGY: PROTOZOOLOGY AND HELMINTHOLOGY**
  K.D. CHATTERJEE
  13th EDITION

FORENSIC MEDICINE AND TOXICOLOGY

- **PRINCIPLES AND PRACTICE OF FORENSIC MEDICINE**
  NASEEB AWAN
  2ND EDITION

- **PARIKH'S TEXTBOOK OF MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY**
  PARIKH, C.K
  6TH EDITION

- **SIMPSON'S FORENSIC MEDICINE**
  KNIGHT B
  11TH EDITION

- **TAYLOR'S PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE**
  TAYLOR
  VOLUME 1

COMMUNITY MEDCINE

- **PARK'S TEXTBOOK OF PREVENTIVE AND SOCIAL MEDICINE**
  K. PARK
  26TH EDITION

- **TEXT BOOK OF COMMUNITY MEDICINE & PUBLIC HEALTH**
  ILYAS SHAH ANSARI
  8TH EDITION

IBN-E-SINA UNIVERSITY MIRPURKHAS
FACULTY OF BASIC MEDICAL SCIENCES

Course Feedback Form

Course Title: _____

Semester/Module_____ Dates:_____

Please fill the short questionnaire to make the course better.

Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained.

THE DESIGN OF THE MODLUE

A. Were objectives of the course clear to you? Y ☐ N ☐

B. The course contents met with your expectations
l. Strongly disagree 5. Strongly agree ☐

C. The lecture sequence was well-planned
l. Strongly disagree 5. Strongly agree ☐

D. The contents were illustrated with
l. Too few examples 5. Adequate examples ☐

E. The level of the course was
l. Too low 5. Too high ☐

F. The course contents compared with your expectations
l. Too theoretical 5. Too empirical ☐

G. The course exposed you to new knowledge and practices
l. Strongly disagree 5. Strongly agree ☐

H. Will you recommend this course to your colleagues?
l. Not at all 5. Very strongly ☐

THE CONDUCT OF THE MODLUE

A. The lectures were clear and easy to understand
l. Strongly disagree 5. Strongly agree ☐

B. The teaching aids were effectively used
l. Strongly disagree 5. Strongly agree ☐

C. The course material handed out was adequate
l. Strongly disagree 5. Strongly agree ☐

D. The instructors encouraged interaction and were helpful
l. Strongly disagree 5. Strongly agree ☐

E. Were objectives of the course realized? Yes ☐ No ☐

F. Please give overall rating of the course

90% - l00%	( )	60% - 70%	( )
80% - 90%	( )	50% - 60%	( )
70% - 80%	( )	below 50%	( )

Please comment on the strengths of the course and the way it was conducted.

Please comment on the weaknesses of the course and the way it was conducted.

Please give suggestions for the improvement of the course.

Optional – Your name and contact address:

Thank you!!

IBN-E-SINA UNIVERSITY MIRPURKHAS

STUDENT'S STUDY GUIDE
CARDIOVASCULAR-II MODULE
THIRD PROFESSIONAL MBBS



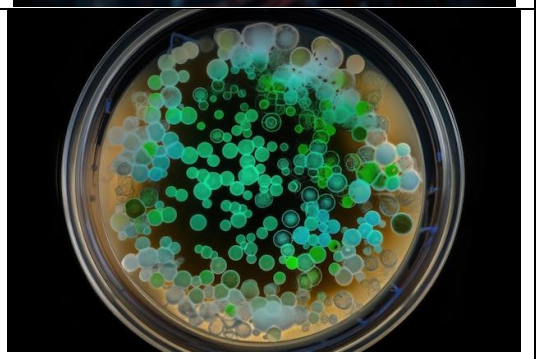




TABLE OF CONTENTS

1. DISCLAIMER

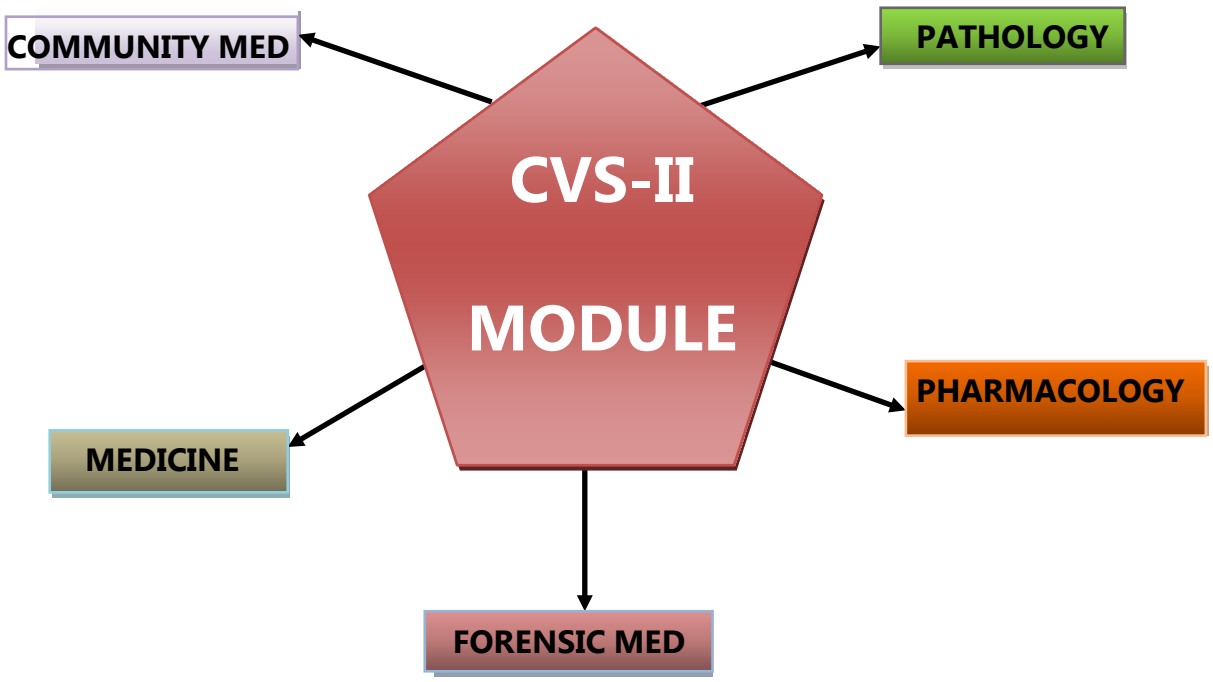
- Developing a study guide is a dynamic process and undergoes iteration according to the needs and priorities.
- This study guide is subjected to the change and modification over the whole academic year.
- However, students are advised to use it as a guide for respective modules.
- The time tables are for guiding purpose. It is to advise that final timetables are always displayed over the notice boards of each lecture hall.
- Students are encouraged to provide feedback via coordinator

2. CURRICULUM FRAMEWORK

An educational strategy known as integrated curriculum places a strong emphasis on interdisciplinary learning, in which students gain knowledge by integrating it from several topic areas. By integrating many subjects and disciplines into a cohesive curriculum, this method seeks to give students a more relevant and interesting learning experience. Integrated curriculum means that subjects are presented as a meaningful whole for better understanding of basic sciences in relation to clinical experience and application.

Integrated curriculum comprises of system-based modules such as CVS-II, Endocrine-II, Git and Liver-II, Hematology and oncology-II, Infectious Disease and Respiratory-II modules which link basic science knowledge to clinical problems.

INTEGRATING DISCIPLINES OF CVS-II MODULE



3. MODULE OVERVIEW

CVS-II MODULE DETAILS

Course	MBBS
Year	Third professional
Duration	5 weeks
Learning Outcomes	The competent Medical Practitioner
Competencies covered	To develop medical professionals who are well - versed, adept, and have the right mindset.
Module Assessment	End module formative assessment
Teaching Methods	Interactive Lectures, Demonstrations, Case Based Learning, Practical Lab, Small Group Discussions, Self-Study Sessions, E-Learning, Clinical rotations
Assessment Methods	MCQs, SEQs, OSPE, VIVA

CVS-II MODULE COMMITTEE

Sr. No	Names	Department	Designation
MODULE COORDINATOR			
1.	Dr. Bhawani Shankar	Pathology	Associate Professor
2.	Mr. Abid Laghari	Pharmacology	Lecturer
COMMITTEE MEMBERS			
1.	Prof: Dr. Syed Razi Muhammad	Surgery	Chancellor ISU
2.	Prof: Dr. Shams Ul Arfeen Khan	Biochemistry	Vice Chancellor ISU
3.	Prof: Dr. Aijaz Ahmed Memon	Surgery	Pro Vice Chancellor ISU

4. WHAT IS STUDY GUIDE

It is an aid to Inform students how student learning program of the module has been organized, tohelp students organize and manage their studies throughout the module and guide students on assessment methods, rules and regulations.

The study guide:

— Communicates information on organization and management of the module.

— This will help the student to contact the right person in case of any difficulty.

— Defines the objectives which are expected to be achieved at the end of the module.

— Identifies the learning strategies such as lectures, small group teachings.

Module objectives.

— Provides a list of learning resources such as books, computer-assisted learning programs, weblinks, and journals, for students to consult in order to maximize their learning.

— Highlights information on the contribution of continuous on the student's overall performance.

— Includes information on the assessment methods that will be held to determine every student's performance.

Achievement of objectives.

- Focuses on information pertaining to examination policy, rules and regulations.

5. LEARNING METHODOLOGIES

The following teaching/learning methods are used to promote better understanding

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
- Clinical Rotations
- Skills session
- Practicals
- Self-Directed Study

- **INTERACTIVE LECTURES:**

  Large group discussions are not the same as traditional lecture formats. When a teacher or instructor uses images, radiographs, patient interaction recordings, etc. to discuss a topic or typical clinical scenario, the lecture becomes interactive. When they are given tiny activities to do that allow them to apply the knowledge they have learned throughout the session and are asked questions, students actively participate in the learning process.

- **SMALL GROUP DISCUSSIONS (SGDS):**

  With the use of SGD, students can take an active role in their education, clarify ideas, develop psychomotor skills, and develop a positive attitude. Discussion themes, patient interviews, and clinical cases are used to design sessions in an organized manner. Pupils are inspired to express their ideas, apply the fundamental knowledge they have learned from lectures and independent study, and are encouraged to share their notions. In small groups, role play is a useful technique for acquainting pupils with real-world scenarios. Probing questions, rephrasing, and summarizing are used by the teacher to assist make the concepts obvious.

- **CASE-BASED LEARNING (CBL):**

  Learning is centered around a sequence of questions based on a clinical scenario in this small group discussion format. Students create new information by discussing and responding to the questions using pertinent prior knowledge from the clinical and fundamental health sciences modules. The relevant department will give the CBL.

- **CLINICAL EXPERIENCES:**

  Students examine patients in hospital wards, clinics, and outreach facilities in small groups, noting their signs and symptoms. This aids students in connecting their understanding of the module's basic and clinical sciences and getting ready for future practice.

- **CLINICAL ROTATIONS:**

  Students cycle through a variety of wards in small groups, including those in family medicine clinics, outreach centers, pediatrics, surgery, obstetrics and gynecology, ENT, and community medicine. In both inpatient and outpatient settings, students watch patients, get medical histories, and carry out clinical examinations under supervision. They also have the chance to watch medical professionals function as a team. Students can link their basic medical and clinical skills to a variety of clinical domains through these rotations.

- **SKILL SESSIONS:**

  Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

- **PRACTICALS:**

  Basic science practical related to pharmacology, microbiology, forensic medicine, and community medicine have been schedule for student learning.

- **SELF STUDY:**

  Self-directed learning is a process in which students take charge, either on their own or with assistance from others. Students chart their learning objectives and determine their areas of need for learning. They select and employ their own learning methodologies, and they independently assess the learning objectives.

6. INTRODUCTION

The most prevalent causes of morbidity and death worldwide are cardiovascular diseases, which include valvular abnormalities, hypertension, ischemic heart disease, and cardiac failure. Therefore, it is expected of a medical graduate to handle these issues in the general public. This module uses prior knowledge of anatomy, physiology, and biochemistry to teach pathology and pharmacology linked to the cardiovascular system. In order for the student to expand on their understanding of clinical presentation, diagnostic tests, and management of cardiovascular illnesses, a strong emphasis is placed on clinical correlation and problem-solving.
Aside from that, this fascinating new module also includes the concurrently offered but related courses in Behavioral Sciences, Community Medicine, and Toxicology and Forensic Medicine.

6.1 RATIONALE

Throughout the world, cardiovascular diseases rank among the leading causes of illness and mortality. Incidence of these conditions is rising in Pakistan in tandem with urbanization. After qualifying, a medical graduate would be expected to address conditions such as hypertension, ischemic heart disease, atherosclerosis, congenital and rheumatic valvular abnormalities. The student will be able to expand on the knowledge of clinical presentation, diagnostic investigations, and management of cardiovascular disorders with the foundation of knowledge gained in the cardiovascular module of the first cycle, which includes anatomy, physiology, pharmacology, and the fundamentals of cardiovascular diseases.

6.2 IBN E SINA UNIVERSITY (ISU) VISION:

To become a world-leading organization in rural health and social care research, training, recruitment and best evidence-based practice.

6.3 IBN E SINA UNIVERSITY (ISU) MISSION:

Our Mission is to inspire hope, and contribute to health and well-being by providing the best care to every patient through integrated clinical practice, education and research. To provide a focal point for the development and collation of high-quality research pertinent to rural health and wellbeing. To improve the training, recruitment and retention of a professional workforce within rural communities. To be recognized as an exemplar in rural health and wellbeing on the international stage. To establish a network of individuals and groups that support research, innovation and development in rural health and social care.

7. LEARNING OBJECTIVES

7.1 Knowledge / Cognitive Domain

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

1. Describe pathogenesis & clinical presentations of common cardiovascular disorders
2. Take history, perform physical examinations of cardiovascular system and formulate appropriate plan of investigations for making a diagnosis.
3. Interpret the investigations for diagnosis.
4. Describe the pharmacology of drugs used in the management of cardiovascular disorders.
5. Practice basic principles of management of cardiovascular disorders.
6. Recognize preventive measures & prognosis for counseling the patients

7.2 Skills / Psychomotor Domain:

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

1. Demonstrate the ability to perform the disease specific relevant examination
2. Respond to common medical emergencies
3. Master the skill of first aid
4. Perform BLS
5. Apply the best evidenced practices for local health problems

7.3 Attitude / Affective Domain:

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

1. Respect oneself and one's peers, both when providing and receiving comments.
2. To show patients compassion and understanding.
3. Develop your ability to communicate while keeping a sense of duty to your patients.
4. Showcase appropriate laboratory procedures.
5. Relate to patient and careers vulnerability
6. Demonstrate ethical self-management
7. Counsel and educate patients and their families to empower them to participate in their care and enable shared decision-making.
8. Display compassion with patient and colleagues
9. Demonstrate in clinical care an understanding of the impact of psychological, social, and economic factors on human health and disease

7.4 Outcomes of Cardiovascular-II Module

1. Knowledgeable
2. Skillful
3. Community Heath Promoter
4. Problem-solver
5. Professional
6. Researcher
7. Leader and Role Model

8. THEMES FOR CVS-II MODULE

SNO	Themes	Duration
1	**Hypertension**	1 week
2	**Atherosclerosis**	1 week
3	**Myocardial Diseases**	1 week
4	**Diseases of Vessels**	1 week
5	**Pericardial and endocardial diseases, andcardiac tumors**	1 week

9. SPECIFIC LEARNING OBJECTIVES

PATHOLOGY

S. NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
01	**Define** hypertension and **classify** itscauses. **Discuss** the pathogenesis of Hypertension Vascular Pathology in Hypertension.	**CVS-II-PATHO-1** Hypertensive Vascular Disease	Interactive Lecture	BCQs, SAQs, OSPE, Viva
02	**Define** Hypertensive heart disease. **Differentiate** between systemic (Left-Sided) HHD and Pulmonary (Right-Sided) HHD (Cor Pulmonale). **Describe** the diagnostic features and morphology of Systemic and Pulmonary HHD. **Describe** various disorders Predisposing to HHD.	**CVS-II-PATHO-2** Hypertensive heart disease (HHD)	Demonstra tion	BCQs, SAQs, OSPE, Viva
03	**Describe** the pathogenesis of Atherosclerosis. **Discuss** the morphological features of Atherosclerosis. **Discuss** the complications of Atherosclerosis.	**CVS-II-PATHO-3** Atherosclerosis	Interactive Lecture	BCQs, SAQs, OSPE, Viva
04	**Define** Ischemic Heart Disease with its types. **Define** Angina Pectoris with itspathogenesis, patterns, morphological changes, clinical features, andcomplications. **Define** Myocardial Infarction with its pathogenesis, patterns, morphological changes, clinical features, andcomplications	**CVS-II-PATHO-4** Ischemic Heart Disease	Interactive Lecture	BCQs, SAQs, OSPE, Viva
05	**Define** Cardiomyopathy and **classify** it. **Describe** the pathogenesis, patterns, morphological changes, clinical features,and complications of various cardiomyopathies.	**CVS-II-PATHO-5** Cardiomyopathies	Interactive Lecture	BCQs, SAQs, OSPE, Viva

06	**Define** valvular stenosis and insufficiency. **Describe** the causes of the major valvular lesions. **Describe** the natural history of Rheumatic Fever. **Describe** Calcific Valvular Degenerationand characterize it. **Discuss** the morphology and clinical features.	**CVS-II-PATHO-6** Valvular Heart Disease and Rheumatic Heart Disease	Demonstration	BCQs, SAQs, OSPE, Viva
07	**Define** vasculitis and **classify** primaryforms. **Describe** causes and mechanisms. **Describe** the typically involved vascularsites. **Describe** the following and **characterize** them: Giant Cell (Temporal) Arteritis Thromboangiitis Obliterans (Buerger Disease)	**CVS-II-PATHO-7** Vasculitis	Interactive Lecture	BCQs, SAQs, OSPE, Viva
08	**Describe** varicose veins and their clinical features. **Differentiate** between Thrombophlebitis and Phlebothrombosis based on pathogenesis and clinical features. **Describe** Lymphangitis and Lymphedema.	**CVS-II-PATHO-8** Diseases of Veins and Lymphatics	Interactive Lecture	BCQs, SAQs, OSPE, Viva
09	**Classify** vascular tumors and tumor-like conditions. **Describe** the pathogenesis, morphology,and clinical characteristics of the following: • Hemangiomas • Lymphangiomas • Intermediate-Grade (Borderline) Tumors • Malignant Tumors	**CVS-II-PATHO-9** Vascular Tumors	Interactive Lecture	BCQs, SAQs, OSPE, Viva

10	**Describe** the pathogenesis, morphology,and clinical characteristics of IE, Pericarditis, and cardiac tumors.	**CVS-II-PATHO-10** Infective Endocarditis (IE), Pericarditis, and Tumors of the Heart	Interactive Lecture	BCQs, SAQs, OSPE, Viva
11	**Interpret** the following on a given biochemical report:	a) Lipid Profile b) Cardiac Enzymes c) Pericardial Effusion	Practical	OSPE, Viva
12	**Interpret** the gross and microscopic features of the following on a given histopathology report:	a) Hemangiomas b) Cardiac Myxoma	Practical	OSPE, Viva

PHARMACOLOGY

S. NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESSMENT
01	**Classify** the antihypertensive agents based on the mechanism of action. **Describe** the hemodynamic responses, adverse effects, and drug interactions of antihypertensive agents.	**CVS-II-PHARMA-1** Drugs used to treat Hypertension	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02	**Classify** the Hypolipidemic drugs according to their mode of action. **Describe** the clinical uses, drug interactions, and adverse effects of hypolipidemic drugs.	**CVS-II-PHARMA-2** Drugs to treat Hyperlipidemia	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
03	**Classify** anti-anginal drugs based on the mechanism of action. **Describe** adverse effects and drug interaction of antianginal drugs.	**CVS-II-PHARMA-3** Drugs used to treat Ischemic Heart Disease	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
04	**List** the major classes of anti-arrhythmic drugs based on their mechanism of action. **Describe** the clinical use, drug interactions, and adverse effects of anti-arrhythmic drugs.	**CVS-II-PHARMA-4** Drugs used to treat Cardiac Arrhythmias	Demonstration	BCQ's, SAQ's OSPE, VIVA
05	**Classify** the major classes of drugs usedto treat congestive cardiac failure based on their mechanism of action. **Describe** the pharmacokinetics, mechanism of action, indications, and adverse effects of drugs used in acute and chronic heart failure. **Describe** the clinical use, drug interactions, and adverse effects of drugsused in CCF.	**CVS-II-PHARMA-5** Drugs used to treat Congestive Cardiac Failure	Demonstration	BCQ's, SAQ's OSPE, VIVA
08	**Identify** the following in a given prescription:	a) Drug-Drug interactions b) Flaws	Practical	OSPE, Viva
09	**Write** down a prescription based on a given scenario.	a) Dyslipidemia	Practical	OSPE, Viva

10	**Construct** a prescription for a patient with Myocardial Infarction	Myocardial Infarction	Practical	OSPE, Viva
11	**Construct** a prescription for a patient with Hypertension	Hypertension	Practical	OSPE, Viva
12	**Construct** a prescription for a patient with Congestive Cardiac Failure	Congestive Cardiac Failure	Practical	OSPE, Viva

COMMUNITY MEDICINE

S. NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
01	To understand the aim of the program To understand the objectives of the program To know the major challenges to development in the 21st century To understand Socioeconomic impacts ofNCDs To differentiate in between modifiable and non-modifiable risk factors related to NCDs. To understand Operational Impediments In Pakistan for Implementation of National Action Plan	**CVS-II-COMM MED-1** Introduction and national action program for prevention and control of non-communicable disease and health promotion	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02	Define Cardiovascular disease (CVD) Elaborate the concept of CVD risk stratification Describe the epidemiology of cardiovascular diseases and explain cardiovascular diseases of Public Health importance globally and in Pakistan Explain the known risk factors of CVD and cultural, racial and gender difference inCVD prevalence and incidence Role of diet and nutrition / lifestyle modification Describe the epidemiology of hypertension and its public Health importance globally and in Pakistan	**CVS-II-COMM MED-2** Coronary heart diseases and its prevention/ Hypertension	Interactive Lecture	
03	To understand the magnitude of cancer problem in Pakistan. To understand the epidemiologicalfeatures of cancer. To describe different causes of cancerTo explain screening of cancer To describe risk factors of cancer To explain the control measures and prevention of cancer	**CVS-II-COMM MED-3** Epidemiology & control measures of cancer	Interactive Lecture	

04	To define Epidemiology of snake bite To understand the Habitat of snakes in Pakistan To describe Clinical features, local andSystematic symptoms, and signs To discuss Snake bite prevention To describe First aid for snake bite To define Management and treatment ofsnake bite To understand the Importance of anti-snake venom	**CVS-II-COMM MED-4** Snake Bite	Interactive Lecture	

SUBJECT: FORENSIC MEDICINE

S. NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
01	List various courts of law in Pakistan Discuss Supreme court and its jurisdictionand powers Discuss Federal Shariat Court jurisdictionand powers Discuss High Court jurisdiction andpowers Discuss District Session and Civil Court jurisdiction and powers	**LEGAL PROCEDURES –II** **CVS-II-FOR MED-1** Court System in Pakistan	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02	Discuss Legal procedures of courts of law	**CVS-II-FOR MED-2** Legal Procedures of Courts	Interactive Lecture	
03	Describe the Documents prepared by a medical man (Certificates such as birth certificate, death certificate, consent form,Prescription writing, sickness certificates, certificates of fitness to drive a vehicle, certificate for estimate of age)	**CVS-II-FOR MED-3** Medical Documents1 & 2	Interactive Lecture	
04	Discuss Internal examination of thoracicand abdominal cavities Describe Dissection of respiratory tract Describe Dissection of heart Describe Dissection of abdominal viscera Describe Dissection of pelvic organs Describe Dissection of Spinal cord	**AUTOPSY – II** **CVS-II-FOR MED-4** Internal Examinations1 & 2	Interactive Lecture	
05	Explain Preservation of viscera for Chemical and Histo-pathological examination Explain Preservatives used in mortuary	**CVS-II-FOR MED-5** Collection, Preservation & Dispatch (CPD)	Interactive Lecture	
06	Explain Exhumation and Postmortemartifact	**CVS-II-FOR MED-6** Exhumation	Interactive Lecture	

07	Define Drowning, its types Discuss Mechanism of drowning Describe Causes of death in drowning Discuss Postmortem finding of drowningDefine Diatoms and their medico legal significance	**ASPHYXIA-II** **CVS-II-FOR MED-7** Drowning	Interactive Lecture	OSPE, VIVA
08	Discuss Traumatic Asphyxia	**CVS-II-FOR MED-8** Traumatic Asphyxia	Interactive Lecture	
09	Discuss Sexual asphyxia (auto erotic asphyxia)	**CVS-II-FOR MED-9** Sexual Asphyxia	Interactive Lecture	
10	Classify corrosive poisons. Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhancedelimination with regard to: Caustics Inorganic – sulphuric, nitric, and hydrochloric acids; Organic- Carbolic Acid (phenol), Oxalic and acetylsalicylic acids	Corrosives	**Special Toxicology Demonstration/ Tutorial Classes**	
11	Discuss sources, fatal dose and fatalperiod and treatment Discuss postmortem appearance and medico-legal importance	Nicotine poisoning		
12	Discuss Introduction to the poison Describe sign, symptoms, fatal dose andfatal period, treatment of a poison. Discuss postmortem appearance and medico-legal importance.	Aconite poisoning		
13	Classify types of snakes Discuss Diagnosis of a snake bite, sign & symptoms and treatment Discuss postmortem appearance and medico-legal importance.	Snake bite		

CLINICAL - CARDIOLOGY

S. NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESSMENT
01	**Describe** the sign and symptoms of RFand RHD **Describe** the drugs used to treat RHD andthere adverse effects	**CVS-II-CARDIO-1** Rheumatic Fever and Rheumatic Heart Disease (RHD)	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02	**Describe** the sign and symptoms of pericarditis, myocarditis, and infective endocarditis. **Describe** the treatment of pericarditis, myocarditis, and infective endocarditis.	**CVS-II-CARDIO-2** Cardiac inflammation	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA

9.1 TAGGED SUBJECTS

Topic	Contents	Learning Objectives	Teaching Method	Module	Hours	Assessment
COMMUNICATION SKILLS						
Counselling skills	Counselling skills	Develops counselling skills in professional life	Lecture/ Group Discussion	CVS-2	2	MCQ
Informed consent	Informed consent Special Situations	Obtaining informed consent	Lecture Bedside teaching	CVS -2	2	MCQ
Positive attitude	Positive attitude processes	Exhibit positive Attitude and Outlook in workplace environment	Bedside/community Visit	CVS-2	2	MCQ
LEADERSHIP AND MANAGEMENT						
SWOT Analysis	SWOT Analysis	Perform SWOT analysis for a particular task	Group Discussion	CVS 2	1	MCQ,
RESEARCH						
GANTT Chart	How to make a GANTT Chart	Make a GANTT Chart for a research project	Hands-on exercise in computer lab	CVS 2	1	MCQ and Assignment

9.2 CLINICAL SCIENCES SUBJECTS

CVS-II MODULE				
S. No	**Clinical Sciences Subjects**	**Learning Objectives**	**Hours**	**Learning Strategy**
1.	**ANAESTHESIA**	Perioperative management	2	Skills Session
	Patient Monitoring	Post-operative Care	2	Skills Session
		ICU Monitoring	2	Skill Session
2.	**ORTHOPAEDICS & TRAUMA**	Pre-operative evaluation of the surgical patient.	2	Skill session
	General Surgery goals	post-operative patient care including fluid and electrolytes status	2	Skill session
3.	**FAMILY MEDICINE**	Chest pains	1	Lecture
	Common Complaints	Dyspnea	1	Lecture
		Abdominal pains	1	Lecture
		Poisoning	1	Lecture
		Adult BLS	1	Lecture

9.3 CLINICAL ROTATION SCHEDULE

Duration	9 weeks	11 weeks	8 weeks	8 weeks
Disciplines	Medicine	Surgery	Gynae/Obs	Paeds
Total hours*	117	143	104	104

* 2.6 Clinical rotation hours per day

The above mentioned clinical rotation schedule is to be followed by every student throughout the year. Groups of students are decided by the Hospital Administration.

10. TEACHING HOURS ALLOCATION

S. No	Subject	Hours	Practical Hours
1	Pathology	12	4
2	Pharmacology	7	10
3	Forensic medicine	13	-
4	Community medicine	4	-
5	Medicine (Cardiology)	2	-
6	CBL (Pathology)*	10	-
7	CBL (Pharmacology)*	10	-
8	Anesthesia	6	
9	Orthopaedics & Trauma	4	
10	Family medicine	5	
	Total hours	**73**	**14**

*Minimum 2 hours are allotted for each CBL session per Module

S. No	Tagged Subject	Teaching Hours
1	Communication Skills	6
2	Leadership and Management	1
3	Research	1
	Total hours	**8**

11. EXAMINATION AND METHODS OF ASSESSMENT

11.1 EXAMINATION RULES AND REGULATIONS

- Student must report to examination hall/venue, in time for smooth conduction of the exams.
- No student will be allowed to enter the examination hall after 10 minutes of scheduled examination time.
- No students will be allowed to sit in exam without College ID Card, and Lab Coat
- Students must sit according to their roll numbers mentioned on the seats.
- Student must bring their own stationary items (Pen, Pencil, Eraser, and Sharpener) – Sharing is prohibited
- Any disturbance or Indiscipline in the exam hall/venue is not acceptable.
- Students must not possess any written material or communicate with their fellow students
- Cell phones are strictly not allowed in examination hall. If any student is found with cell phone in any mode (silent, switched off or on) he/she will be **not be allowed to continue their exam.**
- **No student is allowed to leave the examination hall before half the time is over, paper is handed over to the examiner and properly marking the attendance.**

11.2 ASSESSMENT

11.2.1 Internal: Total 10% (20 marks)

- Students will be assessed comprehensively through multiple methods to determine achievement of module objectives through two methods: Module examination and Graded assessment by Individual department
    - **Module Examination**: It will be scheduled on completion of each module. The method of examination comprises theory exam (which includes SEQs and MCQs) and OSPE / OSCE exam (which includes static and interactive stations).
    - **Graded Assessment by individual department**: It includes weekly MCQs tests on Survive online LMS program, viva, practical, weekly theme based assignments, post-test discussion sessions, peer assessments, presentations, small group activities such as CBL, ward activities, examinations and log books, all of which have specific marks allocation.
- Marks of both modular examination and graded assessment will constitute 10% weightage.
- 10% marks of internal evaluation will be added to the ISU annual professional exam.
- The marks distribution is based on Formative Assessment done individually by all the concerned departments. It may include:

- NOTE: **at least 75% attendance is mandatory** to appear in the annual university examination.
- Exam branch is responsible to maintain the attendance record for Main Campus in coordination with all the concerned departments.

11.2.2 University Annual Exam: Total 90%

- Annual Exam has 90% marks in total
- It includes theory and OSPE / OSCE.
- Each written paper consists of 100 MCQs and 10 SEQs and internal assessment marks will be added tothe final marks.

11.3 METHODS OF ASSESSMENT

11.3.1 Multiple Choice Questions

- Single best type MCQs having five options with one correct answer and four distractors are part of assessment.
- Total 100 MCQs are included which are formulated through the table of specification from learning objectives of Module interactive lectures.
- Time duration for MCQs will be 1 and half hour.
- MCQs are used to assess objectives covered in each module.
- Students after reading the statement / scenarios select one appropriate response from the given options.
- Correct answer carries one mark, and incorrect will be marked zero. Rule of negative marking is not applicable.
- Students attempt the MCQs exam on Computer screen on Moodle / LMS program in IT Lab.

11.3.2 Short Essay Questions (SEQs):

- Short-answer questions are structured way of asking open-ended questions that require students to create their answers based on their knowledge.
- Commonly used in examinations to assess the depth of knowledge and understanding.
- Includes 10 questions each carrying 10 marks.
- Time Duration for Essay type paper is 2 hours.
- Questions are selected from the specific learning objectives of the specific ongoing module.

11.3.3 OSPE / OSCE

- Each student will be assessed on the same content and have same time to complete the task.
- Time allocated for each station is five minutes as per Examination rules of Ibn e Sina University, Mirpurkhas

- All students are rotated through the same stations.
- OSPE / OSCE Comprises of 15 - 20 stations.
- Each station may assess a variety of diagrammatic identifications and clinical tasks. These tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are Interactive, observed, unobserved (static) and rest stations.
  - Interactive Stations:
    - In this station, examiner ask questions related to the task within the allocated time.
  - Observed Stations:
    - In observed stations, internal or external examiner don't interact with candidate and just observe the performance of the skills or procedures.
  - Unobserved (static) Stations:
    - It will be static stations in which there may be models, specimens, multiple identification points, X-ray, Labs reports, flowcharts, pictures, or clinical scenarios (to assess cognitive domain) with related questions for students will be used to answer on the provided answer copy.
  - Rest station
    - It is a station where there is no task given and in this time student can organize his/her thoughts

11.3.4 ASSIGNMENTS

- An online assignment on the Ibn-e-Sina University moodle uploaded according to the topic of the week.
- All assignments should be checked by the teacher who has taken the lecture on the topic during the same week.
- The assignment should cover enough material to include the requirement of the curriculum and syllabus, so the student should be able to answer the annual examination questions by revising these notes (assignments) only.
- The assignments are checked and graded also with comment to guide, motivate and encourage the students to work whole heartedly. Frequent guidance and motivation will go a long way in improving the students' performance.
- Assignments of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.5 WEEKLY TESTS

- The weekly tests are conducted for all classes. The tests are conducted online and are on topics displayed on the portal (Moodle). It consists of 35 MCQs. 5 MCQs will be from the previous weeks (slightly altered to change the answer or the right option). Everyone taking lectures, submit two MCQs to the Chairperson of the department who will check and pass them to the class moderator. MCQs can also be sent directly to the class moderator, who submits the MCQs to IT department for final placement on the moodle.

- The MCQs are not merely simple recall, but test higher level of cognition. As far as possible, they test an important concept related to one of the topics of the week.
- It is different from the summative assessment (Annual or Semester Examinations) in that the goal of summative assessment is to evaluate student's learning at the end of an instructional unit by comparing it against some standard or benchmark, to decide if the student can be promoted or not, whereas the goal of these weekly tests is to check the understanding of the students on the important concepts related to the topics that have been displayed on the portal for the week, the teachers have taught them and the students have made assignments on them.
- Results of weekly tests of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.6 POST-TEST DISCUSSION (PTD)

- Every student has to prepare a special assignment where he/she selects all the questions he/she got wrong. Then he/she makes 3 boxes. In box A he/she writes the questions he/she got wrong in his/her own words, highlighting and underlining the keywords. In box B the student explains why he/she has chosen this answer. In box C the student mentions what he/she has learnt after reading the explanation and how the concept has got clear now.
- The moderator will check, assess and grade PTD
- Next day, the class moderator of the class conducts a class where he/she discusses the mistakes committed and the post-test assignments submitted in detail with the class
- PTD assignments of the whole Professional year MBBS are counted as in Internal Assessment.

12. GRADING POLICY

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	**A+**
75-79	4.0	**A**
70-74	3.7	**A-**
67-69	3.3	**B+**
63-66	3.0	**B**
60-62	2.7	**B-**
56-59	2.3	**C+**
50-55	2.0	**C**
<50 Non gradable	0	**N**

- A student obtaining GPA less than 2.0 (50%) is declared fail or Non gradable

13. ASSESMENT BLUEPRINT

CVS-II MODULE

Assessment is based on Table of Specification (TOS)

	ASSESMENT	TOOLS	MARKS
MODULE EXAM	THEORY	MCQ's	100
		SEQ's	100
	OSPE	OSPE Static	50
		OSPE Interactive	50
		Total	300

14. RECOMMENDED BOOKS

PHARMACOLOGY

- **LIPPINCOTT ILLUSTRATED REVIEWS: PHARMACOLOGY**
  KAREN WHALEN, CARINDA FEILD, RAJAN RADHAKRISHNAN
  7TH EDITION

- **KATZUNG & TREVOR'S PHARMACOLOGY: EXAMINATION & BOARD REVIEW**
  ANTHONY J. TREVOR, BERTRAM G. KATZUNG, MARIEKE KNUIDERING-HALL
  12th EDITION

GENERAL PATHOLOGY

- **ROBBINS & COTRAN PATHOLOGIC BASIS OF DISEASE**
  VINAY KUMAR, ABUL K. ABBAS, JON C. ASTER
  10TH EDITION

- **BRS PATHOLOGY (BOARD REVIEW SERIES)**
  ARTHUR S. SCHNEIDER, PHILIP A. SZANTO
  5THTH EDITION

MICROBIOLOGY

- **REVIEW OF MEDICAL MICROBIOLOGY & IMMUNOLOGY**
  WARREN E. LEVINSON
  14th EDITION

PARASITOLOGY

- **PARASITOLOGY: PROTOZOOLOGY AND HELMINTHOLOGY**
  K.D. CHATTERJEE
  13th EDITION

FORENSIC MEDICINE AND TOXICOLOGY

- **PRINCIPLES AND PRACTICE OF FORENSIC MEDICINE**
  NASEEB AWAN
  2ND EDITION

- **PARIKH'S TEXTBOOK OF MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY**
  PARIKH, C.K
  6TH EDITION

- **SIMPSON'S FORENSIC MEDICINE**
  KNIGHT B
  11TH EDITION

- **TAYLOR'S PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE**
  TAYLOR
  VOLUME 1

COMMUNITY MEDCINE

- **PARK'S TEXTBOOK OF PREVENTIVE AND SOCIAL MEDICINE**
  K. PARK
  26TH EDITION

- **TEXT BOOK OF COMMUNITY MEDICINE & PUBLIC HEALTH**
  ILYAS SHAH ANSARI
  8TH EDITION

IBN-E-SINA UNIVERSITY MIRPURKHAS
FACULTY OF BASIC MEDICAL SCIENCES

Course Feedback Form

Course Title: _____

Semester/Module_____ Dates:_____

Please fill the short questionnaire to make the course better.

Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained.

THE DESIGN OF THE MODLUE

A. Were objectives of the course clear to you? Y ☐ N ☐

B. The course contents met with your expectations
l. Strongly disagree 5. Strongly agree ☐

C. The lecture sequence was well-planned
l. Strongly disagree 5. Strongly agree ☐

D. The contents were illustrated with
l. Too few examples 5. Adequate examples ☐

E. The level of the course was
l. Too low 5. Too high ☐

F. The course contents compared with your expectations
l. Too theoretical 5. Too empirical ☐

G. The course exposed you to new knowledge and practices
l. Strongly disagree 5. Strongly agree ☐

H. Will you recommend this course to your colleagues?
l. Not at all 5. Very strongly ☐

THE CONDUCT OF THE MODLUE

A. The lectures were clear and easy to understand
l. Strongly disagree 5. Strongly agree ☐

B. The teaching aids were effectively used
l. Strongly disagree 5. Strongly agree ☐

C. The course material handed out was adequate
l. Strongly disagree 5. Strongly agree ☐

D. The instructors encouraged interaction and were helpful
l. Strongly disagree 5. Strongly agree ☐

E. Were objectives of the course realized? Yes ☐ No ☐

F. Please give overall rating of the course

90% - l00%	( )	60% - 70%	( )
80% - 90%	( )	50% - 60%	( )
70% - 80%	( )	below 50%	( )

Please comment on the strengths of the course and the way it was conducted.

Please comment on the weaknesses of the course and the way it was conducted.

Please give suggestions for the improvement of the course.

Optional – Your name and contact address:

Thank you!!

IBN-E-SINA UNIVERSITY MIRPURKHAS

STUDENT'S STUDY GUIDE
GIT AND LIVER-II MODULE
THIRD PROFESSIONAL MBBS



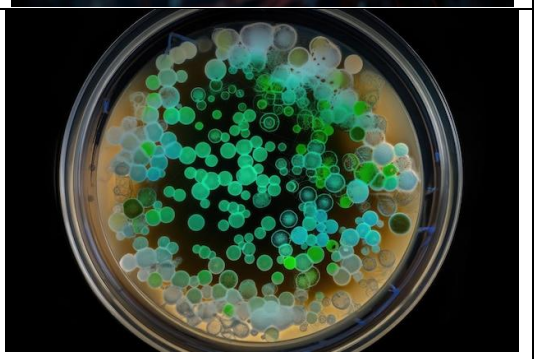




TABLE OF CONTENTS

1. DISCLAIMER

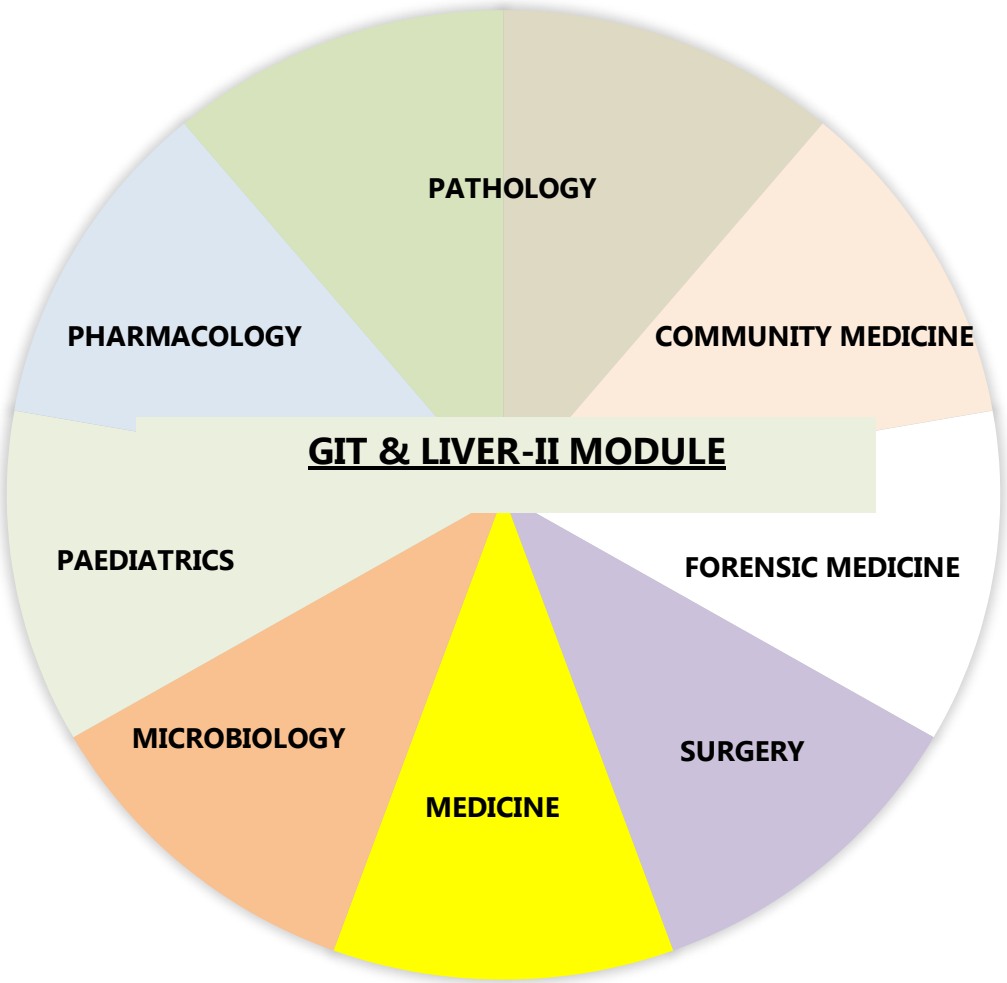
- Developing a study guide is a dynamic process and undergoes iteration according to the needs and priorities.
- This study guide is subjected to the change and modification over the whole academic year.
- However, students are advised to use it as a guide for respective modules.
- The time tables are for guiding purpose. It is to advise that final timetables are always displayed over the notice boards of each lecture hall.
- Students are encouraged to provide feedback via coordinator

2. CURRICULUM FRAMEWORK

An educational strategy known as integrated curriculum places a strong emphasis on interdisciplinary learning, in which students gain knowledge by integrating it from several topic areas. By integrating many subjects and disciplines into a cohesive curriculum, this method seeks to give students a more relevant and interesting learning experience. Integrated curriculum means that subjects are presented as a meaningful whole for better understanding of basic sciences in relation to clinical experience and application.

Integrated curriculum comprises of system-based modules such as CVS-II, Endocrine-II, Git and Liver-II, Hematology and oncology-II, Infectious Disease and Respiratory-II modules which link basic science knowledge to clinical problems.

INTEGRATING DISCIPLINES OF GIT & LIVER-II MODULE



3. MODULE OVERVIEW

GIT AND LIVER-II MODULE DETAILS

Course	MBBS
Year	Third professional
Duration	8 weeks
Learning Outcomes	The competent Medical Practitioner
Competencies covered	To develop medical professionals who are well - versed, adept, and have the right mindset.
Module Assessment	End module formative assessment
Teaching Methods	Interactive Lectures, Demonstrations, Case Based Learning, Practical Lab, Small Group Discussions, Self-Study Sessions, E-Learning, Clinical rotations
Assessment Methods	MCQs, SEQs, OSPE, VIVA

GIT AND LIVER-II MODULE COMMITTEE

Sr. No	Names	Department	Designation
MODULE COORDINATOR			
1.	Dr. Bhawani Shankar	Pathology	Associate Professor
2.	Abid Laghari	Pharmacology	Lecturer
COMMITTEE MEMBERS			
1.	Prof: Dr. Syed Razi Muhammad	Surgery	Chancellor ISU
2.	Prof: Dr. Shams Ul Arfeen Khan	Biochemistry	Vice Chancellor ISU
3.	Prof: Dr. Aijaz Ahmed Memon	Surgery	Pro Vice Chancellor ISU

4. WHAT IS STUDY GUIDE

It is an aid to Inform students how student learning program of the module has been organized, tohelp students organize and manage their studies throughout the module and guide students on assessment methods, rules and regulations.

The study guide:

— Communicates information on organization and management of the module.

— This will help the student to contact the right person in case of any difficulty.

— Defines the objectives which are expected to be achieved at the end of the module.

— Identifies the learning strategies such as lectures, small group teachings.

Module objectives.

— Provides a list of learning resources such as books, computer-assisted learning programs, weblinks, and journals, for students to consult in order to maximize their learning.

— Highlights information on the contribution of continuous on the student's overall performance.

— Includes information on the assessment methods that will be held to determine every student's performance.

Achievement of objectives.

- Focuses on information pertaining to examination policy, rules and regulations.

5. LEARNING METHODOLOGIES

The following teaching/learning methods are used to promote better understanding

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
- Clinical Rotations
- Skills session
- Practicals
- Self-Directed Study

- **INTERACTIVE LECTURES:**

  Large group discussions are not the same as traditional lecture formats. When a teacher or instructor uses images, radiographs, patient interaction recordings, etc. to discuss a topic or typical clinical scenario, the lecture becomes interactive. When they are given tiny activities to do that allow them to apply the knowledge they have learned throughout the session and are asked questions, students actively participate in the learning process.

- **SMALL GROUP DISCUSSIONS (SGDS):**

  With the use of SGD, students can take an active role in their education, clarify ideas, develop psychomotor skills, and develop a positive attitude. Discussion themes, patient interviews, and clinical cases are used to design sessions in an organized manner. Pupils are inspired to express their ideas, apply the fundamental knowledge they have learned from lectures and independent study, and are encouraged to share their notions. In small groups, role play is a useful technique for acquainting pupils with real-world scenarios. Probing questions, rephrasing, and summarizing are used by the teacher to assist make the concepts obvious.

- **CASE-BASED LEARNING (CBL):**

  Learning is centered around a sequence of questions based on a clinical scenario in this small group discussion format. Students create new information by discussing and responding to the questions using pertinent prior knowledge from the clinical and fundamental health sciences modules. The relevant department will give the CBL.

- **CLINICAL EXPERIENCES:**

  Students examine patients in hospital wards, clinics, and outreach facilities in small groups, noting their signs and symptoms. This aids students in connecting their understanding of the module's basic and clinical sciences and getting ready for future practice.

- **CLINICAL ROTATIONS:**

  Students cycle through a variety of wards in small groups, including those in family medicine clinics, outreach centers, pediatrics, surgery, obstetrics and gynecology, ENT, and community medicine. In both inpatient and outpatient settings, students watch patients, get medical histories, and carry out clinical examinations under supervision. They also have the chance to watch medical professionals function as a team. Students can link their basic medical and clinical skills to a variety of clinical domains through these rotations.

- **SKILL SESSIONS:**

  Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

- **PRACTICALS:**

  Basic science practical related to pharmacology, microbiology, forensic medicine, and community medicine have been schedule for student learning.

- **SELF STUDY:**

  Self-directed learning is a process in which students take charge, either on their own or with assistance from others. Students chart their learning objectives and determine their areas of need for learning. They select and employ their own learning methodologies, and they independently assess the learning objectives.

6. INTRODUCTION

Greetings from the Liver and GIT module. This fascinating session will act as a foundation and is crucial to your future practice as physicians. This module includes a number of interactive tasks that are meant to make your learning engaging and fruitful.

The topics covered in this module include malignancies of the stomach, diarrheal disorders, malabsorption syndromes, inflammatory bowel diseases, benign and malignant lesions of the small and large intestine, non-neoplastic and tumors of the esophagus, inflammation and peptic ulcer, and diseases of the salivary gland.

Liver pathologies include jaundice and cholestasis, cholangiopathies and autoimmune liver diseases, metabolic liver diseases-1, drug and toxin-induced liver injury and fatty liver disease, liver cirrhosis, liver tumors, inflammatory illnesses, and gallbladder tumors. Understanding the pathology of the GIT and liver will be made easier by the fact that all of these illnesses are highly prevalent in clinical settings.

In order to assist students in developing their clinical approach to comprehend and solve the clinical problem by connecting their foundational knowledge of anatomy, physiology, biochemistry, and pathology with findings of a clinical case, real-life scenarios have been added to the module and will be discussed in small groups.

6.1 RATIONALE

Diseases of the GIT are common all over our country. It is essential to make early diagnosis and treat the disease in order to reduce morbidity and mortality. This module provides an integrative understanding and detailed and clinically relevant information of pathology related to the digestive and biliary system.

6.2 IBN E SINA UNIVERSITY (ISU) VISION:

To become a world-leading organization in rural health and social care research, training, recruitment and best evidence-based practice.

6.3 IBN E SINA UNIVERSITY (ISU) MISSION:

Our Mission is to inspire hope, and contribute to health and well-being by providing the best care to every patient through integrated clinical practice, education and research. To provide a focal point for the development and collation of high-quality research pertinent to rural health and wellbeing. To improve the training, recruitment and retention of a professional workforce within rural communities. To be recognized as an exemplar in rural health and wellbeing on the international stage. To establish a network of individuals and groups that support research, innovation and development in rural health and social care.

7. LEARNING OBJECTIVES

7.1 Knowledge / Cognitive Domain

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

1. Explain the etiology and clinical manifestations of common gastrointestinal diseases.
2. Assess patients with children and adult nutritional problems.
3. Examine the gastrointestinal system physically.
4. Take a history and create a suitable investigative strategy to arrive at a differential diagnosis.
5. For a diagnosis, evaluate the results of the investigations, exams, and history.
6. Apply the fundamentals of managing gastrointestinal and nutritional diseases.
7. Talk to the patients about prognosis and preventive measures.
8. Comprehend the public health importance of Nutrition.
9. Understand the nutritional requirement for different ages and gender.
10. Identify the factors for micro and macronutrient deficiencies in Pakistan.
11. Identify the risk factors of Malnutrition in children < 5 and over 5 years of age
12. Classify the types of malnutrition among children under and over 5 years.

7.2 Skills / Psychomotor Domain:

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

1. Demonstrate the ability to perform the disease specific relevant examination
2. Respond to common medical emergencies
3. Master the skill of first aid
4. Perform BLS
5. Apply the best evidenced practices for local health problems

7.3 Attitude / Affective Domain:

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

1. Respect oneself and one's peers, both when providing and receiving comments.
2. To show patients compassion and understanding.
3. Develop your ability to communicate while keeping a sense of duty to your patients.
4. Showcase appropriate laboratory procedures.
5. Relate to patient and careers vulnerability
6. Demonstrate ethical self-management
7. Counsel and educate patients and their families to empower them to participate in their care and enable shared decision-making.
8. Display compassion with patient and colleagues
9. Demonstrate in clinical care an understanding of the impact of psychological, social, and economic factors on human health and disease

7.4 Outcomes of Git and Liver-II Module

1. Knowledgeable
2. Skillful
3. Community Heath Promoter
4. Problem-solver
5. Professional
6. Researcher
7. Leader and Role Model

8. THEMES FOR GIT AND LIVER-II MODULE

SNO	Themes	Duration
1	Diseases of oral cavity and esophagus	1 week
2	Diseases of stomach	1 week
3	Diarrheal diseases and malabsorption syndromes	1 week
4	Intestinal disorders	1 week
5	Jaundice & cholestasis	1 week
6	Metabolic & drug/toxin related liver diseases	1 week
7	Cirrhosis	1 week
8	Tumors of liver and gall bladder	1 week

9. SPECIFIC LEARNING OBJECTIVES THEME WISE

THEME 1: DISEASES OF ORAL CAVITY AND ESOPHAGUS

S#	Topics	Learning Objectives	Teaching Strategies	Assessments
		PATHOLOGY		
01	**GIT-II-PATHO-1** Ulcer/ inflammatory lesion and cancer of oral cavity	Define leukoplakia and erythroplakia. Describe ulcer of oral cavity and define dental caries, fungal infection and inflammatory condition of oral cavity. Name the malignant tumors of oral mucosa and describe their etiopathology, morphology and clinical features.	Demonstration	BCQ SAQs OSPE
02	**GIT-II-PATHO-2** Disease of salivary gland inflammation and tumor	Mention cause of sialadenitis, clinical features and morphology. Name benign and malignant tumorsof salivary gland. Describe etiopathology, morphology and clinical features.	Demonstration	BCQ SAQs OSPE
03	**GIT-II-PATHO-3** Motor disorders. Esophageal varices, inflammatory condition and gastroesophageal reflux	Define achalasia, mention its causesand morphology. Describe causes of haematemesis. Describe pathogenesis, clinical features of GERD Mention causes of dysphagia.	Demonstration	BCQ SAQs OSPE
04	**GIT-II-PATHO-4** Tumors of esophagus	Name benign and malignant tumorsof esophagus. Describe etiopathology, clinical features and morphology of carcinoma esophagus.	Interactive Lecture	BCQ SAQs OSPE
05	**GIT-II-PATHO-1[P]**	Gross and microscopic features of oral cavity carcinoma, salivary gland tumor and carcinoma esophagus.	Practical	BCQ SAQs OSPE
		PHARMACOLOGY		
06	**GIT-II-PHARMA-1** Drugs used for dyspepsia (Antacids and prokinetic drugs)	Discuss the Drugs used for dyspepsia (Antacids and prokinetic drugs)	Interactive Lecture	BCQ SAQs OSPE

MEDICINE				
07	**GIT-II-MED-1** Gastroesophageal reflux, esophagitis, Barrett's esophagus and hiatal hernia	Describe Gastroesophageal reflux, esophagitis, Barrett's esophagus and hiatal hernia	Interactive Lecture	BCQ SAQs OSPE
SURGERY				
08	**GIT-II-SURG-1** Surgical causes, presentation and management of hematemesis, dysphagia and carcinoma esophagus	Describe Surgical causes, presentation and management of hematemesis, dysphagia and carcinoma esophagus	Interactive Lecture	BCQ SAQs OSPE

THEME 2: DISEASES OF STOMACH

S#	Topics	Learning Objectives	Teaching Strategies	Assessments
		PATHOLOGY		
09	**GIT-II-PATHO-5** Gastritis and peptic ulcer disease	Mention causes, pathogenesis of gastritis (Acute and chronic) Describe causes, etiopathology, complication and morphology ofpeptic ulcer disease. Mention role of H. Pylori in peptic ulcer disease, describe various methods of diagnosis of H. Pylori infection.	Demonstration	BCQ SAQs OSPE
10	**GIT-II-PATHO-6** Tumor of stomach	Name benign and malignant tumors of stomach, describe etiopathology, clinical features and morphology of carcinoma stomach.	Interactive Lecture	BCQ SAQs OSPE
11	**GIT-II-PATHO-2[P]**	Gross and microscopic features of peptic ulcer and carcinoma stomach	Practical	BCQ SAQs
		PHARMACOLOGY		
12	**GIT-II-PHARMA-2** Drugs used for Acid peptic disorders including H. Pylori infection proton pump inhibitors	Discuss Drugs used for Acid peptic disorders including H. Pylori infection proton pump inhibitors	Interactive Lecture	BCQ SAQs OSPE
13	**GIT-II-PHARMA-P1** Peptic ulcer Disease	Construct prescription for Helicobacter associated peptic ulcer disease (Triple therapy & Quadruple therapy)	Practical	OSPE
		MEDICINE		
14	**GIT-II-MED-2** Diagnosis and management of gastritis/Acid peptic disease and endoscopic management of bleeding peptic ulcer	Diagnosis and management of gastritis/Acid peptic disease and endoscopic management of bleeding peptic ulcer	Interactive Lecture	BCQ SAQs OSPE

SURGERY				
15	**<u>GIT-II-SURG-2</u>** Surgical management in Acid peptic disease and carcinoma of stomach.	Surgical management in Acid peptic disease and carcinoma of stomach.	Interactive Lecture	BCQ SAQs OSPE

THEME 3: DIARRHEAL DISEASES AND MALABSORPTION SYNDROMES

S#	Topics	Learning Objectives	Teaching Strategies	Assessments
		PATHOLOGY		
16	**GIT-II-MICRO-1** Enterocolitis & causes of diarrhea and dysentery (Gram Negative curved rods (campylobacter, H. pylori & Vibrio)	Name various cases of enterocolitis. Mention various causes of diarrhea anddysentery Enlist the virulence factors. Describe the clinical features, pathogenesis & laboratory diagnosis (Microbiology).	Interactive Lecture	BCQ SAQs OSPE
17	**GIT-II-PATHO-7** Ischemic colitis, Haemorrhoids Malabsorption syndrome (Coeliac disease)	Describe clinical features. etiopathogenesis and morphology. Define malabsorption and name variouscauses. Describe clinical features, etiopathology morphology and diagnosis of coelic disease.	Interactive Lecture	BCQ SAQs OSPE
18	**GIT-II- MICRO-2** Entamoeba histolytica & Giardia lamblia	Describe the clinical features , pathogenesis & laboratory diagnosis	Interactive Lecture	BCQ SAQs OSPE
19	**GIT-II- MICRO-3** Cestodes (Tape worms)	Classify the medically important cestodes. Describe the important properties , clinical findings and laboratory diagnosis.	Interactive Lecture	BCQ SAQs OSPE
20	**GIT-II- MICRO-4** Intestinal Nematodes	Classify medically important nematodes Describe the important properties , clinical findings and laboratory diagnosis.	Interactive Lecture	BCQ SAQs OSPE
21	**GIT-II-PATHO-08** Inflammatory bowel diseases	Name inflammatory bowel disease. Describe etiopathology, clinical featuresand morphological features of Crohn's disease and ulcerative colitis.	Interactive Lecture	BCQ SAQs OSPE
22	**GIT-II-PATHO-3[P]**	Describe/ Enlist the various microbial agents causing diarrhea and dysentery and mention their lab diagnosis.	Practical	BCQ SAQs OSPE
		PHARMACOLOGY		
23	**GIT-II-PHARMA-3** Emetics and Antiemetic's	Discuss drugs used as Emetics and Antiemetic's	Interactive Lecture	BCQ SAQs

24	**GIT-II-PHARMA-P2** Anti-emetics	Construct prescriptions for motion sickness, morning sickness, post-operative patient and cancer chemotherapy induced vomiting	Practicle	BCQ OSPE
		MEDICINE		
25	**GIT-II-MED-3** Causes and clinical presentation and management of malabsorption syndrome / Coeliac disease. Irritable bowel syndrome.	Describe in detail the causes and clinical presentation and management of malabsorption syndrome / Coeliac disease. Discuss Irritable bowel syndrome.	Interactive Lecture	BCQ SAQs OSPE
		SURGERY		
26	**GIT-II-SURG-3** Clinical presentation and surgical management of inflammatory bowel disease.	Describe the clinical presentation and surgical management of inflammatory bowel disease.	Interactive Lecture	BCQ SAQs OSPE
		PEDIATRICS		
27	**GIT-II-PAEDS-1** Causes and clinical presentation and management of acute diarrhea.	Discuss the causes and clinical presentation and management of acute diarrhea.	Interactive	BCQ SAQs OSPE

THEME 4: INTESTINAL DISORDERS

S#	Topics	Learning Objectives	Teaching Strategies	Assessments
		PATHOLOGY		
28	**GIT-II-PATHO-09** Intestinal obstruction	Mention various causes of intestinal obstruction Define volvulus, intussusception, hernias and adhesions. Discuss etiopathogenesis, clinical features and morphology of Hirschsprung disease.	Interactive Lecture	BCQ SAQs OSPE
29	**GIT-II-PATHO-10** Inflammatory condition of abdomen	Define acute appendicitis. Describe causes, clinical features and morphology of acute appendicitis. Mention clinical features and morphology of Meckel's diverticulitis. Define diverticulosis, describe etiopathology and morphology.	Demonstration	BCQ SAQs OSPE
30	**GIT-II-PATHO-11** Benign tumors of small intestine and large intestine	Name benign polypoidal lesion of intestine. Describe etiopathology, clinical features and morphology of benign polyp. Define familial adenomatous polyposis syndrome. Describe etiopathology and morphology ofFAP syndrome.	Interactive Lecture	BCQ SAQs OSPE
31	**GIT-II-PATHO-12** Malignant tumors of small intestine and large intestine	Name malignant tumor of large intestine. Describe etiopathology, clinical features and morphological features.	Interactive Lecture	BCQ SAQs OSPE
32	**GIT-II-PATHO-4[P]** Benign and malignant tumors of intestine.	Describe gross and microscopic features of benign and malignant tumors of intestine.	Practical	BCQ SAQs OSPE

PHARMACOLOGY				
33	**GIT-II-PHARMA-4** Drugs used in constipation. Management of diarrhea and inflammatory bowel syndrome.	Discuss the drugs used in constipation. Describe briefly Management of diarrhea and inflammatory bowel syndrome.	Interactive Lecture	BCQ SAQs OSPE
34	**GIT-II-PHARMA-P3** Amoebic Dysentery	Construct a prescription for a patient suffering from amoebic dysentery	Practicle	BCQ OSPE
35	**GIT-II-PHARMA-P4** Enteric Fever	Construct a prescription for a patient suffering from Enteric Fever Construct a prescription for a patient suffering from Ascariasis	Practicle	BCQ OSPE
SURGERY				
36	**GIT-II-SURG-4** Causes and management of intestinal obstruction.	Discuss the causes and management of intestinal obstruction.	Interactive Lecture	BCQ SAQs OSPE

THEME 5: JAUNDICE & CHOLESTASIS

S#	Topics	Learning Objectives	Teaching Strategies	Assessments
		PATHOLOGY		
37	**GIT-II-PATHO-13** Jaundice and cholestasis	Bile Formation and Secretion Pathophysiology of Hyperbilirubinemia Explain etiology & clinical diagnosis of Pre-Hepatic Jaundice Hepatic Jaundice Post-Hepatic Jaundice Hereditary Hyperbilirubinemia Gilbert's syndrome Crigler–Najjar syndrome type I & II Dubin-Johnson syndrome (DJS) Rotors syndrome (DJS)	Demonstration	BCQ SAQs OSPE
38	**GIT-II-PATHO-14** Infectious disorder	Pathophysiology of viral hepatitisA, B, C, D & E Virus	Interactive Lecture	BCQ SAQs OSPE
39	**GIT-II- MICRO-5** Hepatitis Virus	Describe the mode of transmission, Clinical features and serology of viral hepatitis (microbiology)	Interactive Lecture	BCQ SAQs OSPE
40	**GIT-II-PATHO-15** Autoimmune liver diseases & Cholangiopathies	Explain etiology, pathogenesis & clinical features & Diagnostic criteria of Type I Autoimmune liver diseasesType II Autoimmune liver diseases Primary Biliary Cholangitis (PBC) Primary Sclerosing Cholangitis (PSC)	Interactive Lecture	BCQ SAQs OSPE

THEME 6: METABOLIC & DRUG/TOXIN RELATED LIVER DISEASES

S#	Topics	Learning Objectives	Teaching Strategies	Assessments
		PATHOLOGY		
41	**GIT-II-PATHO-16** Metabolic Liver Diseases	Explain etiology, pathogenesis & clinicalfeatures &Diagnostic criteria of -Hemochromatosis -Wilson Disease -α1-Antitrypsin Deficiency	Interactive Lecture	BCQ SAQs OSPE
42	**GIT-II-PATHO-17** Drug- and Toxin-Induced Liver Injury & Fatty Liver Disease	Explain etiology, pathogenesis & clinicalfeatures &Diagnostic criteria of -Alcoholic Liver Disease -Nonalcoholic Fatty liver	Interactive Lecture	BCQ SAQs OSPE
43	**GIT-II-RADIO-1** Radiation Dose	Describe briefly regarding the typical effective doses from diagnostic medical exposure.	Interactive Lecture	BCQ OSPE

THEME 7: CIRRHOSIS

S#	Topics	Learning Objectives	Teaching Strategies	Assessments
		PATHOLOGY		
43	**GIT-II-PATHO-18** Cirrhosis of liver	Etiology, Pathogenesis Symptoms and Complications	Interactive Lecture	BCQ SAQs OSPE
44	**GIT-II-PATHO-5[P]** Cirrhosis of liver	Describe gross and microscopic features	Practical	
		PHARMACOLOGY		
45	**GIT-II-PHARMA-5** Drugs used in Hepatitis	Discuss the drugs used in Hepatitis	Interactive Lecture	BCQ SAQs
		MEDICINE		
46	**GIT-II-MED-4** Clinical presentation and outline management of Hepatitis B&C	Describe the clinical presentation and outline management of Hepatitis B&C	Interactive Lecture	BCQ SAQs OSPE
47	**GIT-II-MED-5** Management of acute hepatitis and fulminant hepatic failure	Discuss in detail the management of acute hepatitis and fulminant hepatic failure	Interactive Lecture	BCQ SAQs OSPE
		SURGERY		
48	**GIT-II-SURG-5** Clinical presentation and indication of surgery in liver cirrhosis.	Discuss briefly the clinical presentation and indication of surgery in liver cirrhosis.	Interactive Lecture	BCQ SAQs OSPE

THEME 8: TUMORS OF LIVER AND GALL BLADDER

S#	Topics	Learning Objectives	Teaching Strategies	Assessments
		PATHOLOGY		
49	**GIT-II-PATHO-19** Tumors of liver	Etiology, pathogenesis, gross & histologic Features Focal Nodular Hyperplasia Cavernous Hemangioma Hepatocellular Adenoma Hepatoblastoma Hepatocellular Carcinoma Malignant Biliary Tumors	Demonstration	BCQ SAQs OSPE
50	**GIT-II-PATHO-20** Diseases & Tumors of gall bladder	Congenital Anomalies Etiology, pathogenesis, gross & histologic Features of Cholelithiasis (Gall stones) Acute & Chronic Cholecystitis Gall bladder Carcinoma	Interactive Lecture	BCQ SAQs OSPE
51	**GIT-II-PATHO-6[P]** Ca liver and Gall Bladder	Gross and microscopic feature of hepatocellular carcinoma and carcinoma gall bladder	Practical	BCQ SAQs OSPE
		MEDICINE		
52	**GIT-II-MED-6** Cirrhosis, partial hypertension, variceal bleeding, medical and endoscopic management.	Briefly describe the Cirrhosis, partial hypertension, variceal bleeding, their medical and endoscopic management.	Interactive Lecture	BCQ SAQs OSPE
53	**GIT-II-MED-7** Ascites, Hepatic encephalopathy and hepato renal syndrome	Discuss the clinical features of Ascites, Hepatic encephalopathy and hepato renal syndrome	Interactive Lecture	BCQ SAQs OSPE
		SURGERY		
54	**GIT-II-SURG-6** Clinical presentation and management of cholelithiasis	Describe the clinical presentation and management of cholelithiasis	Interactive Lecture	BCQ SAQs

SUBJECT: COMMUNITY MEDICINE – NUTRITION

S. No	Learning Objectives	Topic	Teaching Strategy	Assessment
01	Define balanced diet Understand the importance of a balanced dietExplain the food pyramid Describe the different focus groups in a balanced diet Enumerate the routine dietary requirementsand nutritional values at different age groups. Describe the routine dietary needs of pregnantand lactating mothers. Define the nutritional status, growth and development. Describe the purpose of nutritional assessment. Understand and discriminate between internal and external methods of nutritional assessment in children and adults. Enumerate different nutritional indices in adults	**GIT-II-COM MED-1** Balanced Diet and Nutritional status assessment	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02	Describe micro and macro-nutrient components. Comprehend the importance of micro andmacro nutrient components. Enumerate the different factors of micro and macronutrient deficiencies. Describe the burden of micro and macronutrient deficiency in Pakistan. Describe the malnutrition Classify the types of malnutrition among children under and over 5 years. Discriminate between the risk factors responsible for malnutrition among children under and over 5 years of age. Discuss the epidemiology of Malnutrition in Pakistan. Discriminate between Kwashiorkor and Marasmus Discuss the strategies for controlling malnutrition in Pakistan	**GIT-II-COM MED-2** Micro and macro nutritional Deficiencies and Malnutrition in under and over five years' age children	Interactive Lecture	

03	Define food preservation, fortification and adulteration. Describe the public health importance of food preservation and fortification. Discriminate between food adulteration and fortification. Define food poisoning Describe what causes food poisoningExplain the effects of food poisoning	**GIT-II-COM MED-3** Food preservation, fortification and adulteration/ Food Poisoning	Interactive Lecture	

SUBJECT: FORENSIC MEDICINE

S. NO	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
01	Define death Explain Scientific concepts regarding death Describe Medico-legal aspect of brain death, Howard's criteria of death Explain Medico-legal aspects of sudden & unexpected deaths Discuss Cause, manner, mode and mechanism of death	**THEME: THANATOLOGY** **GIT -II-FOR MED-1** Death (Intro) Cause, Manner, Mode & Mechanism of Death	Interactive Lecture	BCQ's, SAQ's OSPE, VIVA
02	Describe Immediate signs of death with special stress on Somatic or clinical death Define Suspended animation Explain Changes in the eye Discuss Early changes after death such as Algor Mortis (Cooling of the body) Discuss Early changes after death such asLiver Mortis. Discuss Early changes after death such as Rigor Mortis	**GIT -II-FOR MED-2** Immediate & Early Signs of Death	Interactive Lecture	
03	Describe Physio-chemical changes in various body tissues and organs under various environmental conditions, such as changes in muscular system after death Describe Changes in the blood Describe Changes in the CSF Describe Changes in the Vitreous humor Describe Changes in the Bone marrow	**GIT -II-FOR MED-3** Physio-Chemical Changes of Death and Death Changesin Blood, CSF, Vitreous Humour & Bone Marrow	Interactive Lecture	
04	Describe Late signs of death i.e., Putrefaction, mechanism, changes, gasesof decomposition Explain Adipocere formation Explain Mummification	**GIT -II-FOR MED-4** Late & very late Sign of Death	Interactive Lecture	

05	Discuss Forensic entomology Define Maceration Discuss Process in formation of maceration Microscopic changes occurred in maceration Differentiate b/w putrefaction, maceration, mummification and adipocere formation	**GIT -II-FOR MED-5** Forensic Entomologyand Maceration	Interactive Lecture	
06	Define Sexual offences Classify sexual offences	**THEME: FORENSIC SEXOLOGY** **GIT -II-FOR MED-6** Sexual Offences (Intro)	Interactive Lecture	
07	Define Legal definition of Rape Describe Procedure of examination of avictim of rape and Collection of specimens during examination Describe Examination of accused person Define Rape in children Discuss Complications following rape with special stress of post-traumatic stress disorder Discuss Problems in medico legal examination of victim of rape in present scenario Define Incest and its legal aspects	**GIT -II-FOR MED-7** Natural Sexual Offences and Legal Aspects	Interactive Lecture	
08	Define Legal definition of sodomy and its types Describe Examination of a victim of Sodomy Describe Examination of a habitual passive agent (Catamite) and habitual active agent (Sodomite) Describe Collection of samples from passive and active agent Define Bestiality with examination Define Tribadism or female homosexuality and its legal aspects Define Buccal coitus Describe common sexual perversions and legal aspects	**GIT -II-FOR MED-8** Unnatural Sexual Offences and Legal Aspects	Interactive Lecture	

09	Define Sexual perversions Classify Sexual perversions Discuss Sexual perversions	**GIT -II-FOR MED-9** Sexual Perversions	Interactive Lecture
10	Define Virginity, Pregnancy, Delivery, Impotence, Sterility, Artificial insemination abortion	**THEME: FORENSIC OBGYN GIT -II-FOR MED-10** Introduction of Forensic OBGYN	Interactive Lecture
11	Describe Virginity and its medico legal perspectives Describe Signs of virginity on medico legal examination Differentiate between true and false virginon examination Describe Defloration along with causes of rupture of hymen and age of a torn hymen	**GIT -II-FOR MED-11** Virginity	Interactive Lecture
12	Describe Pregnancy and its legal aspects Describe Calculation of EDD (Expected date of delivery Describe Signs of pregnancy (presumptive, probable and definite signs) Describe Diagnosis of pregnancy in medico legal cases Describe Motives of feigned pregnancy Discuss Abnormal forms of pregnancy and Legitimacy- Legitimate child as per law	**GIT -II-FOR MED-12** Pregnancy	Interactive Lecture
13	Describe Delivery and its medico legal aspects Describe Signs of recent delivery in living Describe Signs of recent delivery in dead Describe Signs of remote delivery in living Describe Signs of remote delivery in dead Describe Medico legal aspects of delivery	**GIT -II-FOR MED-13** Delivery	Interactive Lecture

14	Define Impotence, Sterility and Artificial insemination Describe Consummation of marriage, causes of nullity of marriage and divorce from legal aspects Describe Impotency and Sterility with legal dictums Describe Causes of impotency and sterility Discuss Examination of a case of impotency and how to give opinion in such a case Artificial Insemination, its types, procedure, precautions in selecting a donor and legal implications, Surrogate birth	**GIT -II-FOR MED-14** Impotence	Interactive Lecture	
15	Define Abortion, types of abortion & its Medico legal aspects Discuss Grounds for abortion with special emphasis on pregnancy after rape Define Criminal abortion and its types according to Pakistan Penal Code Describe Unskilled, Semi-skilled and Skilled methods of criminal abortion Complications of Criminal abortion Describe Causes of death in criminal abortion and autopsy finding	**GIT -II-FOR MED-15** Abortion	Interactive Lecture	
16	Define Properties, Pharmacological Action, Absorption, Distribution and Elimination of Barbiturates. Explain Classification, Features of Acute & Chronic Toxicity & the Methods used for the Detection, Management & Postmortem changes in a Victim of Barbiturate Toxicity. Discuss Fatal & Lethal Doses, Medico-legal Aspects of Barbiturates.	Barbiturate Poisoning	**Special Toxicology**	
17	Define narcotics. Discuss pathophysiology, signs & symptoms, diagnosis and treatment. Discuss medico legal importance	Narcotics Drug		

18	Define drug, drug dependence & drug addiction. Enlist addictive drugs. Define drug abuse, habituation, hypnotics, & narcotics. Discuss different terminologies i.e. physical & psychological dependence, psychotropic drugs, sedative, stimulants and tolerance.	Dependence & Drug Addiction	**Demonstration/ Tutorial Classes**	OSPE, VIVA
19	Define hallucinogens. Classify types of hallucinogens. Discuss source, sign & symptoms, fataldose, fatal period and treatment. Discuss postmortem appearance and medico legal importance.	Hallucinogens		
20	Introduction, different types, treatment , Postmortem appearance ,medico legal importance	Amphetamine Poisoning		
21	Define herbicides Discuss toxicity, sign & symptoms, fatal dose, fatal period and treatment. Discuss medico legal importance	Herbicide		
22	Define Properties, Common sources, common features for absorption, Clinical Features & Occupations at risk, Discuss Methods for the detection, Risks in pregnancy & Management, Postmortem changes & Medico-legal aspects of Carbon Monoxide Poisoning. Discuss How Does Carbon Monoxide Poisoning Works & Its elimination & WhyCarbon Monoxide is considered as a Chemical Asphyxiant.	Carbon monoxide		
23	Define fuel poisoning, Signs & Symptoms, fatal dose and fatal period Discuss poisoning management options Discuss postmortem appearance and medico legal importance	Fuel poisoning (kerosene and petrol)		

9.1 TAGGED SUBJECTS

Topic	Contents	Learning Objectives	Teaching Method	Module	Hours	Assessment
PROFESSIONALISM AND BEHAVIORAL SCIENCES						
Dynamics of professionalism	Trust definition, its attributes, and components, and its' application	Dynamics of trust in health professional-patient relationship	Lecture / Group Discussion	Git and Liver	2	MCQ
Professional identity formation	Types, multiple identities	Students' roles in terms of professional identity	Group Discussion	Git and Liver	2	MCQ
Attributes of Professionalism	Principles of trust in daily work activities	Adheres to principles of trust in day-to-day professional interactions	Group Discussion	Git and Liver	2	MCQ
Dealing with patient	Patient reception, and respect	Receive patients with respect	Group Discussion	Git and Liver	1	MCQ
Communicating with administration	Communicating with administration	Share with administration on matters one feels sensitive about	Hospital teaching	Git and Liver	3	MCQ
Dealing with patients	Answering to patient queries	Answering questions and giving explanations and/or instructions	Role play, Group Discussion	Git and Liver	1	MCQ

Motivation	Motivation. Team working	Explain motivational skills for team members for clinical tasks	Small group discussion	Git and Liver	2	MCQ
RESEARCH						
Purpose and process of health research	Background, concepts, uses. Definition of medical research Need of medical research Broad overview of the different types of research (qualitative, quantitative ,mixed methods and the common research methods/design used in each	Define and categorize types of health research Explain the purpose of health research	Lecture	Git and Liver	2	MCQ
Referencing	Bibliography Intacts (secondary citation Mandeley / Zotero	Differentiate between references, citation & bibliography List different styles of referencing Select appropriate referencing style for research project.	Lecture Self-directed learning	Git and Liver	1	MCQ

	Explore and Practice free reference software Zotero for referencing (open access)	Apply referencing software to word document	Lecture Small group Discussion	Git and Liver	2	Assignment

9.2 CLINICAL SCIENCES SUBJECTS

GIT AND LIVER – II MODULE				
S. No	**Clinical Sciences Subjects**	**Learning Objectives**	**Hours**	**Learning Strategy**
1.	**ANAESTHESIA** Pharmacology of IV Anesthetic Agents	Classify drugs used in Anesthesia Describe their mechanism of action Describe their hemodynamic effect Explain doses of common IV anesthetic agents	1 1 1 1	Lecture Lecture Lecture Lecture
2.	**CRITICAL CARE** Toxicology	Acetaminophen Poisoining Organophosphate Poisoning	1 1	Lecture Lecture
3.	**ORTHOPAEDICS & TRAUMA**	Hand Surgery Arthroscopy Total joint replacement Spine Surgery	1 1 1 1	Lecture Lecture Lecture Lecture
4.	**FAMILY MEDICINE** Common GI Problems	Constipation Diarrhea Dyspepsia IBS and IBD Acute GI presentations	1 1 1 1 1	Lecture Lecture Lecture Lecture Lecture

9.3 CLINICAL ROTATION SCHEDULE

Duration	9 weeks	11 weeks	8 weeks	8 weeks
Disciplines	Medicine	Surgery	Gynae/Obs	Paeds
Total hours*	117	143	104	104

* 2.6 Clinical rotation hours per day

The above mentioned clinical rotation schedule is to be followed by every student throughout the year. Groups of students are decided by the Hospital Administration.

10. TEACHING HOURS ALLOCATION

S. No	Subject	Hours	Practical Hours
1	Pathology	32	12
2	Pharmacology	5	8
3	Forensic medicine	22	14
4	Community medicine	3	-
5	Medicine	7	-
6	Microbiology	5	-
7	Paediatrics	1	-
8	Surgery	6	-
9	CBL (Pathology)*	16	-
10	CBL (Pharmacology)*	8	-
11	Radiology	1	-
12	Anesthesia	4	-
13	Critical Care	2	-
14	Orthopaedics & Trauma	4	-
15	Family Medicine	5	-
	Total hours	**121**	**34**

*Minimum 2 hours are allotted for each CBL session per Module

S. No	Tagged Subject	Teaching Hours
1	Professionalism and behavioral sciences	13
2	Research	5
	Total hours	**18**

11. EXAMINATION AND METHODS OF ASSESSMENT

11.1 EXAMINATION RULES AND REGULATIONS

- Student must report to examination hall/venue, in time for smooth conduction of the exams.
- No student will be allowed to enter the examination hall after 10 minutes of scheduled examination time.
- No students will be allowed to sit in exam without College ID Card, and Lab Coat
- Students must sit according to their roll numbers mentioned on the seats.
- Student must bring their own stationary items (Pen, Pencil, Eraser, and Sharpener) – Sharing is prohibited
- Any disturbance or Indiscipline in the exam hall/venue is not acceptable.
- Students must not possess any written material or communicate with their fellow students
- Cell phones are strictly not allowed in examination hall. If any student is found with cell phone in any mode (silent, switched off or on) he/she will be **not be allowed to continue their exam.**
- **No student is allowed to leave the examination hall before half the time is over, paper is handed over to the examiner and properly marking the attendance.**

11.2 ASSESSMENT

11.2.1 Internal: Total 10% (20 marks)

- Students will be assessed comprehensively through multiple methods to determine achievement of module objectives through two methods: Module examination and Graded assessment by Individual department
    - **Module Examination**: It will be scheduled on completion of each module. The method of examination comprises theory exam (which includes SEQs and MCQs) and OSPE / OSCE exam (which includes static and interactive stations).
    - **Graded Assessment by individual department**: It includes weekly MCQs tests on Survive online LMS program, viva, practical, weekly theme based assignments, post-test discussion sessions, peer assessments, presentations, small group activities such as CBL, ward activities, examinations and log books, all of which have specific marks allocation.
- Marks of both modular examination and graded assessment will constitute 10% weightage.
- 10% marks of internal evaluation will be added to the ISU annual professional exam.
- The marks distribution is based on Formative Assessment done individually by all the concerned departments. It may include:

- NOTE: **at least 75% attendance is mandatory** to appear in the annual university examination.
- Exam branch is responsible to maintain the attendance record for Main Campus in coordination with all the concerned departments.

11.2.2 University Annual Exam: Total 90%

- Annual Exam has 90% marks in total
- It includes theory and OSPE / OSCE.
- Each written paper consists of 100 MCQs and 10 SEQs and internal assessment marks will be added tothe final marks.

11.3 METHODS OF ASSESSMENT

11.3.1 Multiple Choice Questions

- Single best type MCQs having five options with one correct answer and four distractors are part of assessment.
- Total 100 MCQs are included which are formulated through the table of specification from learning objectives of Module interactive lectures.
- Time duration for MCQs will be 1 and half hour.
- MCQs are used to assess objectives covered in each module.
- Students after reading the statement / scenarios select one appropriate response from the given options.
- Correct answer carries one mark, and incorrect will be marked zero. Rule of negative marking is not applicable.
- Students attempt the MCQs exam on Computer screen on Moodle / LMS program in IT Lab.

11.3.2 Short Essay Questions (SEQs):

- Short-answer questions are structured way of asking open-ended questions that require students to create their answers based on their knowledge.
- Commonly used in examinations to assess the depth of knowledge and understanding.
- Includes 10 questions each carrying 10 marks.
- Time Duration for Essay type paper is 2 hours.
- Questions are selected from the specific learning objectives of the specific ongoing module.

11.3.3 OSPE / OSCE

- Each student will be assessed on the same content and have same time to complete the task.
- Time allocated for each station is five minutes as per Examination rules of Ibn e Sina University, Mirpurkhas

- All students are rotated through the same stations.
- OSPE / OSCE Comprises of 15 - 20 stations.
- Each station may assess a variety of diagrammatic identifications and clinical tasks. These tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are Interactive, observed, unobserved (static) and rest stations.
  - Interactive Stations:
    - In this station, examiner ask questions related to the task within the allocated time.
  - Observed Stations:
    - In observed stations, internal or external examiner don't interact with candidate and just observe the performance of the skills or procedures.
  - Unobserved (static) Stations:
    - It will be static stations in which there may be models, specimens, multiple identification points, X-ray, Labs reports, flowcharts, pictures, or clinical scenarios (to assess cognitive domain) with related questions for students will be used to answer on the provided answer copy.
  - Rest station
    - It is a station where there is no task given and in this time student can organize his/her thoughts

11.3.4 ASSIGNMENTS

- An online assignment on the Ibn-e-Sina University moodle uploaded according to the topic of the week.
- All assignments should be checked by the teacher who has taken the lecture on the topic during the same week.
- The assignment should cover enough material to include the requirement of the curriculum and syllabus, so the student should be able to answer the annual examination questions by revising these notes (assignments) only.
- The assignments are checked and graded also with comment to guide, motivate and encourage the students to work whole heartedly. Frequent guidance and motivation will go a long way in improving the students' performance.
- Assignments of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.5 WEEKLY TESTS

- The weekly tests are conducted for all classes. The tests are conducted online and are on topics displayed on the portal (Moodle). It consists of 35 MCQs. 5 MCQs will be from the previous weeks (slightly altered to change the answer or the right option). Everyone taking lectures, submit two MCQs to the Chairperson of the department who will check and pass them to the class moderator. MCQs can also be sent directly to the class moderator, who submits the MCQs to IT department for final placement on the moodle.

- The MCQs are not merely simple recall, but test higher level of cognition. As far as possible, they test an important concept related to one of the topics of the week.
- It is different from the summative assessment (Annual or Semester Examinations) in that the goal of summative assessment is to evaluate student's learning at the end of an instructional unit by comparing it against some standard or benchmark, to decide if the student can be promoted or not, whereas the goal of these weekly tests is to check the understanding of the students on the important concepts related to the topics that have been displayed on the portal for the week, the teachers have taught them and the students have made assignments on them.
- Results of weekly tests of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.6 POST-TEST DISCUSSION (PTD)

- Every student has to prepare a special assignment where he/she selects all the questions he/she got wrong. Then he/she makes 3 boxes. In box A he/she writes the questions he/she got wrong in his/her own words, highlighting and underlining the keywords. In box B the student explains why he/she has chosen this answer. In box C the student mentions what he/she has learnt after reading the explanation and how the concept has got clear now.
- The moderator will check, assess and grade PTD
- Next day, the class moderator of the class conducts a class where he/she discusses the mistakes committed and the post-test assignments submitted in detail with the class
- PTD assignments of the whole Professional year MBBS are counted as in Internal Assessment.

12. GRADING POLICY

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	**A+**
75-79	4.0	**A**
70-74	3.7	**A-**
67-69	3.3	**B+**
63-66	3.0	**B**
60-62	2.7	**B-**
56-59	2.3	**C+**
50-55	2.0	**C**
<50 Non gradable	0	**N**

- A student obtaining GPA less than 2.0 (50%) is declared fail or Non gradable

13. ASSESMENT BLUEPRINT

GIT AND LIVER-II MODULE

Assessment is based on Table of Specification (TOS)

	ASSESMENT	TOOLS	MARKS
MODULE EXAM	THEORY	MCQ's	100
		SEQ's	100
	OSPE	OSPE Static	50
		OSPE Interactive	50
		Total	300

14. RECOMMENDED BOOKS

PHARMACOLOGY

- **LIPPINCOTT ILLUSTRATED REVIEWS: PHARMACOLOGY**
  KAREN WHALEN, CARINDA FEILD, RAJAN RADHAKRISHNAN
  7TH EDITION

- **KATZUNG & TREVOR'S PHARMACOLOGY: EXAMINATION & BOARD REVIEW**
  ANTHONY J. TREVOR, BERTRAM G. KATZUNG, MARIEKE KNUIDERING-HALL
  12th EDITION

GENERAL PATHOLOGY

- **ROBBINS & COTRAN PATHOLOGIC BASIS OF DISEASE**
  VINAY KUMAR, ABUL K. ABBAS, JON C. ASTER
  10TH EDITION

- **BRS PATHOLOGY (BOARD REVIEW SERIES)**
  ARTHUR S. SCHNEIDER, PHILIP A. SZANTO
  5THTH EDITION

MICROBIOLOGY

- **REVIEW OF MEDICAL MICROBIOLOGY & IMMUNOLOGY**
  WARREN E. LEVINSON
  14th EDITION

PARASITOLOGY

- **PARASITOLOGY: PROTOZOOLOGY AND HELMINTHOLOGY**
  K.D. CHATTERJEE
  13th EDITION

FORENSIC MEDICINE AND TOXICOLOGY

- **PRINCIPLES AND PRACTICE OF FORENSIC MEDICINE**
  NASEEB AWAN
  2ND EDITION

- **PARIKH'S TEXTBOOK OF MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY**
  PARIKH, C.K
  6TH EDITION

- **SIMPSON'S FORENSIC MEDICINE**
  KNIGHT B
  11TH EDITION

- **TAYLOR'S PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE**
  TAYLOR
  VOLUME 1

COMMUNITY MEDCINE

- **PARK'S TEXTBOOK OF PREVENTIVE AND SOCIAL MEDICINE**
  K. PARK
  26TH EDITION

- **TEXT BOOK OF COMMUNITY MEDICINE & PUBLIC HEALTH**
  ILYAS SHAH ANSARI
  8TH EDITION

IBN-E-SINA UNIVERSITY MIRPURKHAS
FACULTY OF BASIC MEDICAL SCIENCES

Course Feedback Form

Course Title: _____

Semester/Module_____ Dates:_____

Please fill the short questionnaire to make the course better.

Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained.

THE DESIGN OF THE MODLUE

A. Were objectives of the course clear to you? Y ☐ N ☐

B. The course contents met with your expectations
l. Strongly disagree 5. Strongly agree ☐

C. The lecture sequence was well-planned
l. Strongly disagree 5. Strongly agree ☐

D. The contents were illustrated with
l. Too few examples 5. Adequate examples ☐

E. The level of the course was
l. Too low 5. Too high ☐

F. The course contents compared with your expectations
l. Too theoretical 5. Too empirical ☐

G. The course exposed you to new knowledge and practices
l. Strongly disagree 5. Strongly agree ☐

H. Will you recommend this course to your colleagues?
l. Not at all 5. Very strongly ☐

THE CONDUCT OF THE MODLUE

A. The lectures were clear and easy to understand
l. Strongly disagree 5. Strongly agree ☐

B. The teaching aids were effectively used
l. Strongly disagree 5. Strongly agree ☐

C. The course material handed out was adequate
l. Strongly disagree 5. Strongly agree ☐

D. The instructors encouraged interaction and were helpful
l. Strongly disagree 5. Strongly agree ☐

E. Were objectives of the course realized? Yes ☐ No ☐

F. Please give overall rating of the course

90% - l00%	( )	60% - 70%	( )
80% - 90%	( )	50% - 60%	( )
70% - 80%	( )	below 50%	( )

Please comment on the strengths of the course and the way it was conducted.

Please comment on the weaknesses of the course and the way it was conducted.

Please give suggestions for the improvement of the course.

Optional – Your name and contact address:

Thank you!!

IBN-E-SINA UNIVERSITY MIRPURKHAS

STUDENT'S STUDY GUIDE
ENDOCRINOLOGY-II MODULE
THIRD PROFESSIONAL MBBS



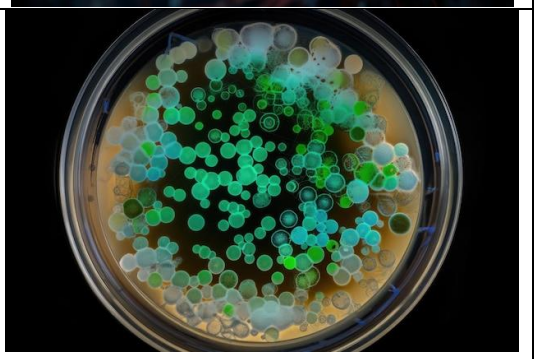




TABLE OF CONTENTS

1. DISCLAIMER

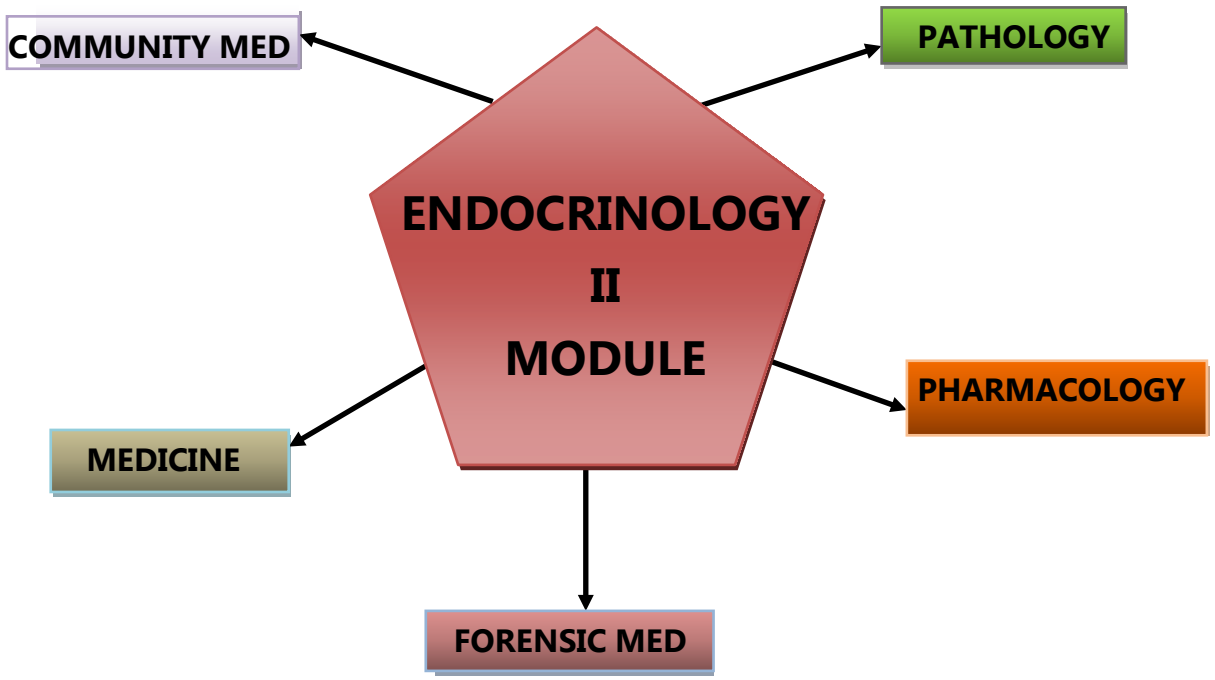
- Developing a study guide is a dynamic process and undergoes iteration according to the needs and priorities.
- This study guide is subjected to the change and modification over the whole academic year.
- However, students are advised to use it as a guide for respective modules.
- The time tables are for guiding purpose. It is to advise that final timetables are always displayed over the notice boards of each lecture hall.
- Students are encouraged to provide feedback via coordinator

2. CURRICULUM FRAMEWORK

An educational strategy known as integrated curriculum places a strong emphasis on interdisciplinary learning, in which students gain knowledge by integrating it from several topic areas. By integrating many subjects and disciplines into a cohesive curriculum, this method seeks to give students a more relevant and interesting learning experience. Integrated curriculum means that subjects are presented as a meaningful whole for better understanding of basic sciences in relation to clinical experience and application.

Integrated curriculum comprises of system-based modules such as CVS-II, Endocrine-II, Git and Liver-II, Hematology and oncology-II, Infectious Disease and Respiratory-II modules which link basic science knowledge to clinical problems.

INTEGRATING DISCIPLINES OF ENDOCRINOLOGY-II MODULE



3. MODULE OVERVIEW

ENDOCRINOLOGY-II MODULE DETAILS

Course	MBBS
Year	Third professional
Duration	4 weeks
Learning Outcomes	The competent Medical Practitioner
Competencies covered	To develop medical professionals who are well - versed, adept, and have the right mindset.
Module Assessment	End module formative assessment
Teaching Methods	Interactive Lectures, Demonstrations, Case Based Learning, Practical Lab, Small Group Discussions, Self-Study Sessions, E-Learning, Clinical rotations
Assessment Methods	MCQs, SEQs, OSPE, VIVA

ENDOCRINOLOGY-II MODULE COMMITTEE

Sr. No	Names	Department	Designation
MODULE COORDINATOR			
1.	Dr. Bhawani Shankar	Pathology	Associate Professor
2.	Abid Laghari	Pharmacology	Lecturer
COMMITTEE MEMBERS			
1.	Prof: Dr. Syed Razi Muhammad	Surgery	Chancellor ISU
2.	Prof: Dr. Shams Ul Arfeen Khan	Biochemistry	Vice Chancellor ISU
3.	Prof: Dr. Aijaz Ahmed Memon	Surgery	Pro Vice Chancellor ISU

4. WHAT IS STUDY GUIDE

It is an aid to Inform students how student learning program of the module has been organized, tohelp students organize and manage their studies throughout the module and guide students on assessment methods, rules and regulations.

The study guide:

— Communicates information on organization and management of the module.

— This will help the student to contact the right person in case of any difficulty.

— Defines the objectives which are expected to be achieved at the end of the module.

— Identifies the learning strategies such as lectures, small group teachings.

Module objectives.

— Provides a list of learning resources such as books, computer-assisted learning programs, weblinks, and journals, for students to consult in order to maximize their learning.

— Highlights information on the contribution of continuous on the student's overall performance.

— Includes information on the assessment methods that will be held to determine every student's performance.

Achievement of objectives.

- Focuses on information pertaining to examination policy, rules and regulations.

5. LEARNING METHODOLOGIES

The following teaching/learning methods are used to promote better understanding

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
- Clinical Rotations
- Skills session
- Practicals
- Self-Directed Study

- **INTERACTIVE LECTURES:**

  Large group discussions are not the same as traditional lecture formats. When a teacher or instructor uses images, radiographs, patient interaction recordings, etc. to discuss a topic or typical clinical scenario, the lecture becomes interactive. When they are given tiny activities to do that allow them to apply the knowledge they have learned throughout the session and are asked questions, students actively participate in the learning process.

- **SMALL GROUP DISCUSSIONS (SGDS):**

  With the use of SGD, students can take an active role in their education, clarify ideas, develop psychomotor skills, and develop a positive attitude. Discussion themes, patient interviews, and clinical cases are used to design sessions in an organized manner. Pupils are inspired to express their ideas, apply the fundamental knowledge they have learned from lectures and independent study, and are encouraged to share their notions. In small groups, role play is a useful technique for acquainting pupils with real-world scenarios. Probing questions, rephrasing, and summarizing are used by the teacher to assist make the concepts obvious.

- **CASE-BASED LEARNING (CBL):**

  Learning is centered around a sequence of questions based on a clinical scenario in this small group discussion format. Students create new information by discussing and responding to the questions using pertinent prior knowledge from the clinical and fundamental health sciences modules. The relevant department will give the CBL.

- **CLINICAL EXPERIENCES:**

  Students examine patients in hospital wards, clinics, and outreach facilities in small groups, noting their signs and symptoms. This aids students in connecting their understanding of the module's basic and clinical sciences and getting ready for future practice.

- **CLINICAL ROTATIONS:**

  Students cycle through a variety of wards in small groups, including those in family medicine clinics, outreach centers, pediatrics, surgery, obstetrics and gynecology, ENT, and community medicine. In both inpatient and outpatient settings, students watch patients, get medical histories, and carry out clinical examinations under supervision. They also have the chance to watch medical professionals function as a team. Students can link their basic medical and clinical skills to a variety of clinical domains through these rotations.

- **SKILL SESSIONS:**

  Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

- **PRACTICALS:**

  Basic science practical related to pharmacology, microbiology, forensic medicine, and community medicine have been schedule for student learning.

- **SELF STUDY:**

  Self-directed learning is a process in which students take charge, either on their own or with assistance from others. Students chart their learning objectives and determine their areas of need for learning. They select and employ their own learning methodologies, and they independently assess the learning objectives.

6. INTRODUCTION

The endocrine system regulates and integrates cellular activity throughout the body by preserving homeostasis and controlling cellular and organ function throughout life. Maintaining a steady internal environment, or homeostasis, is essential for proper cellular activity. In addition to the hormonal changes linked to diseases of the reproductive organs, common endocrinological disorders such as diabetes mellitus, thyrotoxicosis, hypothyroidism, Cushing syndrome, and pituitary disorders must be addressed for comprehensive care. These illnesses are frequently seen in the practice of medicine. This module builds a strong clinical foundation by integrating the fundamental knowledge from the first spiral.

6.1 RATIONALE

Endocrine illnesses, such as diabetes mellitus and diseases connected to the thyroid, are widespread throughout Pakistan. This module offers the foundation for third-year MBBS students to learn not only the knowledge application to understand the pathology but also the ability to connect anomalies with available treatments in the second curriculum spiral. Comprehensive care of common endocrine disorders such as Cushing syndrome, hypothyroidism, diabetes mellitus, thyrotoxicosis, and pituitary abnormalities requires an understanding of these conditions. These illnesses are frequently seen in the practice of medicine. This module builds a strong clinical foundation by thoroughly understanding the pharmacotherapy, integrating the fundamental knowledge from the first spiral.

6.2 IBN E SINA UNIVERSITY (ISU) VISION:

To become a world-leading organization in rural health and social care research, training, recruitment and best evidence-based practice.

6.3 IBN E SINA UNIVERSITY (ISU) MISSION:

Our Mission is to inspire hope, and contribute to health and well-being by providing the best care to every patient through integrated clinical practice, education and research. To provide a focal point for the development and collation of high-quality research pertinent to rural health and wellbeing. To improve the training, recruitment and retention of a professional workforce within rural communities. To be recognized as an exemplar in rural health and wellbeing on the international stage. To establish a network of individuals and groups that support research, innovation and development in rural health and social care.

7. LEARNING OBJECTIVES

7.1 Knowledge / Cognitive Domain

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

1. Explain the clinical applications of growth hormone and the side effects of adrenocorticotropic (ACTH) hormones.
2. Describe the thyroxine's therapeutic benefits in treating hypothyroidism.
3. Describe the anti-thyroid drug's mode of action, benefits, and side effects.
4. Describe how iodine can be used to treat and prevent thyroid problems.
5. Sort diabetes mellitus according to the WHO classification system.
6. Explain the causes, symptoms, pathological alterations, consequences, and ways to prevent diabetes mellitus.
7. Explain the pharmacokinetics, mechanism of action, and side effects of oral hypoglycemic medications and insulin.
8. To outline and go over the function of hormone receptors in the action of hormones, including their kind, location, and signaling pathways.
9. To identify the pathophysiological causes and effects of particular endocrine illnesses by using endocrinological concepts.
10. Talk about the causes and effects of iodine deficiency as well as the key components of Pakistan's iodine control program.
11. Describe Pakistan's diabetes mellitus epidemiology from a global viewpoint.
12. Explain the various approaches to diabetes mellitus prevention and management.

7.2 Skills / Psychomotor Domain:

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

1. To understand the importance of Health Education and its role in prevention of diseases and promotion of Health of the communities
2. To equip with various skills of Communication and modes/methods of transferring health related knowledge to others, which will lead to positive behavior change.
3. Demonstrate the ability to perform the disease specific relevant examination
4. Respond to common medical emergencies
5. Master the skill of first aid
6. Perform BLS
7. Apply the best evidenced practices for local health problems

7.3 Attitude / Affective Domain:

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

1. Respect oneself and one's peers, both when providing and receiving comments.
2. To show patients compassion and understanding.
3. Develop your ability to communicate while keeping a sense of duty to your patients.
4. Showcase appropriate laboratory procedures.
5. Relate to patient and careers vulnerability
6. Demonstrate ethical self-management
7. Counsel and educate patients and their families to empower them to participate in their care and enable shared decision-making.
8. Display compassion with patient and colleagues
9. Demonstrate in clinical care an understanding of the impact of psychological, social, and economic factors on human health and disease

7.4 Outcomes of Endocrinology-II Module

1. Knowledgeable
2. Skillful
3. Community Heath Promoter
4. Problem-solver
5. Professional
6. Researcher
7. Leader and Role Model

8. THEMES FOR ENDOCRINOLOGY-II MODULE

SNO	Themes	Duration
1	**Non-neoplastic & neoplastic diseases of Pituitary Gland**	1 week
2	**Non-neoplastic & neoplastic diseases of Thyroid & Parathyroid**	1 week
3	**Non-neoplastic & neoplastic diseases of Pancreas**	1 week
4	**Non-neoplastic & neoplastic diseases of Adrenal Gland**	1 week
5	**Multiple Endocrine Neoplasia Syndromes**	1 week

9. SPECIFIC LEARNING OBJECTIVES

SUBJECT: PHARMACOLOGY

S No	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
1	Discuss the pharmacology of anterior pituitary growth hormone (Somatotropin)	**Endo-II PHA-1** Anterior pituitary hormones	Interactive Lecture	BCQs, SAQs, OSPE,
2	Classify the drugs used in Thyroiddisorders Pharmacological effects of anti-thyroid drugs Discuss the drugs used for hypothyroidism	**Endo- II PHA-2** Introduction to Basicpharmacology of Thyroid drugs	Interactive Lecture	BCQs, SAQs, OSPE, VIVA
3	Drugs used in parathyroid disorders (Tetany)	**Endo- II PHA- 3** Parathyroid agents	Interactive Lecture	BCQs, SAQs,
4	Describe the pharmacology of insulin and benefits of glycemic control in diabetes mellitus type I	**Endo- II PHA-4** Pancreas (Insulin)	Interactive Lecture	BCQs, SAQs, OSPE,
5	Describe the drugs used in type IIdiabetes mellitus.	**Endo- II PHA-5** Non-Insulin antidiabetic agents	Interactive Lecture	BCQs, SAQs, OSPE,
6	Describe the pharmacokinetic pharmacodynamics clinical uses and toxicity of glucocorticoids	**Endo- II PHA-6** Corticosteroids (Glucocorticoids).	Interactive Lecture	BCQs, SAQs, OSPE,
7	Discuss the pharmacology of mineralo corticoids.	**Endo- II PHA-7** Mineralo corticoids	Interactive Lecture	BCQs, SAQs,
8	Discuss the corticosteroid antagonists	**Endo- II PHA-8** Corticosteroid antagonists	Interactive Lecture	BCQs, SAQs, OSPE,
9	Formulate prescription for a patient with Cushing's disease	**Endo- II PHA-P1** Cushing's Disease	Practicle	OSPE
10	Formulate prescription for a patient with Hypothyroidism	**Endo- II PHA-P2** Hypothyroidism	Practicle	OSPE,
11	Formulate prescription for a patient with Tetany	**Endo- II PHA-P3** Tetany	Practicle	OSPE

SUBJECT: PATHOLOGY

S No	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESSMENT
1	Describe clinical manifestations of Anterior Pituitary gland disorders &Syndromes Describe the pathophysiology and Histologic features of - Lactotroph Adenoma - Somatotroph Adenoma - Corticotroph Adenoma - Other Anterior Pituitary Tumors Histologic features of Hypothalamic Suprasellar Tumors	**Endo-II-Path-1** Disorders and neoplasms of Pituitary gland.	Demonstration	BCQ'S SAQ's, OSPE
2	Describe the pathophysiology of -Hyperparathyroidism - Primary Hyperparathyroidism - Secondary Hyperparathyroidism Hypoparathyroidism -Pseudohypoparathyroidism	**Endo II-Path-2** Disorder of Parathyroid gland	Demonstration	BCQ'S, SAQ's, OSPE
3	Histology thyroid hormones T3 andT4 synthesis and functions. Pathophysiology, clinical features and laboratory diagnosis of simpleand multinodular goiter. Toxic multinodular goiter	**EndoII-Path-3** Diseases of Thyroid gland Introduction Simple goiter and Multinodular goiter	Demonstration	BCQ'S SAQ's, OSPE
4	Hyperthyroidism and thyrotoxicosis.Primary and secondary hyperthyroidism. Pathophysiology causes, clinical features and laboratory diagnosis of Graves' disease Thyroid function and its interpretation	**EndoII-Path-4** Hyperthyroidism. Graves' disease Thyroid storm Apathetic hyperthyroidism	Interactive lecture	BCQ'S SAQ's, OSPE
5	Hypothyroidism its causes clinicalfeatures and laboratory diagnosis	**Endo II-Path-5** Hypothyroidism Cretinism Myxedema	Interactive lecture	BCQ'S, SAQ's, OSPE

6	Discuss Clinical and morphologicalfeatures of : - Hashimoto Thyroiditis - Subacute Lymphocytic Thyroiditis - Granulomatous Thyroiditis	**Endo II-Path-6** Inflammatory diseases of Thyroid gland	Interactive lecture	BCQ'S, SAQ's, OSPE
7	Causes, pathogenesis, morphological features and laboratory diagnosis of thyroid adenoma and papillary carcinoma	**Endo II Path-7** Thyroid Neoplasms-I	Interactive lecture	BCQ'S, SAQ's, OSPE
8	Causes, pathogenesis, morphological features and laboratory diagnosis of follicularcarcinoma, medullary carcinoma and anaplastic carcinoma.	**Endo II-Path-8** Thyroid Neoplasms-II	Interactive lecture	BCQ'S, SAQ's, OSPE
9	Glucose homeostasis, metabolic action of insulin and mechanism of insulin release. Classification of diabetes mellitus. Types of incretins.Impaired glucose tolerance test. Laboratory diagnosis of diabetes mellitus	**Endo II-Path-9** Disorder of Endocrine Pancreas DiabetesMellitus-1	Interactive lecture	BCQ'S, SAQ's, OSPE
10	Pathogenesis of type -I and type-IIdiabetes mellitus, clinical presentation and complications ofdiabetes mellitus.	**Endo II-Path-10** Disorder of Endocrine Pancreas Diabetes mellitus-II	Interactive lecture	BCQ'S, SAQ's, OSPE
11	Discuss clinical presentation, pathogenesis and histologicfeatures of Common Pancreatic Endocrine Neoplasms - Hyperinsulinism (Insulinoma) - Zollinger-Ellison Syndrome (Gastrinoma) - Pancreatic carcinoid tumors	**Endo II-Path-11** Pancreatic tumors	Interactive lecture	BCQ'S, SAQ's, OSPE

12	Describe the hyper-secretory & hypo-secretory disorders of adrenalcortex Adrenocortical Hyperfunction -Hypercortisolism (Cushing Syndrome) -Primary Hyperaldosteronism -Adrenogenital Syndromes Adrenocortical Insufficiency -Primary Acute Adrenocortical Insufficiency -Primary Chronic Adrenocortical Insufficiency (Addison Disease) Discuss clinical presentation, pathogenesis and histologicfeatures of Adrenocortical Neoplasms -Adrenocortical adenomas -Pheochromocytoma.	**Endo II-Path-12** Non-neoplastic diseases of adrenal cortex Neoplastic diseases of adrenal cortex & Medulla MEN-I & MEN-II	Demonstrati on	BCQ'S, SAQ's, OSPE
13	Laboratory interpretation of parathyroid gland diseases	**Endo II-Path- P1** Parathyroid gland Lab interpretation	Interactive Practical	BCQ'S, SAQ's, OSPE
14	Thyroid function test and its interpretation according to disease	**Endo II-Path- P2** Thyroid function tests	Interactive Practical	BCQ'S, SAQ's, OSPE
15	Neoplastic lesions of thyroid gland	**Endo II-Path- P3** Benign and malignant tumors of thyroid gland	Interactive Practical	BCQ'S, SAQ's, OSPE
16	Diabetes mellitus its type and laboratory interpretation	**Endo II-Path- P4** Diabetes mellitus Lab interpretation	Interactive Practical	BCQ'S, SAQ's, OSPE

SUBJECT: COMMUNITY MEDICINE

S No	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESSMENT
1	• To understand the Health Education • To discuss the importance ofHealth • To describe the Aims and Objectives of Health Education • To discuss various Principles ofHealth Education • To describe the Stages of Health Education	**Endo-II CM-1** Health Education: Concept, Aims and Objectives, Principles and Stages of Health Education	Interactive Lecture	BCQs, SAQs, OSPE, VIVA
2	• To describe term Communicationand its various Methods • To elaborate the Barriers of Communication and discuss how to overcome it.	**Endo- II CM-2** Communication Methods, Barriers and skills in Health Education		
3	• To know how to organize a Health Education Program • To understand the Terms of IEC,KAP and BCC, through an example • To know the Steps of: Planning, Organizing and Evaluating the health education program	**Endo- II CM- 3** Planning, Organizing and evaluating a Health Education Program		
4	• To define Family • To discuss various types of Families • To discuss the social evils and its consequences on Health	**Endo- II CM-4** Types of Families, Social evils including Juvenile delinquency		

SUBJECT: FORENSIC MEDICINE

Themes	Topic	Learning Objectives	Teaching Strategy	Assessment
Forensic Psychiatry	**Endo II-FM-1** Mental Illness	•Classify common mental illnesses. •Define, classify and describe delusions, hallucinations, illusion, lucid interval, obsessions and schizophrenia with exemplification.	Lecture	SBA, SEQs, OSPE & Viva Voce
	Endo II-FM-2 Insanity	• Define insanity. Differentiate between true insanity from feigned insanity. • Discuss Legal test of insanity i.e., McNaughton's Rule. Motives of feigned insanity.		
	Endo II-FM-3 Mental HealthOrdinance	•Describe the Mental Health ordinance 2001 with special reference to admission, care and discharge of a mentally ill person.		
	Endo II-FM-4 Civil and Criminal responsibilitiesof mentally ill	•Describe Civil and criminal responsibilities of a mentally ill person. •Discuss Testamentary		

		capacity •Discuss McNaghten rules, Durham rule and Currens rule		
Pediatric Forensic	**Endo II-FM-5** Introduction Still born and dead born Signs of establishment of respiration Time of survivalof live born	• Define Infanticide & Feticide		
		• Differentiate Still born baby &Dead born baby • Define Maceration		
		• Describe Signs of live birth • Discuss Precipitate labor/Unconscious delivery		
		• Describe Fetal age estimation		
	Endo II-FM-6 Causes of death Autopsy	• Discuss Criminal causes of death of new born babies i.e., Acts of commission and acts of omission		
		• Describe Autopsy on bodies of new born babies		
	Endo II-FM-7 Battered BabySyndrome	Define Battered Baby Syndrome • Define Shaken Baby Syndrome • Define Battered Baby Syndromeor Caffey's Syndrome • Discuss Etiology of Batteredbaby Syndrome • Discuss Clinical Features of a battered baby		

		• Describe Injuries seen in Shaken Baby Syndrome with mechanism		
	Endo II-FM-8 Sudden Infant death syndrome (SIDS)	• Define COT death (sudden infant death syndrome) • Discuss SIDS and various possibilities of death with postmortem findings and Medico legal importance of SIDS		
Regional Injuries	**Endo II-FM-9** Introduction ofInjuries Injuries of Scalp& Skull	• Describe Head, general consideration and injuries to scalp & Fractures of Skull**.** • Classify injuries of scalp. • Describe Injuries of the scalpincluding forensic aspects of anatomy of the scalp and their medico legal aspects		

		• Classify fractures of the skullincluding forensic aspects of anatomy of skull • Explain Mechanism of production of fractures of the skull and their medico legal significance		
	Endo II-FM-10 Intracranial Hemorrhages & Brain Injuries	• Define Intracranial Hemorrhages • Differentiate types of intracranial hemorrhages alongwith forensic anatomy of blood vessels Commonly involved • Describe Signs and symptomsof different types of intracranial hemorrhages and methods to diagnose them • Explain Medico legal aspects of intracranial hemorrhages	Interactive Lecture	

		• Define Brain Injuries, Spinal Injuries • Classify types of injuries to thebrain and spine. • Discuss Mechanism of brain injuries such as Concussion/Contus ion/ IrritationCoup and contre coup injuries with their mechanism • Define Brain injuries to boxers. • Describe Spinal injuries withspecial emphasis on Railway spine • Explain Medico legal aspects of brain and spinal injuries		
	Endo II-FM-11 Face & Neck Injuries	• Discuss Common Injuries ofFace • Explain medico legal significance to the face.	Interactive Lecture	
		• Discuss Neck including different cervical fractures, whiplash injuries, homicidal and suicidalcutthroat.		

	Endo II-FM-12 Chest & AbdominalInjuries	• Describe chest injuries including traumatic asphyxia, injuries to ribs, lungs, heart with special emphasis on penetrating injuries and Commotion Cordis.	Interactive Lecture	
		• Describe Abdominal injuries with medico legal aspects of rupture of liver, spleen, injuries to abdominal aorta and intestines, • Define Pelvic injuries of medico legal significance		
	Endo II-FM-13 Thermal Injury & Electrocution	•Define electrical burn and itstypes •Enlist the body tissues that are resistant to electrical burn & factors on which injury of electrical burn depends. •Describe the mortality of electrical burn • Define Features of injuries dueto various types of electrical current. Describe Causes of death due to electrocution. • Discuss Lightning injuries and lightning deaths.	Interactive Lecture	

Special Toxicology	Organo phosphorus	•Describe common uses of organophosphorus. •Discuss the signs and symptomsof organophosphorus toxicity & evaluation of a patient with suspected organophosphorus toxicity. •Explain treatment of organophosphorus toxicity & medico legal importance of it.	Practical	SBA, SEQs, OSPE & Viva Voce
	Naphthalene	•Enlist the other names of Naphthalene •Discuss routes of transmissionof Naphthalene in body •Describe the clinical features, investigation, treatment, fatal dose and fatal period of Naphthalene toxicity •Enlist the uses of Naphthalene •Discuss medico legal importance of naphthalene toxicity		

	Veg Poison: Hydrocyanic Acid & Cyanides	•Describe Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to hydrogen cyanide & derivatives		

SUBJECT: MEDICINE

S No	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
1	Describe clinical manifestationsof the anterior & posterior pituitary gland.	**Endo-II MED-1** Hypopituitarism/ Pan hypopituitarism, GHD, Sheehan Syndrome. Diabetes Insipidus	Interactive Lecture	BCQs, SAQs, OSPE, VIVA
2	Describe the clinical features of pituitary tumors + Hypothalamic suprasellar tumors. Clinical features of Hyper function tumors + Mass effects	**Endo- II MED-2** Pituitary tumors + Hypothalamic suprasellar tumors	Interactive Lecture	
3	Describe the clinical features & management of & Hyperparathyroidism	**Endo- II MED-3** Primary+ Secondary+ tertiary. Hyperparathyroidism	Interactive Lecture	
4	Describe the clinical features & management of hypoparathyroidism	**Endo- II MED-4** Primary+ Secondary+ tertiary. Hypoparathyroidism+ Pseudo hypoparathyroidism	Interactive Lecture	BCQs, SAQs, OSPE, VIVA
5	Discuss Clinical features of inflammatory thyroid disorders	**Endo- II MED-5** Thyroiditis. Hypothyroidism (Hashimoto thyroid disease, Myxedema and cretinism)	Interactive Lecture	
6	Discuss Clinical features of inflammatory thyroid disorders	**Endo- II MED-6** Hyperthyroidism (Graves' disease)	Interactive Lecture	
7	Discuss Toxic adenoma. Multinodular Goiter Simple Nontoxic goiter Types of thyroid carcinomas.	**Endo- II MED-7** Goiter + Adenoma + Thyroid Malignancies.	Interactive Lecture	
8	Describe Diabetes (Definition +WHO Classification). Management of diabetes.	**Endo- II MED-8** Diabetes Mellitus-I	Interactive Lecture	

9	Discuss Acute & chronic complications of diabetes.	**Endo- II MED-9** Diabetes Mellitus-II	Interactive Lecture	
10	Describe the clinical manifestations of Hyper functioning of the Adrenal gland. (Cortex)	**Endo- II MED-10** Cushing Syndrome	Interactive Lecture	
11	Describe the clinical manifestations of hypo functioning of the Adrenal gland. (Cortex)	**Endo- II MED-11** Adrenal insufficiencies (Addison disease)	Interactive Lecture	
12	Describe the clinical features of. Corticotrophin adenoma.	**Endo- II MED-12** Corticotrophin adenoma. (Cushing Syndrome of pituitary origin)	Interactive Lecture	
13	Discuss the Clinical manifestation of Adrenal Medullary tumors + paragangliomas	**Endo- II MED-13** Pheochromocytoma + paragangliomas	Interactive Lecture	
14	Discuss the genetic mutation in Endocrinology	**Endo- II MED-14** MEN-I, MEN-II, A&B	Interactive Lecture	

SUBJECT: SURGERY

S No	LEARNING OBJECTIVES	TOPIC	TEACHING STRATEGY	ASSESS MENT
1	Identify the indications for trans sphenoidal Hypophysectomy Describe the technique in regards to trans sphenoidal Hypophysectomy Outline the appropriate evaluation ofthe potential complications of trans sphenoidal Hypophysectomy Review some interprofessional teamstrategies for improving care, coordination and communication toadvance transsphenoidal Hypophysectomy and improve outcomes	**Endo- II Surgery-1** Hypophysectomy .		BCQs, SAQs, OSPE, VIVA
2	Identify the indications of Para thyroidectomy Describe the technique of Para thyroidectomy. Review the clinical significance of Para thyroidectomy. Summarize the potential complicationsof Para thyroidectomy	**Endo- II Surgery-2** Para thyroidectomy.	Interactive Lecture	
3	Identify the indications of adrenalectomy Describe the management of adrenalectomy Outline the complications of adrenalectomy	**Endo- II Surgery-3** Adrenalectomy	Interactive Lecture	

9.1 TAGGED SUBJECTS

Topic	Contents	Learning Objectives	Teaching Method	Module	Hours	Assessment
PROFESSIONALISM AND BEHAVIORAL SCIENCES						
Attributes of professionalism	Empathy levels & its application	Demonstrate empathy in patient- health professional interaction.	Group Discussion	Endocrinology	2	MCQ
Listening skills	Listening skills	Listen to the patient's problems	Group Discussion	Endocrinology	2	MCQ
Communicate as a peer-teacher	Knowing limitations	Recognizing the limits of one's knowledge and skills; and to ensure the accuracy of teaching content delivered to others	Group Discussion,	Endocrinology	2	MCQ
RESEARCH						
Proposal writing	Guidelines and Templates for proposal writing /synopsis writing	Write a proposal for research project using ISU guidelines or any other standard guidelines		Endocrinology	7	Assignment (develop a literature review and synopsis for your topic of interest)

Referencing	Bibliography Intacts (secondary citation Mandeley / Zotero	Differentiate between references, citation & bibliography List different styles of referencing Select appropriate referencing style for research project.	Lecture Self-directed learning	Endocrinology	1	MCQ
	Explore and Practice free reference software Zotero for referencing (open access)	4.5 Apply referencing software to word document	Lecture Small group format	Endocrinology	2	Assignment

9.2 CLINICAL SCIENCES SUBJECTS

ENDOCRINOLOGY – II MODULE				
S. No	**Clinincal Sciences Subjects**	**Learning Objectives**	**Hours**	**Learning Strategy**
	Family Medicine	Thyroid Problems (goiter)	1	Lecture
	Common Complains	Acne	1	Lecture
		Hirsutism	1	Lecture
		Hypoglycemia	1	Lecture
		Hyperglycemia	1	Lecture

9.3 CLINICAL ROTATION SCHEDULE

Duration	9 weeks	11 weeks	8 weeks	8 weeks
Disciplines	Medicine	Surgery	Gynae/Obs	Paeds
Total hours*	117	143	104	104

* 2.6 Clinical rotation hours per day

The above mentioned clinical rotation schedule is to be followed by every student throughout the year. Groups of students are decided by the Hospital Administration.

10. TEACHING HOURS ALLOCATION

S. No	Subject	Hours	Practical Hours
1	Pathology	16	8
2	Pharmacology	08	6
3	Forensic medicine	14	6
4	Community medicine	04	-
5	Medicine	14	-
6	Surgery	03	-
7	CBL (Pathology)*	8	-
8	CBL (Pharmacology)*	8	-
9	Family medicine	5	-
	Total hours	**80**	**20**

*Minimum 2 hours are allotted for each CBL session per Module

S. No	Tagged Subject	Teaching Hours
1	Professionalism and behavioral sciences	6
2	Research	10
	Total hours	**16**

11. EXAMINATION AND METHODS OF ASSESSMENT

11.1 EXAMINATION RULES AND REGULATIONS

- Student must report to examination hall/venue, in time for smooth conduction of the exams.
- No student will be allowed to enter the examination hall after 10 minutes of scheduled examination time.
- No students will be allowed to sit in exam without College ID Card, and Lab Coat
- Students must sit according to their roll numbers mentioned on the seats.
- Student must bring their own stationary items (Pen, Pencil, Eraser, and Sharpener) – Sharing is prohibited
- Any disturbance or Indiscipline in the exam hall/venue is not acceptable.
- Students must not possess any written material or communicate with their fellow students
- Cell phones are strictly not allowed in examination hall. If any student is found with cell phone in any mode (silent, switched off or on) he/she will be **not be allowed to continue their exam.**
- **No student is allowed to leave the examination hall before half the time is over, paper is handed over to the examiner and properly marking the attendance.**

11.2 ASSESSMENT

11.2.1 Internal: Total 10% (20 marks)

- Students will be assessed comprehensively through multiple methods to determine achievement of module objectives through two methods: Module examination and Graded assessment by Individual department
    - **Module Examination**: It will be scheduled on completion of each module. The method of examination comprises theory exam (which includes SEQs and MCQs) and OSPE / OSCE exam (which includes static and interactive stations).
    - **Graded Assessment by individual department**: It includes weekly MCQs tests on Survive online LMS program, viva, practical, weekly theme based assignments, post-test discussion sessions, peer assessments, presentations, small group activities such as CBL, ward activities, examinations and log books, all of which have specific marks allocation.
- Marks of both modular examination and graded assessment will constitute 10% weightage.
- 10% marks of internal evaluation will be added to the ISU annual professional exam.
- The marks distribution is based on Formative Assessment done individually by all the concerned departments. It may include:

- NOTE: **at least 75% attendance is mandatory** to appear in the annual university examination.
- Exam branch is responsible to maintain the attendance record for Main Campus in coordination with all the concerned departments.

11.2.2 University Annual Exam: Total 90%

- Annual Exam has 90% marks in total
- It includes theory and OSPE / OSCE.
- Each written paper consists of 100 MCQs and 10 SEQs and internal assessment marks will be added to the final marks.

11.3 METHODS OF ASSESSMENT

11.3.1 Multiple Choice Questions

- Single best type MCQs having five options with one correct answer and four distractors are part of assessment.
- Total 100 MCQs are included which are formulated through the table of specification from learning objectives of Module interactive lectures.
- Time duration for MCQs will be 1 and half hour.
- MCQs are used to assess objectives covered in each module.
- Students after reading the statement / scenarios select one appropriate response from the given options.
- Correct answer carries one mark, and incorrect will be marked zero. Rule of negative marking is not applicable.
- Students attempt the MCQs exam on Computer screen on Moodle / LMS program in IT Lab.

11.3.2 Short Essay Questions (SEQs):

- Short-answer questions are structured way of asking open-ended questions that require students to create their answers based on their knowledge.
- Commonly used in examinations to assess the depth of knowledge and understanding.
- Includes 10 questions each carrying 10 marks.
- Time Duration for Essay type paper is 2 hours.
- Questions are selected from the specific learning objectives of the specific ongoing module.

11.3.3 OSPE / OSCE

- Each student will be assessed on the same content and have same time to complete the task.
- Time allocated for each station is five minutes as per Examination rules of Ibn e Sina University, Mirpurkhas
- All students are rotated through the same stations.

- OSPE / OSCE Comprises of 15 - 20 stations.
- Each station may assess a variety of diagrammatic identifications and clinical tasks. These tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are Interactive, observed, unobserved (static) and rest stations.
  - Interactive Stations:
    - In this station, examiner ask questions related to the task within the allocated time.
  - Observed Stations:
    - In observed stations, internal or external examiner don't interact with candidate and just observe the performance of the skills or procedures.
  - Unobserved (static) Stations:
    - It will be static stations in which there may be models, specimens, multiple identification points, X-ray, Labs reports, flowcharts, pictures, or clinical scenarios (to assess cognitive domain) with related questions for students will be used to answer on the provided answer copy.
  - Rest station
    - It is a station where there is no task given and in this time student can organize his/her thoughts

11.3.4 ASSIGNMENTS

- An online assignment on the Ibn-e-Sina University moodle uploaded according to the topic of the week.
- All assignments should be checked by the teacher who has taken the lecture on the topic during the same week.
- The assignment should cover enough material to include the requirement of the curriculum and syllabus, so the student should be able to answer the annual examination questions by revising these notes (assignments) only.
- The assignments are checked and graded also with comment to guide, motivate and encourage the students to work whole heartedly. Frequent guidance and motivation will go a long way in improving the students' performance.
- Assignments of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.5 WEEKLY TESTS

- The weekly tests are conducted for all classes. The tests are conducted online and are on topics displayed on the portal (Moodle). It consists of 35 MCQs. 5 MCQs will be from the previous weeks (slightly altered to change the answer or the right option). Everyone taking lectures, submit two MCQs to the Chairperson of the department who will check and pass them to the class moderator. MCQs can also be sent directly to the class moderator, who submits the MCQs to IT department for final placement on the moodle.

- The MCQs are not merely simple recall, but test higher level of cognition. As far as possible, they test an important concept related to one of the topics of the week.

- It is different from the summative assessment (Annual or Semester Examinations) in that the goal of summative assessment is to evaluate student's learning at the end of an instructional unit by comparing it against some standard or benchmark, to decide if the student can be promoted or not, whereas the goal of these weekly tests is to check the understanding of the students on the important concepts related to the topics that have been displayed on the portal for the week, the teachers have taught them and the students have made assignments on them.
- Results of weekly tests of the whole Professional year MBBS are counted as in Internal Assessment.

11.3.6 POST-TEST DISCUSSION (PTD)

- Every student has to prepare a special assignment where he/she selects all the questions he/she got wrong. Then he/she makes 3 boxes. In box A he/she writes the questions he/she got wrong in his/her own words, highlighting and underlining the keywords. In box B the student explains why he/she has chosen this answer. In box C the student mentions what he/she has learnt after reading the explanation and how the concept has got clear now.
- The moderator will check, assess and grade PTD
- Next day, the class moderator of the class conducts a class where he/she discusses the mistakes committed and the post-test assignments submitted in detail with the class
- PTD assignments of the whole Professional year MBBS are counted as in Internal Assessment.

12. GRADING POLICY

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	**A+**
75-79	4.0	**A**
70-74	3.7	**A-**
67-69	3.3	**B+**
63-66	3.0	**B**
60-62	2.7	**B-**
56-59	2.3	**C+**
50-55	2.0	**C**
<50 Non gradable	0	**N**

- A student obtaining GPA less than 2.0 (50%) is declared fail or Non gradable

13. ASSESMENT BLUEPRINT

ENDOCRINOLOGY-II MODULE

Assessment is based on Table of Specification (TOS)

	ASSESMENT	TOOLS	MARKS
MODULE EXAM	THEORY	MCQ's	100
		SEQ's	100
	OSPE	OSPE Static	50
		OSPE Interactive	50
		Total	300

14. RECOMMENDED BOOKS

PHARMACOLOGY

- **LIPPINCOTT ILLUSTRATED REVIEWS: PHARMACOLOGY**
  KAREN WHALEN, CARINDA FEILD, RAJAN RADHAKRISHNAN
  7TH EDITION

- **KATZUNG & TREVOR'S PHARMACOLOGY: EXAMINATION & BOARD REVIEW**
  ANTHONY J. TREVOR, BERTRAM G. KATZUNG, MARIEKE KNUIDERING-HALL
  12th EDITION

GENERAL PATHOLOGY

- **ROBBINS & COTRAN PATHOLOGIC BASIS OF DISEASE**
  VINAY KUMAR, ABUL K. ABBAS, JON C. ASTER
  10TH EDITION

- **BRS PATHOLOGY (BOARD REVIEW SERIES)**
  ARTHUR S. SCHNEIDER, PHILIP A. SZANTO
  5THTH EDITION

MICROBIOLOGY

- **REVIEW OF MEDICAL MICROBIOLOGY & IMMUNOLOGY**
  WARREN E. LEVINSON
  14th EDITION

PARASITOLOGY

- **PARASITOLOGY: PROTOZOOLOGY AND HELMINTHOLOGY**
  K.D. CHATTERJEE
  13th EDITION

FORENSIC MEDICINE AND TOXICOLOGY

- **PRINCIPLES AND PRACTICE OF FORENSIC MEDICINE**
  NASEEB AWAN
  2ND EDITION

- **PARIKH'S TEXTBOOK OF MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY**
  PARIKH, C.K
  6TH EDITION

- **SIMPSON'S FORENSIC MEDICINE**
  KNIGHT B
  11TH EDITION

- **TAYLOR'S PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE**
  TAYLOR
  VOLUME 1

COMMUNITY MEDCINE

- **PARK'S TEXTBOOK OF PREVENTIVE AND SOCIAL MEDICINE**
  K. PARK
  26TH EDITION

- **TEXT BOOK OF COMMUNITY MEDICINE & PUBLIC HEALTH**
  ILYAS SHAH ANSARI
  8TH EDITION

IBN-E-SINA UNIVERSITY MIRPURKHAS
FACULTY OF BASIC MEDICAL SCIENCES

Course Feedback Form

Course Title: _____

Semester/Module_____ Dates:_____

Please fill the short questionnaire to make the course better.

Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained.

THE DESIGN OF THE MODLUE

A. Were objectives of the course clear to you? Y ☐ N ☐

B. The course contents met with your expectations
l. Strongly disagree 5. Strongly agree ☐

C. The lecture sequence was well-planned
l. Strongly disagree 5. Strongly agree ☐

D. The contents were illustrated with
l. Too few examples 5. Adequate examples ☐

E. The level of the course was
l. Too low 5. Too high ☐

F. The course contents compared with your expectations
l. Too theoretical 5. Too empirical ☐

G. The course exposed you to new knowledge and practices
l. Strongly disagree 5. Strongly agree ☐

H. Will you recommend this course to your colleagues?
l. Not at all 5. Very strongly ☐

THE CONDUCT OF THE MODLUE

A. The lectures were clear and easy to understand
l. Strongly disagree 5. Strongly agree ☐

B. The teaching aids were effectively used
l. Strongly disagree 5. Strongly agree ☐

C. The course material handed out was adequate
l. Strongly disagree 5. Strongly agree ☐

D. The instructors encouraged interaction and were helpful
l. Strongly disagree 5. Strongly agree ☐

E. Were objectives of the course realized? Yes ☐ No ☐

F. Please give overall rating of the course

90% - l00%	( )	60% - 70%	( )
80% - 90%	( )	50% - 60%	( )
70% - 80%	( )	below 50%	( )

Please comment on the strengths of the course and the way it was conducted.

Please comment on the weaknesses of the course and the way it was conducted.

Please give suggestions for the improvement of the course.

Optional – Your name and contact address:

Thank you!!