

MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE MIRPUR

DEPARTMENT OF MEDICAL EDUCATION



RENAL-1 MODULE

2ND YEAR MBBS (BATCH-17)

BLOCK: D

DURATION: 3-WEEKS

FROM: 1ST TO 24TH APRIL 2026

MODULE CODE: MB2-D-REN-I-07

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Disclaimer:

The development of study guides and the associated curriculum is an iterative process of quality enhancement, informed by stakeholder feedback. All elements—including content, delivery modes, scheduled hours, and assessment—are subject to periodic review and potential revision. Students are advised that the provided topics and learning outcomes represent the essential foundation for approximately 70% of examinations. The remainder will be derived from lecture content and directives issued by course instructors.

1. Instructions:

2. Maintain a minimum attendance of 85% in all scheduled academic activities; otherwise, you will not be allowed to sit in the annual exam.
3. Always adhere strictly to the prescribed college uniform and professional dress code.
4. Demonstrate professionalism and respect toward peers, faculty, staff, and patients.
5. Uphold academic integrity and ethical conduct in all learning and assessment activities.
6. Comply with all institutional policies regarding conduct, use of facilities, and digital etiquette.

2. Module Committee:

s.no	Name	Department	Role
1.	Prof..Dr.Col Shafqat Ali	Anatomy	HOD
2.	Prof. Dr. M. Naqib	Biochemistry	HOD
3.	Prof. Dr. Ayyaz Ahmed	Physiology	HOD
4.	Dr. M Junaid Khan	DME	HOD

3. Our Vision Statement

To be a renewed nationwide and world class academia maintaining a prominent role in medical education, innovative research and delivery of best health care services of international standards.

4. Our Mission Statement

To take this medical college to the international ranking by providing healthcare professional's excellent knowledge, extraordinary skill sets, leadership in research and empathy with Islamic Sprit.

5. Module Mapping of MBBS Program

Module Mapping (MBBS Program)

Tentative

Year	Blocks	Modules			Horizontal Module	
1 st year	A	Foundation-I (5-weeks)	Blood & Immunology -I (5-weeks)		Quran Kareem	
	B	Locomotor/MSK-I (8-weeks)				
	C	CVS – I (4-weeks)	RES – I (4-weeks)			
2 nd year	D	Gastrointestinal, Hepatobiliary and Metabolism Module -I (9-weeks)	Renal-I (3-weeks)			Pak_Study/Islamite
	E	Neurosciences 1A (6-weeks)	Neurosciences 1B (5-weeks)			
	F	Endocrine – I (4-weeks)	Repro – I (3-weeks)			
3 rd year	G	Foundation - II	Infection & Inflammation-II		English Expository Writing	
	H	Multisystem-I	Blood & Immunology-II	Locomotor/MSK-II		
	I	CVS - II	RES – II			
4 th year	J	Neurosciences-II			M1=ENT M2=EYE	Arts & Humanities
	K	GIT & Hepatobiliary - II				
	L	Renal-II	Endo & Repro- II			
PRIME Year	N	Foundation-III	Blood & Immunology-III	Locomotor/MSK-III	Clerkship, Electives, /Capstone/Observer ship	
	O	Cardiorespiratory-III				
	P	Renal-III	Endo & Repro-III			
	Q	Neurosciences-III	GIT & Hepatobiliary-III	Multisystem-III		
PRIME (Professionalism, Research, Identity formation, Management & leadership, Ethics)						

- 1st Year MBBS: 3 blocks, 5 Modules-27 weeks (945 Hours/AY)
 - 2nd Year MBBS: 3 blocks 6 Modules – 30 weeks (1050 Hours/AY)
- Per week teaching hours=35
 Total weeks/hours are tentative
 PRIME Year: Year of Professionals Ready for Innovative Medical Excellence
 PRIME: Professionalism, Research, Identity formation, Management & leadership, Ethics.

6. What Is A Study Guide?

The Purpose and Structure of a Study Guide

A study guide serves as the central contract and roadmap between the educational program and the student. Its primary purpose is to demystify the learning process by clearly communicating how a module is organized, managed, and assessed. It empowers students to take ownership of their learning by providing all necessary information to plan their studies, identify appropriate resources and support, and understand precisely how their performance will be evaluated.

Core Components of an Effective Study Guide:

Module Administration & Overview

This section provides the essential framework for the module. It includes:

- **Module Identification:** Code, title, teaching hours, and placement within the curriculum.
- **Personnel & Coordination:** Clear points of contact (Module Coordinator, teaching faculty) with roles and responsibilities defined, enabling students to seek the right help efficiently.
- **Timetable & Schedule:** A structured overview of the teaching sequence, including dates, topics, and formats (e.g., lectures, practicals).
- **Learning Objectives & Instructional Strategy**
This is the academic core of the guide, aligning intent with action.
- **Module & Theme Objectives:** A precise list of what students are expected to know, understand, and be able to do by the module's end, directly mapped to program and PMDC competencies.
- **Teaching-Learning Methods:** A description of the instructional strategies employed (e.g., interactive lectures, small group discussions, lab sessions, case-based learning) and their role in achieving the objectives.
- **Learning Resources & Support**
This component directs students to the tools for successful learning.
- **Curated Resource List:** A categorized list of essential and recommended resources, including core textbooks, key journal articles, vetted online links, and specific software or simulation tools.
- **Assessment Strategy:** A detailed breakdown of all formative (continuous) and summative assessments, including their format, weighting, schedule, and how they contribute to the final grade.
- **Rules and Policies:** Clear statements on examination rules, grading criteria, policy on late submissions, academic integrity, and the appeals process.

In summary, a well-constructed study guide transforms a module from a series of disjointed events into a coherent, transparent, and manageable learning journey. It is a fundamental tool for achieving constructive alignment and enhancing the student learning experience.



7. Recommended List Of Icons



Introduction To Case



For Objectives



Critical Questions



Assessment



Resource Material

8. Organization of Module

1.1 Introduction:

“Renal Module” is a three-week module with three themes. Maximum effort has been made to make this module interesting and interactive, so you would be able to integrate basic sciences knowledge with clinical subjects and enjoy learning.

The urinary tract system is an part of the body's overall maintenance as it works to maintain homeostasis. The system removes toxins from the and maintains the body's arterial pressure and acid-base balance. It regulates the chemical composition, volume, and electrolyte balance of the blood. urinary system allows the body to successfully filter out blood, create urine as a waste product, and then store and excrete it. Disruption of any of its activities can lead to diseased states such as renal colic, chronic kidney disease, glomerulonephritis and nephrolithiasis



integral

urinary
blood
blood

The

1.2 Rationale:

This module is proposed to build students' basic knowledge of the normal structure, organisation, functions, and development of the urinary system, with core knowledge of important concepts such as the regulation of body fluids, fluid compartments, fluid volume and composition, electrolyte and acid-base balance, and homeostasis. In addition to Anatomy, Physiology and Biochemistry, Clinical, PRIME and behavioral sciences are also included in this module.

1.3 Organization of the Study guide:

Block D is the first block of the 2nd-year MBBS, covering GIT and renal modules. The renal module lasts three weeks and comprises three themes, each based on a real-life complaint and developed around common renal disorders. These themes will act as a trigger to enhance the clinical relevance and will boost your problem-solving abilities.

S. No	Title of themes	Duration
1.	Flank pain/ Loin pain	1 week
2.	Scanty Urine /Urinary retention and Edema/ Abdominal pain	1 week
3.	Urinary Incontinence	1 week

9. Teaching and learning strategies

How You Will Learn:

This guide outlines the diverse learning methods you will experience, each carefully chosen to help you grow from a student of science into a capable, independent future clinician. Think of this as your map to not only *what* you will learn, but *how* you will learn most effectively.

Part 1: Learning Together – Facilitated Sessions

These sessions provide the foundation, context, and interactive space to build knowledge with your peers and faculty.

- a. **Interactive Lectures:** These are not passive events. In the lecture hall, your teacher will introduce core concepts and clinical principles using slides, animations, and real patient stories. We encourage you to engage—ask questions, respond to polls, and connect the dots live. This is where the roadmap for each topic is drawn.
- b. **Small-Group Sessions:** This is where knowledge becomes skill. In smaller classrooms, you will roll up your sleeves with a facilitator and a group of peers.
 - In **Tutorials**, you'll dissect clinical cases, clarify challenging concepts from lectures, and learn through discussion and debate.
 - In **anatomical dissection**, your group will engage directly with the reality of the human body from the very first session. Your mission is to explore, map, and trace the architecture of tissues—identifying key landmarks, surface contours, and gross anatomical features while following the precise pathways of neurovascular and lymphatic systems. This hands-on exploration actively animates and integrates the principles from your anatomy, histology, and embryology lectures, transforming theoretical knowledge into a tangible, three-dimensional understanding—mirroring the very essence of foundational discovery and clinical reasoning.
 - **Practical Demonstrations** in labs will bring the textbook to life, allowing you to see, touch, and understand the human body and its functions.
 - **Journal Club** sessions will train you to critically evaluate new medical research, a skill vital for a lifetime of evidence-based practice.

Part 2: Learning on Your Own – The Engine of Mastery

True expertise in medicine requires you to become the director of your own learning. These are your key tools.

- **Directed Self-Learning (DSL):** Consider this structured, independent practice. For specific modules, you will be given clear tasks, objectives, and a list of resources. Your job is to work through them independently. This builds the disciplined study habits and foundational understanding you need. Faculty are there to guide you if you hit a roadblock.
- **Self-Directed Learning (SDL):** This is the ultimate goal of your professional development in which you take full responsibility. You will identify your own learning gaps (“I don’t understand heart murmurs well enough”), set your own goals, seek out your own resources, and assess your progress. The college provides the support—the library, online databases, and faculty office hours—but you drive the process. This is the skill that will sustain your clinical competence for decades.

We are here to guide you in this transition from learning what we teach, to learning what you need to know. Embrace each method—the collaborative and the independent—as essential parts of your growth into a physician.



10. General Learning Objectives

At the end of this 3 weeks' Renal module, the 2nd Year MBBS students will be able to:

1. Describe the anatomy and development of Kidney and Urinary system.
2. Describe Histological features of the various components of Nephron and urinary system.
3. Describe functions of different parts of Nephron.
4. Discuss Glomerular Filtration and mechanisms of formation of urine.
5. What's the role of Kidney in long term control of arterial pressure?
6. Describe Mechanism & regulation of Water balance/metabolism as well as its disorders such as dehydration & over hydration.
7. Describe metabolism and renal control of Electrolytes (intracellular & extracellular cations).
8. Describe Acid Base Balance and imbalance and role of kidney in this regard.
9. Discuss the homeostatic function of the kidneys.
10. Describe renal disorders. How can systemic diseases affect renal functions?
11. Discuss quality of life issues in patients with prostate problems and overview of the concept of quality of life.

Knowledge

1. Discuss about normal structure, organization, functions, and development of reproductive and urinary system.
2. Explain Electrolyte, Acid-Base Balance & homeostasis and describe the regulation of body fluids, fluid compartments, fluid Volume and Composition
3. Correlate the role of hypothalamic-pituitary-gonadal axis with male and female in stages of life and clinical situations

Skills

1. Demonstrate effective skill for performing and interpreting various laboratory tests like pregnancy test, urine routine examination.

Attitude

2. Demonstrate a professional attitude, team building spirit and good communication skill especially during small group discussions, flip classes and CBLs.
3. Demonstrate ability to give and receive feedback, respect for self and peers. Demonstrate empathy and care to patients.
4. Develop respect for the individuality and values of others - (including having respect for oneself) patients, colleagues and other health professionals.
5. Organize & distribute tasks.
6. Exchange opinion & knowledge

12. Specific learning objectives

Theme-1 Loin pain/ Flank Pain

Introduction:

Theme-1 Loin pain/ Flank Pain has one-week duration, comprising of overview and development of the kidney and urinary system. Posterior abdominal wall with related structures are also included. Review of transport mechanisms across the cell membrane and Glomerular Filtration is part of this theme. Acid-base balance & imbalance and Renal disorders are also added.

THEME-1 LOIN PAIN/ FLANK PAIN							
S. no	Topic	Content	S. no	Learning objectives	Teaching strategies	Hour	Assessment
GROSS ANATOMY							
1	Kidney and Urinary system	Overview of the urinary system and Gross anatomy of Kidneys	1.	List and describe the main components of the urinary system	LGIS -1	1	MCQ/S AQ/VIVA/OSPE
			2.	Discuss the location, anatomical structure, and relations of right and left kidneys to other abdominal organs			
			3.	Discuss the gross morphological composition of kidneys Capsule Pericapsular adipose tissue Cortex Medulla Pelvis Hilum Vascular system within kidneys Arterial supply Venous drainage Lymphatic's Innervation			
			4.	Enumerate the various coverings of the kidney			
			5.	Explain the clinical significance of coverings of the kidneys			
			6.	Describe the structures entering and leaving the hilum of kidney and their relations			
2	Posterior abdominal wall	Osteology of lumbar vertebrae	7.	Describe the general features of lumbar vertebrae	LGIS -2	1	MCQ/S AQ/VIVA/OSPE
			8.	Describe the special features of lumbar vertebrae			
		Muscles of posterior abdominal wall.	9.	Enlist the muscles of posterior abdominal wall. Describe their origin, insertion, nerve supply and actions			

		Course, branches & relation of aorta.	10	Explain the course and relations of Abdominal Aorta			
			11	Enumerate and elaborate the paired branches of abdominal aorta			
		Inferior venacava	12	Discuss the formation of inferior vena cava			
EMBRYOLOGY							
1	Urinary system.	Developm ent of the urinary system	13	Trace the embryological origins and development of the urinary system	LGIS -3	1	MCQ/S AQ/VIV A/OSPE
			14	.Enlist the stages of development of kidneys			
			15	Describe the formation of pronephric, mesonephric and metanephric kidneys			
			16	Enumerate the derivatives of metanephric blastema and describe their development			
			17	.Enumerate the derivatives of metanephric diverticulum/ureteric bud			
			18	Describe the changes in position and blood supply of kidneys during development			
			19	Describe the development of bladder			
			20	Describe the development of male urethra			
			21	Describe the development of prostate and bulbourethral glands			
			22	Describe the development of female urethra			
			23	Describe Embryological development of prostate gland			
HISTOLOGY							
1	kidney	Histology of Kidney	24	Describe the parenchyma of kidney	LGIS -4	1	MCQ/S AQ/VIV A/OSPE
			25	Enlist different components of uriniferous tubules			
			26	Describe Histological features of the various components of Nephron			
			27	Describe the histological features of renal corpuscle			
			28	Describe filtration barrier			
			29	Describe the parts of collecting tubules			
			30	Describe the microscopic anatomy of collecting duct			
			31	Enlist the components of juxtaglomerular apparatus			

PHYSIOLOGY							
1	Overview of the kidneys	3	32	States major functions of the kidneys & brief physiological anatomy of kidney.	LGIS -1	1	MCQ/S AQ/VIV A/OSPE
			33	Define the components of the nephron and their interrelationships: renal corpuscle, glomerulus, nephron, and collecting-duct system.			
			34	Draw the relationship between glomerulus, Bowman's capsule, and the proximal tubule.			
			35	Describe the 3 layers separating the lumen of the glomerular capillaries and Bowman's space; defines podocytes, foot processes, and slit diaphragms.			
			36	Define glomerular mesangial cells and states their functions and location within the glomerulus. Detail of renal vessels & Pressure within them. Describe, in general terms, the differences among superficial cortical, midcortical, and juxtamedullary nephrons.			
			37	List the individual tubular segments in order; states the segments that comprise the proximal tubule, Henle's loop, and the collecting-duct system; defines principal cells and intercalated cells.			
			38	Define juxtaglomerular apparatus and describes its 3 cell types; states the function of the granular cells.			
			39	Define the basic renal processes: glomerular filtration, tubular reabsorption, and tubular secretion			
2.	Glomerular Filtration -I	Glomerular Filtration: Determinants and Equation	40	Describe how molecular size and electrical charge determine filterability of plasma solutes; states how protein binding of a low molecular-weight substance influences its filterability.	LGIS -2	1	MCQ/S AQ/VIV A/OSPE
			41	State the formula for the determinants of glomerular filtration rate, and states, in qualitative terms why the net filtration pressure is positive.			
			42	Define filtration coefficient and states how mesangial cells might alter the filtration coefficient; states the reason glomerular filtration rate is so large relative to filtration across other capillaries in the body.			
3.	Glomerular Filtration- II	Glomerular Filtration Rate	43	Describe how arterial pressure, afferent arteriolar resistance, and efferent arteriolar resistance influence glomerular capillary pressure.	LGIS -3	1	MCQ/S AQ/VIV A/OSPE

			44	Describe how changes in renal plasma flow influence average glomerular capillary oncotic pressure.			
			45	State the Starling forces involved in capillary filtration.			
			46	State how changes in each Starling force affect glomerular filtration rate			
4	Auto regulation of GFR and renal blood flow	Tubuloglomerular feedback mechanisms/ Juxtaglomerular complex	47	Define auto regulation of renal blood flow and glomerular filtration rate	LGIS -4	1	MCQ/S AQ/VIV A/OSPE
			48	Describe the myogenic and tubuloglomerular feedback mechanisms of auto regulation.			
5.	Transport across the Cell Membrane and Body Fluid and Osmoles	Review of Transport Mechanisms across the Cell Membrane (Active and Passive transport)	49	Define and state the major characteristics of diffusion, facilitated diffusion, primary active transport, secondary active transport (including symport and antiport) and endocytosis.	LGIS -5	1	MCQ/S AQ/VIV A/OSPE
			50	Discuss the physiochemical aspects (Diffusion, Adsorption, Viscosity, Colloid Osmotic pressure and role of Albumin in regulation of Osmotic pressure)			
		Osmolality and Osmolarity -I	51	Define osmolality and osmolarity, and states why osmolarity is commonly used to approximate osmolality.			
			52	Describe what is meant by the expression "water follows the osmoles."			
			53	Describe qualitatively the forces that determine movement of reabsorbed fluid from the interstitium into peritubular capillaries.			
		Osmolality and Osmolarity -II	54	Compare the Starling forces governing glomerular filtration with those governing peritubular capillary absorption.			
			55	Compare and contrasts the concepts of Tm and gradient-limited transport.			

			56	Describe 3 processes that can produce bidirectional transport of a substance in a single tubular segment; states the consequences of pump-leak systems.			
			57	Contrast "tight" and "leaky" epithelia.			
BIOCHEMISTRY							
1.	Acid-base balance	Acid-base balance & Buffers	58	Study the sources of Hydrogen Ion, pH & Anion Gap	LGIS -1	1	MCQ/S AQ/VIV A/OSPE
			59	Describe Buffer Systems operating in the Body			
			60	Carbonic acid, protein, and phosphate buffer			
			61	Transporting acid and mitigating pH changes			
2.	Regulation of acid base balance	Respiratory and Renal Regulation of Acid Base Balance	62	Describe Respiratory Regulation of Acid Base Balance	LGIS -2	1	MCQ/S AQ/VIV A/OSPE
			63	Describe Renal Regulation of Acid Base Balance			
3.	Acid base Imbalance	Acid base Imbalance	64	Describe disorders of acid base balance: their causes, mechanisms and compensations of Respiratory Acidosis & Alkalosis and Metabolic Acidosis & Alkalosis	LGIS -3	1	MCQ/S AQ/VIV A/OSPE
PATHOLOGY							
1.	Overview of Renal Diseases	Smoky urine	65	List the common kidney symptoms	LGIS -1	1	MCQ/S AQ/VIV A/OSPE
			66	Overview of the pathophysiology of renal infections			
			67	Describe Symptoms associated with renal pathology			
			68	Classify renal diseases			

			69	Describe Treatment of chronic pyelonephritis			
		Renal complications of Diabetes, Hypertension and Systemic Lupus Erythematosus (SLE)	70	Explain how systemic diseases can affect renal function			
			71	Systemic diseases affecting renal function - Diabetes -Cardiovascular disorders (hypertension, CHF) -Immunological disorders (SLE, glomerulonephritis) -Cancers (myeloma) -Hematological disorders (sickle cell anemia, HUS)			

DIRECTED SELF LEARNING

S. no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
PHYSIOLOGY							
1.	Renal Blood Flow	Nervous & Hormonal Control of Renal Circulation	72	Define renal blood flow, renal plasma flow, glomerular filtration rate, and filtration fraction, and gives normal values.	DSL	1	MCQ/S AQ/VIVA/OSPE
			73	State the formula relating flow, pressure, and resistance in an organ.			
			74	Describe sympathetic nerve supply of renal vessels & hormones affecting renal vessels			
			75	Describe the effects of changes in afferent and efferent arteriolar resistances on renal blood flow			

DISSECTION

S. no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
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ANATOMY							
1.	Kidney	Gross & Surface Anatomy	76.	Identify the gross anatomic features the kidneys, renal pelvis, ureter, urinary bladder and urethra	Demonstration	1.5	OSPE/VIVA
			77.	locate renal angle			
			78.	Perform renal punch and its clinical significance			
2.	Ureter	Gross & Surface Anatomy	79.	Identify the gross anatomic features of ureter	Demonstration	1.5	OSPE/VIVA

LAB WORK							
S. no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
HISTOLOGY							
1.	Histology of Kidney and Urinary bladder		80.	Identify the histology features of kidney and urinary bladder	Demonstration/Practical	1.5	OSPE
BIOCHEMISTRY							
1.	Titration acidity of urine		81.	Find out PH of urine	Demonstration/Practical	1.5	OSPE

SMALL GROUP DISCUSSION							
S. no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
BIOCHEMISTRY							
1	Acid base Imbalance		82.	Respiratory Acidosis & Alkalosis and Metabolic Acidosis & Alkalosis	SGD	1.5	OSPE

Theme-2 Edema and Urinary retention/ Scanty Urine

Introduction:

This theme consists of one-week activity, and comprises discussion on anatomy and development of the kidney, bladder, ureter, urethra, prostate. Body fluid compartments, functions of nephron, long term control of arterial pressure, electrolyte and osmolality are also included. Renal diseases/ disorders are also part of the theme.

THEME-2 Edema and Urinary retention/ Scanty Urine

S. no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
GROSS ANATOMY							
1	Ureters, Urinary Bladder, Prostate gland & urethra	Ureters Gross structure	83	Describe the gross anatomy of ureters	LGIS-5	1	MCQ/SEQ/VIVA/OSPE
			84	Describe the relations of right ureter in males and females			
			85	Describe the relations of left ureter in males and females			
			86	Highlight the clinical significance of relations of right and left ureters in both sexes			
			87	Discuss constrictions in ureter and their clinical relevance.			
		Urinary bladder Gross structure	88	Describe the gross structure of urinary bladder			
			89	Discuss the Ligaments/supports.			
			90.	Discuss the blood supply and nerve supply of urinary bladder			
			91.	Discuss the relations of urinary bladder in males			
			92.	Discuss the relations of urinary bladder in females			
		Prostate gland gross structure	93.	Describe the structure of prostate gland			
			94.	Describe Lobes, capsule, relations and structures within prostate.			
			95.	Discuss the common problems resulting from abnormal growth of the prostate. Relate the symptoms to structures			
		Urethra Gross structure	96.	Describe the gross anatomy of urethra			
			97.	Enlist the differences between male and female urethra			
EMBRYOLOGY							
1.	Congenital anomalies of Urinary system	Congenital anomalies of kidney and ureter	98.	Enlist the various types of developmental anomalies of kidneys along with their embryological causes	LGIS-6	1	MCQ/SAQ/VIVA/OSPE
			99.	Enlist the various types of developmental anomalies of ureters along with their embryological causes			
		Congenital anomalies	100.	Discuss the developmental anomalies of bladder			

		of bladder & Urethra	101.	Discuss the developmental anomalies of male and female urethra			
HISTOLOGY							
1	URETER, Bladder	Ureter microscopy	102.	Describe the microscopic anatomy of ureter	LGIS-7	1	MCQ/SAQ/VIVA/OSPE
		Bladder microscopy	103.	Describe the histological features of urinary bladder			
2	Prostate Urethra	Prostate	104.	Describe the microscopic structure of prostate	LGIS-8	1	MCQ/SAQ/VIVA/OSPE
		Urethra Microscopy	105.	Discuss the microscopic structure of male and female urethra			
PHYSIOLOGY							
1.	Body fluid Compartments	Volumes of body fluid compartments	106.	List the body fluid compartments	LGIS-6	1	MCQ/SAQ/VIVA/OSPE
			107.	Recall the volumes of body fluid compartments			
			108.	Discuss the interplay in fluid volumes between different fluid compartments			
			109.	Describes principles of osmosis and osmotic pressure			
			110.	Discuss the interplay between various pressures			
		Principles of osmosis and oedema	111.	Discuss principles of edema - Intracellular fluid compartment - Extracellular fluid compartment - Intravascular fluids - Blood - Plasma - Interstitial fluid - Constituents of intra- and extracellular fluid compartments - Calculating fluid volumes - Osmosis and osmotic fluid regulation			
2.	Transport of substances across tubular cells	Reabsorption/Secretion along Different Parts of the Nephron	112.	List approximate percentages of sodium reabsorbed in major tubular segments.	LGIS-7	1	MCQ/SAQ/VIVA/OSPE
			113.	List approximate percentages of water reabsorbed in major tubular segments.			
			114.	Define the term iso-osmotic volume reabsorption			

			115.	Describe proximal tubule sodium reabsorption, including the functions of the apical membrane sodium entry mechanisms and the basolateral sodium-potassium-adenosine triphosphatase.			
		Mechanisms of regulation of tubular reabsorption	116.	Explain why chloride reabsorption is coupled with sodium reabsorption, and lists the major pathways of proximal tubule chloride reabsorption.			
			117.	State the maximum and minimum values of urine osmolality.			
			118.	Define osmotic diuresis and water diuresis.			
			119.	Explain why there is an obligatory water loss.			
			120.	Describe the handling of sodium by the descending and ascending limbs, distal tubule, and collecting-duct system.			
			121.	Describe the role of sodium-potassium-2 chloride symporters in the thick ascending limb.			
			122.	Describe the handling of water by descending and ascending limbs, distal tubule, and collecting duct system			
			123.	Discuss the mechanisms of regulation of tubular reabsorption • Reabsorption and secretion by the renal tubules • Active and passive transport mechanisms • Mechanism of reabsorption of specific substances (eg. Water, electrolytes) • Reabsorption and secretion in different parts of the tubules • Glomerular balance • Peritubular and renal interstitial fluid physical forces • Effect of arterial pressure on urine output • Hormonal control of tubular reabsorption • Aldosterone • Angiotensin-II • ADH • Parathyroid hormone • Nervous regulation of tubular reabsorption			

3.	Renal Clearance	Use of inulin, urea and creatinine as indicators	124.	Define the terms clearance and metabolic clearance rate, and differentiates between general clearance and renal clearance.	LGIS-8	1	MCQ/SAQ/VIVA/OSPE
			125.	List the information required for clearance calculation			
			126.	State the criteria that must be met for a substance so that its clearance can be used as a measure of glomerular filtration rate; states which substances are used to measure glomerular filtration rate and effective renal plasma flow.			
			127.	Predict whether a substance undergoes net reabsorption or net secretion by comparing its clearance with that of inulin or by comparing its rate of filtration with its rate of excretion.			
		Use of inulin, urea and creatinine as indicators	128.	Calculate net rate of reabsorption or secretion for any substance			
			129.	Calculate fractional excretion of any substance.			
			130.	Describe how to estimate glomerular filtration rate from CCr and describes the limitations.			
			131.	Describe how to use plasma concentrations of urea and creatinine as indicators of changes in glomerular filtration rate.			
4.	Diluted urine	Mechanism of diluted urine formation	132.	Describe the process of "separating salt from water" and how this permits excretion of either concentrated or dilute urine.	LGIS-9	1	MCQ/SAQ/VIVA/OSPE
			133.	Describe how antidiuretic hormone affects water reabsorption.			
			134.	Describe the characteristics of the medullary osmotic gradient.			
			135.	Explain the role of the thick ascending limb, urea recycling, and medullary blood flow in generating the medullary osmotic gradient.			
			136.	State why the medullary osmotic gradient is partially "washed out" during a water diuresis			
			137.	Describe the origin of antidiuretic hormone and the 2 major reflex controls of its secretion; define diabetes insipidus; state the effect of antidiuretic hormone on arterioles.			
			138.	Distinguish between the reflex changes that occur when an individual has suffered iso-osmotic fluid loss because of diarrhoea as opposed to a pure water loss (ie, solute-water loss as opposed to purewater loss).			

			139.	Describe the control of thirst.			
			140.	Describe the pathways by which sodium and water excretion are altered in response to sweating, diarrhoea, haemorrhage, high-salt diet, and low-salt diet.			
5.	Concentrated urine	Mechanism of concentrated urine formation	141.	Discuss the mechanism of concentrated urine formation.	LGIS-10	1	MCQ/SAQ/VIVA/OSPE
6.	Potassium	Renal regulation of Potassium	142.	State the normal balance and distribution of potassium within different body compartments, including cells and extracellular fluid.	LGIS-11	1	MCQ/SAQ/VIVA/OSPE
			143.	Describe how potassium moves between cells and the extracellular fluid, and how, on a short-term basis, the movement protects the extracellular fluid from large changes in potassium concentration.			
			144.	Describe how plasma levels of potassium do not always reflect the status of total-body potassium.			
			145.	State generalizations about renal potassium handling for persons on high- or low-potassium diets.			
			146.	State the relative amounts of potassium reabsorbed by the proximal tubule and thick ascending limb of Henle's loop regardless of the state of potassium intake.			
			147.	Describe how the cortical collecting duct can manifest net secretion or reabsorption; describes the role of principal cells and intercalated cells in these processes.			
			148.	List the 3 inputs that control the rate of potassium secretion by the cortical collecting duct.			
			149.	Describe the mechanism by which changes in potassium balance influence aldosterone secretion.			
			150.	State the effects of most diuretic drugs and osmotic diuretics on potassium excretion.			
			151.	Describe the association between perturbations in acid-base status and the plasma potassium level			
7.	Osmolality and	Regulation of	152.	Discuss the homeostatic function of the kidneys	LGIS-12	1	MCQ/SAQ/

	Sodium concentration	extracellular fluid osmolality and sodium concentration-I	153.	Explain the mechanism by which kidneys are able to form diluted or concentrated urine			VIVA /OSP E
			154.	Describe Mechanism of formation of dilute urine			
			155.	Describe Mechanism of formation of concentrated urine			
			156.	Describe requirements for excreting a concentrated urine			
			157.	Describe the counter-current mechanism			
			158.	Describe Role of distal tubules and collecting ducts			
			159.	Describe Quantifying urine concentration and dilution			
			160.	Describe Disorders of urine concentration ability			
		Regulation of extracellular fluid osmolality and sodium concentration -II	161.	Discuss the homeostatic function of the kidneys			
			162.	Discuss the principles of osmoregulation by the kidneys			
			163.	Explain how the body regulated the osmolarity of fluid compartments			
			164.	Describe Control of extracellular fluid osmolarity and sodium concentration			
			165.	Describe Osmoreceptor-ADH feedback system			
			166.	Describe Role of thirst in controlling extracellular fluid osmolarity and concentration			
			167.	Describe Salt-appetite mechanism and Integrated response to sodium intake			
8.	Concentration of various ions in the body.	Regulation of concentration of potassium, calcium, phosphate and magnesium	168.	Discuss the mechanisms of regulation of concentrations of various ions in the body	LGIS-13	1	MCQ/SAQ/VIVA/OSP E
			169.	Describe the processes occurring at cellular level to maintain/excrete various ions in the kidneys -Regulation of potassium -Regulation of calcium -Regulation of phosphate -Regulation of magnesium			
BIOCHEMISTRY							
1.	Renal control of Calcium, Phosphorus &	Describe Renal control of Calcium & Phosphorus	170.	State the normal total plasma calcium concentration and the fraction that is free.	LGIS-4	1	MCQ/SAQ/VIVA/OSP E
			171.	Describe the distribution of calcium between bone and extracellular fluid and the role of bone in regulating extracellular calcium.			
			172.	Describe and compare osteocytes osteolysis and bone remodelling.			

	Constituents of urine		173.	Describe renal handling of phosphate.			
			174.	Describe how parathyroid hormone changes renal phosphate excretion.			
		Normal and abnormal Constituents of urine	175.	Describe the normal and abnormal constituents of urine			
GENERAL SURGERY/UROLOGY							
1.	Flank pain	Upper urinary tract obstruction	176.	Describe development and anatomy of collecting urinary system and ureter	LGIS-1	1	MCQ/SAQ/VIVA/OSPE
			177.	Describe anatomy and physiology of ureterovesical junction.			
			178.	Describe Transportation of urinary bolus from kidney to bladder			
			179.	Enumerate common anatomical congenital abnormalities of upper tract.			
			180.	Enumerate common causes of upper urinary tract obstruction.			
			181.	Name common presentation of patients with upper tract urinary obstruction			
			182.	Define and enumerate the consequences as a result of Incompetence of vesicoureteric junction.			
PATHOLOGY							
1.	Renal failure & Urinary stones	Causes and pathophysiology of renal failure	183.	Enlist the causes of Renal failure/uraemia and abnormalities related to micturition including incontinence	LGIS-2	1	MCQ/SAQ/VIVA/OSPE
			184.	Discuss the causes and pathophysiology of Chronic Renal failure			
		Pathophysiology of urinary stones	185.	Describe the pathophysiology of Urinary stones Enlist the Causes types of renal stones.			
2.	Classification of kidney disorders	Aetiology, Site and type of dysfunction	186.	Classify kidney disorders according to etiology, site of dysfunction and type of dysfunction - Acute/ chronic -Infectious -Immunological -Neoplastic -Vascular/interstitial /parenchymal - Primary/systemic	LGIS-3	1	MCQ/SAQ/VIVA/OSPE
		Glomerulonephritis	187.	Describe the aetiology and pathogenesis of glomerulonephritis			
		Glomerular disorders with aetiology and Pathophysiology	188.	Define the terms Nephrotic syndrome, nephritic syndrome, Azotemia.			
			189.	Aetiology of Nephrotic syndrome			
PHARMACOLOGY							

1.	Nephrotic drugs		190.	Describe the mechanism of drug excretion	LGIS-1	1	MCQ/SAQ/VIVA/OSPE
			191.	Enlist nephrotoxic drugs			
2.	Drugs acting on the renal system	Diuretics	192.	Classify diuretics	LGIS-2	1	MCQ/SAQ/VIVA/OSPE
			193.	Describe the mechanism of action of diuretic drugs			
COMMUNITY MEDICINE/PUBLIC HEALTH							
1.	Quality of life in diseases	Quality of life in problems of prostate	194.	Discuss quality of life issues in patients with prostate problems	LGIS-1	1	MCQ/SAQ/VIVA/OSPE
			195.	Overview of the concept of quality of life (QoL)			
			196.	Discuss the significance of quality of life in disease and treatment settings			
			197.	Discuss quality of life issues in geriatric population			
CLINICAL (NEPHROLOGY/ MEDICINE)							
1.	Approach to a patient with common renal diseases and renal failure.		198.	Define anuria, oliguria, hematuria, proteinuria, azotemia, edema.	LGIS-1	1	MCQ/SAQ/VIVA/OSPE
			199.	Differentiate between nephrotic and nephritic syndrome.			
			200.	Define and classify renal failure. Interpret common laboratory investigations in renal failure.			

DISSECTION							
S.no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
ANATOMY							
1.	Surface Anatomy of urinary viscera	Surface Anatomy	201.	Identify the anatomic features of urinary viscera	Demonstration	1.5	OSPE/VIVA
2.	Pelvis	Gross & Surface Anatomy	202.	Identify the gross anatomic features of Pelvis	Demonstration	1.5	OSPE/VIVA

LAB WORK							
S. no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
HISTOLOGY							
1.	Histology of urinary system	Ureter/Urethra	203.	Identify the histology features of Ureter and Urethra	Demonstration/Practical	1.5	OSPE
PHYSIOLOGY							
1.	Urine output monitoring	Intake output chart maintenance in bed ridden patients	204.	Maintain Intake output chart maintenance in bed ridden patients	Demonstration/Practical	1.5	OSPE
		Catheter insertion	205.	Preform insertion of catheter on dummy			
BIOCHEMISTRY							
1.	Urine analysis		206.	Determine the normal/abnormal constituents in the urine -Urine sugar -Amino acids -Proteins -Haemoglobin -Uric acid -Urea -Creatinine and chloride -Calcium and phosphate -Ammonia -Ketone bodies -Benzedrine test for blood in urine	Demonstration/Practical	1.5	OSPE

SMALL GROUP DISCUSSION							
S. no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
PHYSIOLOGY							
1.	Control of arterial pressure	Short and Long term control of	207.	Describe the 3 temporal domains of blood pressure control and the major mechanisms associated with them.	SGD	1.5	OSPE

		arterial pressure by Kidneys	208.	Describe the relationship between renin and angiotensin II.			
			209.	Describe the 3 detectors that can alter renin secretion.			
			210.	Define pressure natriuresis and diuresis.			
			211.	Define tubuloglomerular feedback and describe the mechanism for tubuloglomerular feedback and auto regulation of glomerular filtration rate			
BIOCHEMISTRY							
1.	Regulation and Disorders of Body Fluid Compartments		212.	Describe the distribution of body fluids in the intracellular and extracellular compartments and their normal volumes.	SGD	1.5	OSPE
			213.	Explain the mechanisms regulating body fluid balance, including the roles of the kidneys, hormones (ADH, aldosterone), and thirst mechanism.			
			214.	3. Discuss the movement of water between compartments, including the concepts of osmosis, osmolarity, and tonicity.			
			215.	4. Identify the major electrolytes present in intracellular and extracellular fluid and explain their physiological significance.			
			216.	Analyze common disorders of body fluid balance, such as dehydration, edema, hyponatremia, and hypernatremia.			

THEME-3 Urinary incontinence

Introduction:

This is one-week theme, comprising of Perineum with its different parts, micturition problems, water balance and disorders. Clinical Nephrology including arterial blood-gas analysis, types of dialysis and its indications are also included.

The contents of teaching include LGF-Lectures, DSL and SGF-Practicals, SGDs, SDL.

THEME-3 Urinary incontinence							
S. no	Topic	Content	S. no	Learning Objectives	Teaching strategies	H o u r	Assessment
GROSS ANATOMY							
1.	Pelvis &Perineum	Osteology of pelvis	217.	Define the pelvis and the perineum Discuss the openings in the pelvis and what passes through them	LGIS-9	1	MCQ/SAQ/VI VA/OSPE
		Urogenital triangel	218.	List and describe the contents of the urogenital triangle -Contents of the male urogenital triangle -Urethral injuries			
		Applied aspects of urethra and perineum	219.	Injury to the perineum in childhood			
PHYSIOLOGY							
1.	Urinary bladder -I	Micturition	220.	Describe the functional anatomy of urinary bladder	LGIS-14	1	MCQ/SAQ/VI VA/OSPE
			221.	Explain the mechanism of micturition			
			222.	Explain the micturition reflex and relate structures of the bladder with function			
			223.	Explain basal cystometrogram			
			224.	Describe the nervous control of bladder functions			
2.	Urinary bladder - II	Urinary incontinece	225.	Discuss the causes, symptoms and management of patients with urinary incontinence, urgency, frequency, burning micturition etc	LGIS-15	1	MCQ/SAQ/VI VA/OSPE
			226.	Causes of urinary incontinence, urgency, frequency, burning micturition			
			227.	Terms related to urinary obstruction and incontinence			
			228.	Describe Clinical presentation of continence disorders			

			229.	Explain General management of incontinence			
BIOCHEMISTRY							
1.	Water balance/metabolism-I	Regulation and disorders of water balance	230.	Mechanism & regulation of Water balance	LGIS-5	1	MCQ/SAQ/VI VA/OSPE
			231.	Disorders of water balance, such as dehydration & over hydration			
2.	Water balance/metabolism-II		232.	Electrolytes (intracellular & extracellular cations) & its metabolism	LGIS-6	1	MCQ/SAQ/VI VA/OSPE
			233.	Disorders of electrolyte metabolism			
RADIOLOGY							
1.	Radiological evaluation of kidneys and urinary tract	Normal radiographs and special radiological tests	234.	Radiological anatomy of kidneys and urinary tract on ultrasonography and on X-ray abdomen Pelvis (IVU)	LGIS-1	1	MCQ/SAQ/VI VA/OSPE
			235.	Radiological tests to evaluate renal excretory functions (IVU and Radioisotope Renal scanning)			
			236.	Radiological tests to diagnose common renal & Urinary tract pathologies			
CLINICAL (NEPHROLOGY/ MEDICINE)							
1.	Acid base balance	Introduction to basic principles of dialysis	237.	Define acidosis, alkalosis and anion gap. Describe normal values.	LGIS-2	1	MCQ/SAQ/VI VA/OSPE
			238.	Interpret basic abnormalities of common acid base disturbances in renal disease.			
			239.	Describe types of dialysis and process of dialysis.			
General Surgery/Urology							
1.	Lower urinary tract symptoms -LUTS		240.	Name the parts of lower urinary tract in male and female	LGIS-2	1	MCQ/SAQ/VI VA/OSPE
			241.	Describe surgical anatomy of bladder and it's nerve supply			
			242.	Name the functions of the bladder			
			243.	Describe the consequences as a result of the malfunction of bladder			

			244.	Name common causes of bladder outlet obstruction			
			245.	Describe zonal anatomy of prostate			
			246.	Name three most common diseases affecting prostate			
PATHOLOGY							
1.	Urinary tract infections	Common pathogens, management and complication	247.	Define urinary tract infection (UTI) and classify its types (upper vs lower UTI, uncomplicated vs complicated).	LGIS-4	1	MCQ/SAQ/VIVA/OSPE
			248.	Enlist the causes and describe the pathogenesis of urinary tract infection.			
			249.	Identify the common causative microorganisms responsible for UTIs and explain their sources of infection			
			250.	Recognize the clinical features and symptoms associated with lower and upper urinary tract infections.			
			251.	Explain the diagnostic methods used for UTIs, including urinalysis and urine culture.			
			252.	Discuss the principles of management and treatment of UTIs.			

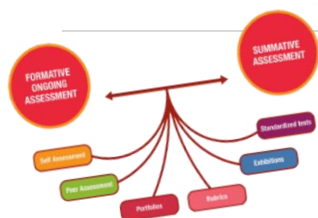
DISSECTION							
S. no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
ANATOMY							
1.	Gross Anatomy of Sacrum	Gross Anatomy	253.	Identify the anatomic features of Sacrum	Demonstration	1.5	OSPE/VIVA
2.	Lumbar Vertebrae	Gross Anatomy	254.	Identify the gross anatomic features of Lumbar Vertebrae	Demonstration	1.5	OSPE/VIVA

LAB WORK							
S.no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
HISTOLOGY							
1.	Histology of Prostate	Prostate	255.	Identify the histology features of Prostate	Demonstration/ Practical	1.5	OSPE
PHYSIOLOGY							
1.	Arterial blood-gas analysis		256.	Arterial blood sampling Analysis and interpretation of arterial blood gases	Demonstration/ Practical	1.5	OSPE
BIOCHEMISTRY							
1.	Creatinine in urine		257.	Estimation of creatinine in 24-hour urine sample	Demonstration/ Practical	1.5	OSPE

SMALL GROUP DISCUSSION							
S.no	Topic	Content	S.no	Learning Objectives	Teaching strategies	Hour	Assessment
BIOCHEMISTRY							
1	Electrolyte Imbalance and Its Effect on Bladder Function		258.	Describe the role of major electrolytes (Na ⁺ , K ⁺ , Ca ²⁺) in normal cellular and muscle function.	SGD	1.5	OSPE
			259.	Explain how electrolyte balance is maintained in body, particularly by the kidneys.			
			260.	Understand how electrolyte disturbances affect smooth muscle contraction of the urinary bladder.			

			261.	Relate electrolyte imbalance to clinical symptoms such as urinary frequency or incontinence.			
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Subject	LGIS	Practical/ Demo	SGD	DSL	Dissection	Total Hours
ANATOMY (Histology, Embryology)	9	4.5			9	22.5
PHYSIOLOGY	15	3.5	1.5	1		21
BIOCHEMISTRY	6	4.5	4.5			15
PATHOLOGY	4					4
PHARMACOLOGY	2					2
COMMUNITY MEDICINE	1					1
SURGERY	2					2
MEDICINE	2					2
RADIOLOGY	1					1
PRIME (Research/JC)						
PRIME (IT Skills)						
PRIME (Leadership)						
PRIME (Professionalism)						
PRIME (Communication Skills)	2					2
PRIME (Ethics/Islamiat)						
Pakistan Studies/Ideology & Constitution	3					3
Others	1					1
TOTAL (Teaching Hours)	48	12.5	6	1	9	76.5



13.Examination and Methods of Assessment:

Assessments within the MBBS program at the MIMC consist of both formative and summative evaluations. These assessments are crucial for monitoring student progress and academic performance.

1.4 Formative Assessment:

Formative assessments, accounting for 20% of the total marks assigned to each block, serve as ongoing evaluations designed to provide feedback and promote learning. Formative assessments are conducted after the completion of each module, ensuring students receive timely feedback to enhance their understanding and performance.

1.5 Summative Assessment:

Summative assessments, comprising 80% of the total assessment weighting, are conducted and overseen by constitute university as part of the annual examination process. This summative assessment evaluates students' comprehensive understanding of the curriculum and constitutes a significant portion of their final scores.

1.6 Assessment Tools:

Various assessment tools are employed to measure students' knowledge and competencies. These tools include:

1. **Written Examinations:** These include Multiple Choice Questions (MCQs) and Short Answer Questions (SAQs) that assess students' theoretical knowledge.
2. **Performance Assessments:** Objective Structured Practical Examinations (OSPE) and Objective Structured Clinical Examinations (OSCE) are used to evaluate practical skills and clinical competence.
3. **Assignments:** Presentations, projects, and self-reflection assignments are included in the assessment process to enhance students' critical thinking and research skills.

**14. Learning Opportunities and Resources**

S.No	Subject	Recommended Books
1	Gross Anatomy	• <i>Clinical Anatomy by Regions</i> by Richard S. Snell (Latest Edition) • <i>Gray's Anatomy for Students</i> (Latest Edition) • <i>K.L. Moore, Clinically Oriented Anatomy</i> (Latest Edition) • <i>Netter's Atlas of Human Anatomy</i> (Latest Edition) • <i>Last's Anatomy</i> (Latest Edition)
2	Histology	• <i>Textbook of Histology</i> by Junqueira (Latest Edition) • <i>diFiore's Atlas of Histology with Functional Correlations</i> (Latest Edition) • <i>Atlas of Human Histology</i> by Wheaters (Latest Edition) • <i>Textbook of Histology</i> by Laiq Hussain (Latest Edition)
3	Embryology	• <i>Langman's Medical Embryology</i> (Latest Edition) • <i>The Developing Human</i> by Keith L. Moore (Latest Edition)
4	Physiology	• <i>Textbook of Medical Physiology</i> by Guyton and Hall (Latest Edition) • <i>Ganong's Review of Medical Physiology</i> (Latest Edition)
5	Biochemistry	• <i>Harper's Illustrated Biochemistry</i> (Latest Edition) • <i>Lippincott's Illustrated Review: Biochemistry</i> (Latest Edition)
6	Pharmacology	• <i>Katzung's Basic and Clinical Pharmacology</i> (Latest Edition)
7	Pathology	• <i>Robbins Basic Pathology</i> (Latest Edition)
8	Community Medicine	• <i>Essential Community Medicine</i> (Latest Edition) • <i>K. Park Textbook of Preventive and Social Medicine</i> (Latest Edition)
9	General Medicine	• <i>Davidson's Principles and Practice of Medicine</i> (Latest Edition)
10	Radiology	• <i>David Sutton's Textbook of Radiology and Imaging</i> (Latest Edition)
11	Neurosurgery	• <i>Greenberg's Textbook of Neurosurgery</i> • <i>Rangacharya's Principles of Neurosurgery</i>

15. Timetables

		MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)					
Renal-I Module							
Time Table Class 2nd Year MBBS 2026							
Theme 1 (LOIN PAIN/ FLANK PAIN)							
Week- 00						Venue: 2nd Year Lecture Hall	
Day / Date		Time					
		08:00AM - 09:00AM	09:00 AM -10:30 AM		11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	01:30 PM - 03: 00 PM
MONDAY 30-03-2026							
TUESDAY 31-03-2026							
WEDNESDAY 01-04-2026		LGIS BIO-37 Topic: Metabolism of Individual Amino Acids -II Fac: Prof. Dr. M. Naqib	LGIS DME Topic: Introduction to Renal Module Fac: Dr. M Junaid Khan	BREAK 10:30 AM - 11:00 AM	LGIS PHY-1 Topic: Overview of the kidneys Fac: Dr. Barkat Ullah Khan Awan	LGIS Pak Studies-1 Fac: Hafiz Ghulam Yasin	LGIS PHY-2 Topic: Glomerular Filtration -I Fac: Dr. Barkat Ullah Khan Awan
THURSDAY 02-04-2026		LGIS PHY-3 Topic: Glomerular Filtration-II Fac: Dr. Barkat Ullah Khan Awan	LGIS ANT-1 Topic: Kidney and Urinary system Fac: Prof. Dr. Col Shafqat Ali		SDL	DSL PHY Topic: Renal Blood Flow Fac: Dr. Shafan Khan Venue Library	LGIS ANT-2 Topic: Posterior abdominal wall Fac: Prof. Dr. Col Shafqat Ali
FRIDAY 03-04-2026		LGIS BIO-1 Topic: Acid-base balance Fac: Prof. Dr. M. Naqib	LGIS PHY-4 Topic: Auto regulation of GFR and renal blood flow Fac: Dr. Barkat Ullah Khan Awan		LGIS PATHO-1 Topic: Overview of Renal Diseases Fac: Dr. Saadia Samad	12:00 PM - 12:30 PM SDL	
Prayer Break 1:00 PM - 01:30 PM							
Dr. M Junaid Khan Department of Medical Education		Principal Brig(R) Prof. Dr. Abdul Halim					

		MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)					
		Renal-I Module					
		Time Table Class 2nd Year MBBS 2026					
		Theme 1/2 (LOIN PAIN/ FLANK PAIN)					
Week- 01		Venue: 2nd Year Lecture Hall					
Day / Date		Time					
		08:00AM - 09:00AM	09:00 AM -10:30 AM	BREAK 10:30 AM - 11:00 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	01:30 PM - 03: 00 PM
MONDAY 06-04-2026		LGIS PHY-5 Topic: Transport across the Cell Membrane, Body Fluid and Osmoles Fac: Dr. Barkat Ullah Khan Awan	* Practical * A (ANT) * B (BIO) * C (SDL)		LGIS BIO-2 Topic: Regulation of acid base balance Fac: Prof. Dr. M. Naqib	LGIS ANT-3 Topic: Urinary system (Embryology) Fac: Prof. Dr. Col Shafqat Ali	Practical A (ANT) B (BIO) C (SDL)
TUESDAY 07-04-2026		LGIS BIO-3 Topic: Acid base Imbalance Fac: Prof. Dr. M. Naqib	* Practical * B (ANT) * C (BIO) * A (SDL)		PRIME-1 Topic: Verbal/Non-Verbal Communication Fac: Dr. Fazaila Sabih	LGIS ANT-4 Topic: kidneys (Histology) Fac: Prof. Dr. Col Shafqat Ali	Practical B (ANT) C (BIO) A (SDL)
WEDNESDAY 08-04-2026		LGIS PHY-6 Topic: Body fluid Compartments Fac: Prof. Dr. Ayyaz Ahmed	* Practical * C (ANT) * A (BIO) * B (SDL)		LGIS PHY-7 Topic: Transport of substances across tubular cells (Reabsorption /Secretion along Different Parts of the Nephron) Fac: Prof. Dr. Ayyaz Ahmed	LGIS Pak Studies-2 Fac: Hafiz Ghulam Yasin	Practical C (ANT) A (BIO) B (SDL)
THURSDAY 09-04-2026		LGIS PHY-8 Topic: Renal Clearance Fac: Prof. Dr. Ayyaz Ahmed	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		SDL	LGIS PATHO-2 Topic: Renal failure & Urinary stones Fac: Prof. Dr. Iqbal Hussain Malik	LGIS ANT-5 Topic: Ureters, Urinary Bladder, Prostate gland & urethra Fac: Prof. Dr. Col Shafqat Ali
Friday 10-04-2026		LGIS PHY-9 Topic: Diluted urine Fac: Prof. Dr. Saadia Zainab	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		LGIS Pharma-1 Topic: Nephrotoxic drugs Fac: Dr. Salma Salim	12:00 PM - 12:30 PM SDL	
*Practicals		Practicals				Anatomy Dissection	
*ANT-7 Topic: Histology of Anal Canal *BIO-7/8 Topic: Estimation of Bilirubin in blood, Estimation of Urea in blood		Histo (ANT): Topic: Histology of Kidney and Urinary bladder BIO: Topic: Titrable acidity of urine				1- Topic: Kidney 2- Topic: Ureter	
Dr. M Junaid Khan Department of Medical Education						Principal Brig(R) Prof. Dr. Abdul Halim	

MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)						
Renal-I Module						
Time Table Class 2nd Year MBBS 2026						
Theme 2 (Edema and Urinary retention/ Scanty Urine)						
Week- 02						Venue: 2nd Year Lecture Hall
Day / Date	Time					01:30 PM - 03: 00 PM
	08:00AM - 09:00AM	09:00 AM - 10:30 AM	BREAK 10:30 AM - 11:30 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	
MONDAY 13-04-2026	LGIS PHY-10 Topic: Concentrated urine Fac: Prof. Dr. Saadia Zainab	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		LGIS Pharma-2 Topic: Drugs acting on the renal system Fac: Dr. Saman Omer	LGIS ANT (Embryology)-6 Topic: Congenital anomalies of Urinary system Fac: Prof. Dr. Col Shafqat Ali	Practical A (ANT) B (BIO) C (PHY)
TUESDAY 14-04-2026	LGIS PHY-11 Topic: Potassium Fac: Prof. Dr. Saadia Zainab	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		PRIME-2 Topic: Listening and reading skills Fac: Dr. Fazaila Sabih	LGIS ANT (Histology)-7 Topic: URETER & Bladder Fac: Prof. Dr. Col Shafqat Ali	Practical B (ANT) C (BIO) A (PHY)
WEDNESDAY 15-04-2026	LGIS BIO-4 Topic: Renal control of Calcium, Phosphorus & Constituents of urine Fac: Dr. Zahira Bashir	SGD A (ANT) B (BIO) C (PHY)		LGIS PATHO-3 Topic: Classification of kidney disorders Fac: Dr. Farzana Habib	LGIS Pak Studies-3 Fac: Hafiz Ghulam Yasin	Practical C (ANT) A (BIO) B (PHY)
THURSDAY 16-04-2026	LGIS PHY-12 Topic: Osmolality and Sodium concentration Fac: Prof. Dr. Ayyaz Ahmed	SGD B (ANT) C (BIO) A (PHY)		LGIS Medicine (Nephro)-1 Topic: Approach to a patient with common renal diseases and renal failure Fac: Dr. Umer Siddique	SDL	LGIS Community Med. -1 Topic: Quality of life in renal diseases Fac: Prof. Dr. Abrar Hussain
Friday 17-04-2026	LGIS PHY-13 Topic: Concentration of various Ions in the body. Fac: Prof. Dr. Ayyaz Ahmed	SGD C (ANT) A (BIO) B (PHY)		LGIS Surgery (Urology)-1 Topic: Flank pain Fac: Prof. Dr. Mumtaz Ahmed	12:00 PM - 12:30 PM SDL	
SGD		Practicals			Anatomy Dissection	
ANT: Topic: Revision of dissection topics BIO: Topic: Regulation and disorders of body fluid compartments PHY: Topic: Control of arterial pressure		Histo (ANT): Topic: Ureter/Urethra BIO: Topic: Urine analysis PHY: Topic: Intake output chart maintenance in bed ridden patients & Catheter insertion			1- Topic: Surface Anatomy of urinary viscera 2- Topic: Pelvis	
Dr. M Junaid Khan Department of Medical Education						Principal Brig(R) Prof. Dr. Abdul Halim

		MOHI-UD-DIN ISLAMIC MEDICAL COLLEGE , MIRPUR, (AJ&K)					
Renal-I Module							
Time Table Class 2nd Year MBBS 2026							
Theme 2/3 (Urinary incontinence)							
Week- 03		Amended 23.04.2026				Venue: 2nd Year Lecture Hall	
Day / Date	Time						
	08:00AM - 09:00AM	09:00 AM - 10:30 AM	BREAK 10:30 AM - 11:00 AM	11:00 AM - 12:00 PM	12:00 PM - 01:00 PM	Prayer Break 1:00 PM - 01:30 PM	01:30 PM - 03: 00 PM
MONDAY 20-04-2026	LGIS PHY-14 Topic: Urinary bladder -I Fac: Prof. Dr. Saadia Zainab	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		LGIS Surgery (Urology)-2 Topic: Lower urinary tract symptoms-LUTS Fac: Prof. Dr. Mumtaz Ahmed	LGIS ANT (Histology)-8 Topic: Prostate & Urethra Fac: Prof. Dr. Col Shafqat Ali		Practical A (ANT) B (BIO) C (PHY)
TUESDAY 21-04-2026	LGIS PHY-15 Topic: Urinary bladder-II Fac: Prof. Dr. Saadia Zainab	Anatomy Dissection Fac: Dr. Aqsa Tassaduq & Dr. Zainab Khalid		SDL	LGIS ANT-9 Topic: Pelvis & Perineum Fac: Prof. Dr. Col Shafqat Ali		Practical B (ANT) C (BIO) A (PHY)
WEDNESDAY 22-04-2026	LGIS ANT Topic: Revision Fac: Dr. Zainab Khalid	SGD A (ANT) B (BIO) C -SDL		LGIS Radiology-1 Topic: Radiological evaluation of kidneys and urinary tract Fac: Prof. Brig [®] Dr. Irfan ul Haq	LGIS Pak Studies-4 Fac: Hafiz Ghulam Yasin		Practical C (ANT) A (BIO) B (PHY)
THURSDAY 23-04-2026	LGIS BIO-5 Topic: Water balance/metabolism-I Fac: Prof. Dr. M. Naqib	SGD B (ANT) C (BIO) A -SDL		LGIS Medicine (Nephro)-2 Topic: Acid base balance Fac: Dr. Umer Siddique	LGIS PATHO-4 Topic: Urinary Tract Infection Fac: Prof. Dr. Sara Najeeb		LGIS BIO Topic: Revision Fac: Dr. Sadia Mustafa
Friday 24-04-2026 (Online Classes)	LGIS BIO-6 Topic: Water balance/metabolism-II Fac: Prof. Dr. M. Naqib	SGD C (ANT) A (BIO) B -SDL		LGIS PHY Topic: Revision Fac: Dr. Effah Shaukat	12:00 PM - 12:30 PM SDL		
SGD		Practicals			Anatomy Dissection		
ANT: Topic: Revision of dissection topics BIO: Topic: Electrolytes imbalance & its effect on bladder function		Histo (ANT): Topic: Prostate BIO: Topic: Creatinine in urine PHY: Topic: Arterial blood-gas analysis			1- Topic: Gross Anatomy of Sacrum 2- Topic: Lumbar Vertebrae		
Dr. M Junaid Khan Department of Medical Education				Principal Brig(R) Prof. Dr. Abdul Halim			

16. For inquiry and troubleshooting



Please contact
DME

17.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 | | ☐ |
| 1. Strongly disagree | 5. Strongly agree | |
| C. The lecture sequence was well-planned | | ☐ |
| 1. Strongly disagree | 5. Strongly agree | |
| D. The contents were illustrated with | | ☐ |
| 1. Too few examples | 5. Adequate examples | |
| E. The level of the course was | | ☐ |
| 1. Too low | 5. Too high | |
| F. The course contents compared with your expectations | | ☐ |
| 1. Too theoretical | 5. Too empirical | |
| G. The course exposed you to new knowledge and practices | | ☐ |
| 1. Strongly disagree | 5. Strongly agree | |
| H. Will you recommend this course to your colleagues? | | ☐ |
| 1. Not at all | 5. Very strongly | |

THE CONDUCT OF THE MODLUE

- | | | |
|--|--|--------------------------|
| A. The lectures were clear and easy to understand | | ☐ |
| 1. Strongly disagree | 5. Strongly agree | |
| B. The teaching aids were effectively used | | ☐ |
| 1. Strongly disagree | 5. Strongly agree | |
| C. The course material handed out was adequate | | ☐ |
| 1. Strongly disagree | 5. Strongly agree | |
| D. The instructors encouraged interaction and were helpful | | ☐ |
| 1. Strongly disagree | 5. Strongly agree | |
| E. Were objectives of the course realized? | Y N ☐ ☐ | |

F. Please give overall rating of the course

90% - 100% ()

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!!

18.Scan To Submit End Of Module Feedback



<https://forms.gle/Yi5u1GBk3CLYFVvJ7>