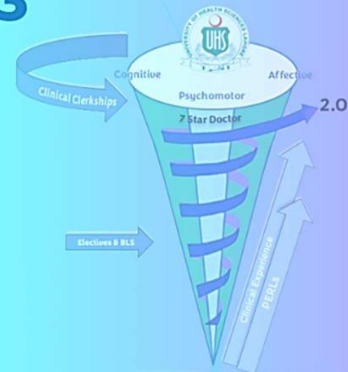




MODULAR INTEGRATED CURRICULUM 2K23



version 2.0



MODULAR INTEGRATED CURRICULUM 2K23

Version 2.0

YEAR-2



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Principal's Message

Dear Students and Faculty,

It is with great pride and enthusiasm that we embark on this transformative journey together at our newly established medical college. This is a moment of new beginnings, brimming with possibilities, and an opportunity to shape a future grounded in academic excellence, innovation, and compassionate care.

To our students, you are stepping into a world where knowledge meets responsibility. Medicine is more than a profession; it is a calling to serve humanity with integrity and empathy. We are committed to nurturing not just your intellect but also your values, so you may emerge as competent and compassionate healthcare professionals. As you navigate this rigorous yet rewarding journey, remember that perseverance, curiosity, and a spirit of service will be your guiding stars.

To our esteemed faculty, your dedication and expertise form the cornerstone of this institution. Together, let us inspire our students, foster a culture of inquiry, and build a learning environment that emphasizes collaboration, critical thinking, and lifelong learning. You have the unique opportunity to shape the minds and hearts of future leaders in healthcare, and I am confident that your unwavering commitment will pave the way for their success.

Our first block of study marks the foundation of an academic experience that integrates the principles of holistic education with cutting-edge medical training. It is designed to challenge, motivate, and inspire both students and faculty. Let this guide serve as a roadmap, helping us achieve our shared goals while upholding the highest standards of education and care.

The journey ahead will undoubtedly present challenges, but it is in overcoming these that we find growth. Let us work together to create a legacy of excellence that will guide generations to come. With determination, collaboration, and a shared vision, I have no doubt that we will achieve greatness together.

Welcome to the start of an extraordinary chapter.

Warm regards,

Prof. Shireen Khawar
Principal, QMCK



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PLANNER
YEAR 2

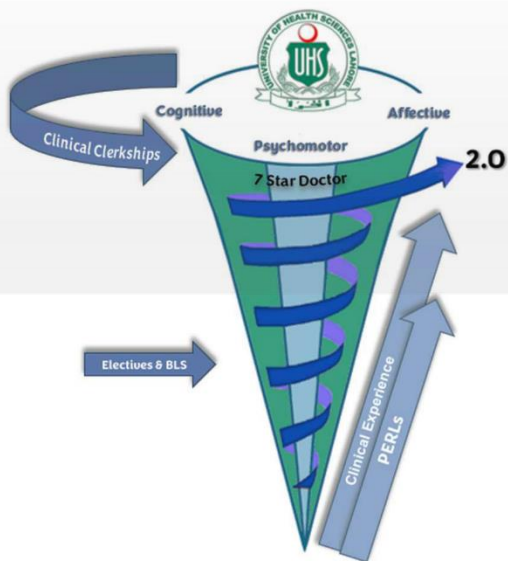
BLOCKS	Year 2		
Block 4	Modules	Spirals	
	Module 6: GIT & Nutrition-1	PERLs	CFRC
	Module 7: Renal-1		
Eid ul Fitr 31.3.2025—03.4.2025			
Block 5	Module 7 (continues): Renal-1	PERLs	CFRC
	Space for Spirals & CIA		
	BLOCK Exam 4		
	Module 8: Endocrinology & Reproduction-1	PERLs	CFRC
Summer Break 01 July,25 - 30 July,25			
Block 6 Prep Leave	(Continues) Endocrinology & Reproduction-1	PERLs	CFRC
	Module 9: Head & Neck, Special Senses		
	Space for Spirals & CIA		
	Block Exam 5		
	Module 10: Neurosciences-1	PERLs	CFRC
	Module 11: Inflammation		
	Space for Spirals & CIA		
Block Exam 6			
	Prep Leave		
	Professional Exam		



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BLOCK-4

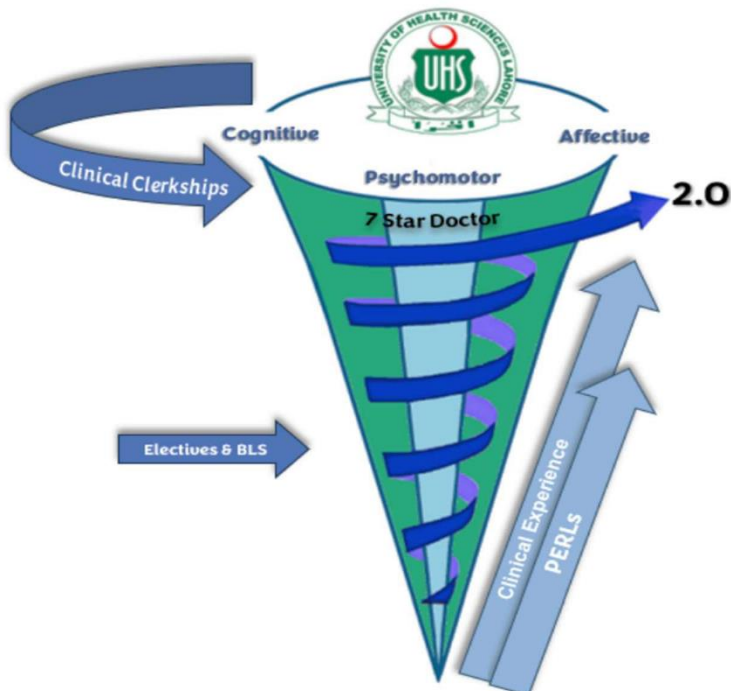




MODULE NO. 06

GIT & NUTRITION-I

**MODULAR INTEGRATED
CURRICULUM 2K23** *version 2.0*



MODULE RATIONALE

Gastrointestinal system is an integral part of human body which is primarily related to consumption, digestion and assimilation of food to provide nutrition and calories on regular basis to human body which are essential for basic functioning of each organ of human beings.

We will study in detail regarding different parts of gastrointestinal system, their functional, embryological and histological anatomy, physiological and biochemical aspects of its functioning. Students will also be briefly introduced to clinical and pathological aspects, pharmacological interventions and preventive measures of common diseases related to the system.

We have assigned six (6) weeks in academic calendar of 2nd year curriculum of MBBS to Gastrointestinal Module. We have divided our module into eight (8) themes. For every theme, anatomy, physiology, biochemistry, pathology, pharmacology, community medicine, behavioral sciences, general medicine and surgery will need to plan for integrated teaching of students for better comprehension and understanding of subject. We have outlined learning outcomes for each discipline along with allocated time to be taught.

MODULE OUTCOMES

- To describe gross and microscopic anatomy of different parts of gastrointestinal system and associated organs
- To describe the embryological development of different parts of gastrointestinal system and associated organs
- To describe the functional anatomy and physiology of different parts of gastrointestinal system and associated organs
- To describe the motility, secretory and digestive function of gastrointestinal system
- To describe the biochemical aspects of carbohydrate metabolism
- To discuss pathological aspect and management of gastrointestinal related diseases
- To discuss the pharmacological treatment of diarrhea
- To discuss the psychosocial impact of gastrointestinal diseases in society
- To discuss the preventive measures related to gastrointestinal diseases
- To comprehend concept of balanced diet and malnutrition

THEMES

- Oral cavity & Esophagus (O &E)
- Walls of Abdomen & Peritoneum
- Stomach
- Small intestine
- Large intestine (Cecum, Appendix, Colon, Rectum & Anal Canal)
- Liver & Biliary tree
- Pancreas & Spleen
- Nutrition

CLINICAL RELEVANCE

- Diseases of oral cavity, esophagus and stomach
- Diseases of small and large intestine
- Diseases of hepatobiliary system
- Diseases related to malnutrition

IMPLEMENTATION TORs

- The time calculation for completion of modules and blocks is based on 35 hours per week. Total hours of teaching, learning and formative/summative internal assessment to be completed in a year are 1200.
- The hours mentioned within each module are the mandatory minimum required. The rest of the hours are left to the discretion of the institution that can be used in teaching, learning and assessment as per decision of the institutional academic council.
- The content and the intended learning outcomes written are mandatory, to be taught, at the level required, as the end year assessment will be based on these.
- However, the level of cognition can be kept at a higher level by the institution.
- The Table of Specifications provided will be used for the three papers of the Second professional examination. The same table of specifications should be used for the respective three block exams for internal assessment.



SYLLABUS OF GIT & NUTRITION-I MODULE



NORMAL STRUCTURE

THEORY

CODE	GROSS ANATOMY	TOTAL HOURS = 35	
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC
GIT-A-001	Describe the gross anatomical features of oral cavity with its neurovascular supply and lymphatic drainage	Human Anatomy	Oral Cavity and Oropharynx
	Discuss the location, anatomical features, relations and vascular supply of tonsils: nasopharyngeal, palatine and lingual.		
	Discuss the skeletal framework of hard palate with its neurovascular supply and lymphatic drainage		
	Describe the gross anatomical features of soft palate with its neurovascular supply and lymphatic drainage		
	Describe the attachments, nerve supply and actions of muscles of soft palate		
	Describe the structure of tongue with attachments of muscles, blood supply, nerve supply and lymphatic drainage		
	Discuss the anatomical basis of injury to hypoglossal nerve		
	Describe anatomical features, relations and neurovascular supply of parotid gland and its duct, mentioning the structures entering and exiting the gland.		
	Discuss the clinical correlates of parotid gland: parotiditis, Mumps, Frey's syndrome, parotid duct injury and parotid tumor surgery with its complications.		
	Describe the Waldeyer's ring.		
	Describe anatomical features, relations and neurovascular supply of submandibular and sublingual glands with their ducts.		
	Name the parts of pharynx giving their extent, anatomical		

	features, structure, neurovascular supply and Lymphatic drainage		
	Name the pharyngeal constrictor muscles defining their attachments, innervation and structure traversing the gaps between adjacent muscles.		
GIT-A-002	Describe the planes and quadrants of abdomen	Human Anatomy	Anterior Abdomen Wall
	Draw and label the cutaneous innervation and dermatomes of anterior abdominal wall and anterolateral Abdominal wall and describe the clinical correlates (Abdominal pain, Muscle rigidity, Referred pain, anterior abdominal nerve block)		
	Describe the fascia of anterior abdominal wall with its clinical significance		
	Describe anterolateral Abdominal wall arteries, Veins and Lymphatics and related clinical correlates—Caput Medusae		
	Describe the attachments, nerve supply and actions of muscles of anterior abdominal wall		
	Identify the muscles of anterolateral abdominal wall on anatomical model and/or cadaver		
	Describe the extent, formation and contents of rectus sheath		
	Give the formation and extent of inguinal ligament		
	Describe the formation of superficial and deep inguinal rings and conjoint tendon		
	Locate the position of superficial and deep inguinal rings on simulated subject or Cadaver		
	Describe the extent, boundaries and contents of inguinal canal		
	Define the following hernias: umbilical, epigastric, incisional, Spigelian, lumbar, femoral, internal and inguinal		

	Differentiate between direct and indirect inguinal hernias		
	Describe the location of abdominal surgical incisions		
	Mark the abdominal incisions on simulated patient/ subject and explain their anatomical basis		
	List the structures and coverings of spermatic cord		
GIT-A-004	Trace the horizontal and vertical peritoneal reflections	Human Anatomy	Peritoneum
	Describe the relationship of viscera to the peritoneum		
	Describe the gross anatomical features of the following: 1. Mesentery 2. Omentum 3. Peritoneal ligaments 4. Peritoneal fold 5. Peritoneal sac, 6. Recesses, 7. Spaces and 8. Gutters		
	Describe the nerve supply of Peritoneum		
	Describe the anatomical basis and manifestations of the following: 1. Peritonitis and ascites 2. Peritoneal adhesions (and adhesiotomy) 3. Abdominal paracentesis		
GIT-A-005	Describe the extent of esophagus, its constrictions, neurovascular supply and lymphatic drainage		Esophagus
	Discuss the anatomical basis of esophageal varices, achalasia and Gastro Esophageal Reflux Disease (GERD)		
GIT-A-006	Describe the location, position, parts, external and internal structure, relations, vascular and nerve supply and lymphatic drainage of stomach	Human Anatomy	Stomach
	Draw and label a diagram illustrating the lymphatic drainage of Stomach		

	Describe the clinical presentation and the anatomical basis and manifestations of the following conditions: Carcinoma of stomach and peptic ulcers		
	Identify and demonstrate the parts, external and internal features of stomach on anatomical model and cadaver		
GIT-A-007	Describe the location, position, parts, relations, neurovascular supply and lymphatic drainage of duodenum	Human Anatomy	Small & Large Intestine
	Describe the anatomical basis and manifestations of the following conditions: 1. Duodenal Ulcers 2. Ileal diverticulum 3. Diverticulosis 4. Large bowel cancer 5. Appendicitis 6. Volvulus 7. Intussusception		
	Demonstrate the various positions of appendix		
	Identify and demonstrate the Parts and external features of small and large intestines on anatomical model and cadaver		
GIT-A-008	Describe the origin, course, branches (tributaries in case of veins) and distribution of the blood vessels of GIT	Human Anatomy	Liver
	Describe the formation, tributaries and drainage of hepatic-portal vein		
	Discuss the sites and vessels contributing in portosystemic anastomosis		
	Describe the clinical picture and anatomical basis for the blockage of porto-systemic anastomosis		
	Identify the blood vessels supplying GIT on anatomical model and cadaver		
	Describe location, lobes, important relations, peritoneal ligaments, blood supply, lymphatic drainage, nerve	Human Anatomy	Liver

	supply, related clinical correlates of liver and subphrenic spaces.		
GIT-A-009	Describe components of Biliary tree- hepatic duct and bile duct	Human Anatomy	Biliary System
	Describe relations, functions, blood supply, lymphatic drainage and nerve supply of Gallbladder		
	Describe related clinical correlates- gall stones, biliary colic, cholecystectomy, gallbladder gangrene		
GIT-A-010	Describe the location, surfaces, peritoneal reflections, relations, neurovascular supply and lymphatic drainage of pancreas	Human Anatomy	Pancreas
	Describe the anatomical basis and manifestations of pancreatitis and pancreatic cancer		
	Identify the parts of the pancreas		
GIT-A-011	Describe the location, surfaces, peritoneal reflections, relations, neurovascular supply and lymphatic drainage of spleen	Human Anatomy	Spleen
	Describe the anatomical basis and manifestations of splenic trauma and splenomegaly		
	Identify the borders, surfaces and Impressions of spleen		
	Demonstrate the correct anatomical positioning of spleen		
GIT-A-012	Describe the gross anatomical features, peritoneal relations, blood supply, nerve supply and lymphatic drainage of sigmoid colon, rectum and anal canal	Human Anatomy	Sigmoid Colon, Rectum & Anal Canal
	Describe the anatomical basis for Sigmoidoscopy, rectal prolapse, rectal examination, rectal cancer and hemorrhoids		
GIT-A-013	Outline the anatomical basis and surgical treatment plan for the following diseases: 1. Esophageal Injuries 2. Gastric Carcinoma	Human Anatomy integrated with Surgery	Surgical Intervention

	3. Intestinal Obstruction 4. Pancreatic Carcinoma 5. Obstructive Jaundice 6. Gall Stones		
CODE	EMBRYOLOGY & POST-NATAL DEVELOPMENT	TOTAL HOURS = 08	
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC
GIT-A-014	Describe the development of tongue	Embryology	Oral Cavity
	Describe the embryological basis of tongue tie		
	Describe the development of palate		
	Describe the embryological basis of various facial clefts		
	Identify the parts of the developing tongue and palate		
GIT-A-015	Describe the formation and divisions of gut tube	Embryology	Foregut
	Describe the development of mesenteries		
	Describe the development of esophagus		
	Describe the embryological basis of esophageal atresia and/or tracheoesophageal fistula		
	Describe the development and rotation of stomach		
	Describe the embryological basis of pyloric stenosis		
	Describe the development of duodenum, liver and gall bladder		
	Describe the embryological basis of intrahepatic and extrahepatic biliary atresia		
	Describe the development of pancreas		
GIT-A-016	Describe the development of midgut especially mentioning physiological herniation, rotation, retraction of herniated loops and mesenteries of the intestinal loops	Embryology	Midgut
	Describe the embryological basis of the following - mobile cecum - volvulus - retro colic hernia - Omphalocele		

	5. gastroschisis		
	Describe the embryological basis of Meckel’s diverticulum		
	Describe the embryological basis of; 1. Gut rotation defects 2. Gut atresia and stenosis		
GIT-A-017	Describe the development of hindgut	Embryology	Hindgut
	Describe the embryological basis of; 3. Rectourethral and rectovaginal fistulas 4. Recto anal fistulas and atresia 5. Imperforate anus 6. Congenital megacolon		
	Identify the parts of the developing foregut, midgut and hindgut originating from the endoderm		
CODE	MICROSCOPIC ANATOMY (HISTOLOGY & PATHOLOGY)	TOTAL HOURS = 07	
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC
GIT-A-018	Describe the light microscopic structure of; 1. Lips 2. Tongue including lingual papillae and taste buds 3. Oral Cavity (Cheeks, Teeth gums, hard & Soft palate) Describe the histological structure of parotid, submandibular and sublingual glands.	Histology	Oral Cavity & Esophagus
	Compare and contrast the histological structures of parotid, submandibular and sublingual glands.		
	Describe the serous and mucous acini and give histological differences between the two.		
	Describe the structure and location of serous demilunes. Describe histology of oropharynx		
	Relate the characteristics of various layers of GIT with		

	their function		
	Describe the light microscopic structure of esophagus		
	Tabulate the histological differences between different parts of esophagus		
	Describe the histological changes associated with reflux esophagitis and Barrett's esophagus		
GIT-A-019	Describe the light microscopic structure of stomach	Histology	Stomach
	Describe the role of parietal cells in pernicious anemia		
GIT-A-020	Describe the light microscopic structure of 1. Duodenum 2. Jejunum 3. Ileum	Histology	Small Intestine
	Discuss the histological basis of celiac disease		
	Discuss the histological basis of Crohn's disease		
GIT-A-021	Describe the light microscopic structure of 1. Colon 2. Appendix 3. Rectum	Histology	Large Intestine
	Define colorectal cancer, anal abscess, hemorrhoids		

PRACTICAL

CODE	HISTOLOGY	TOTAL HOURS = 12	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
GIT-A-022	Identify, draw and label the histological sections of Tongue and Lips and enumerate points of identification	Histology Practical	Oral Cavity
GIT-A-023	Identify, draw and label the histological sections of Salivary glands (Submandibular, Sublingual and Parotid)	Histology Practical	Salivary Gland
GIT-A-024	Identify, draw and label the histological structure of the esophagus and enumerate points of identification	Histology Practical	Upper GIT
	Identify, draw and label the histological structure of stomach and enumerate points of identification		

GIT-A-025	Identify, draw and label the histological structure of small intestine (Duodenum, Jejunum, and Ileum) and enumerate points of identification	Histology Practical	Small Intestine
GIT-A-026	Identify, draw and label the histological structure of large intestine and enumerate points of identification	Histology Practical	Large Intestine
GIT-A-027	Identify, draw and label the histological sections of Gall bladder, liver and enumerate points of identification	Histology Practical	Organs associated with GIT
	Identify, draw and label the histological sections of pancreas and enumerate points of identification	Histology Practical	Organs associated with GIT
GIT-A-028	Identify, draw and label the histological sections of Palatine tonsil, appendix, peyer's patches and enumerate points of identification	Histology Practical	Lymphatic tissue associated with GIT

NORMAL FUNCTION

THEORY

CODE	MEDICAL PHYSIOLOGY	TOTAL HOURS = 20	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
GIT-P-001	Classify the components of enteric nervous system	Medical Physiology	General Principles of GIT Function - Motility, Nervous Control & Blood Flow
	Discuss the location and significance of myenteric plexus		
	Describe the Meissner's plexus		
	Differentiate between myenteric and Meissner's plexuses		
	Explain the mechanism of developing slow wave		
	Explain the mechanism of developing spike potential		
	Enlist the factors that depolarize & hyperpolarize the GIT membrane		
	Enlist the excitatory & inhibitory neurotransmitters of enteric nervous system		
	Explain the role of sympathetic & parasympathetic nervous system in controlling GIT function.		
	Enlist the gastrointestinal reflexes & explain the functions of these reflexes		

	Enlist the hormones acting on GIT, their stimuli, site of release and actions		
	Enumerate different types of movements that occur in GIT		
	Discuss the functions and control of GIT movements		
	Discuss the effect of gut activity and metabolic factors on GIT blood flow		
	Explain the nervous control of GIT blood flow		
GIT-P-002	Trace the reflex arc of mastication	Medical Physiology	Oral Cavity & Esophagus
	Explain the process and importance of chewing reflex		
	Enlist the stages of swallowing		
	Describe the mechanism of voluntary stage of swallowing		
	Trace the reflex arc of involuntary stage of swallowing		
	Enlist the steps involved in involuntary stage of swallowing	Medical Physiology	
	Explain the effect of swallowing on respiration	Medical Physiology	
	Discuss the mechanism of esophageal stage of swallowing	Medical Physiology	
	Enlist causes of dysphagia	Medical Physiology integrates with Surgery	
	Explain the types and role of different peristalsis originating in esophagus	Medical Physiology	
	Discuss the role of Lower Esophageal Sphincter (Gastroesophageal)	Medical Physiology	
	Discuss the pathophysiology of achalasia & Megaesophagus	Medical Physiology	
	Enlist the features and treatment of achalasia	Medical Physiology	
GIT-P-003	Explain storage function of stomach	Medical Physiology	Stomach
	Describe the basic electrical rhythm of stomach wall	Medical Physiology	
	Explain the role of pyloric pump and pyloric sphincter in gastric emptying	Medical Physiology	

	Explain the factors that promote Stomach Emptying	Medical Physiology	
	Discuss the duodenal (nervous & hormonal) factors that inhibit Stomach emptying	Medical Physiology	
	Enlist the factors that initiate enterogastric inhibitory reflexes	Medical Physiology	
	Enumerate the causes, features, and pathophysiology of gastritis	Medical Physiology integrates with Medicine	
	Explain the physiological basis of each feature of gastritis	Medical Physiology integrates with Medicine	
	Recommend treatment of gastritis	Medical Physiology integrates with Medicine	
	Enumerate the causes, features, and pathophysiology of peptic ulcer		
	Explain the physiological basis of each feature of peptic ulcer		
GIT-P-004	Enumerate and explain the hormones and movements of small intestine	Medical Physiology	Small Intestine
	Explain the term “peristaltic rush”		
	Explain the functions of ileocecal valve and sphincter		
	Enumerate the types of intestinal sprue	Medical Physiology integrates with Medicine	
	Enlist the features of intestinal sprue		
	Explain the consequences of sprue on the body		
GIT-P-005	Enumerate the types of movements taking place in colon	Medical Physiology	Large Intestine
	Explain the mechanism of developing movements of colon and their control through Gastrocolic and Duodenocolic Reflexes	Medical Physiology	
	Enlist the defecation reflexes	Medical Physiology	
	Explain the mechanism of defecation reflex	Medical Physiology	
	Trace the reflex arc of defecation	Medical	

		Physiology	
	Name the other autonomic reflexes that affect bowel activity	Medical Physiology	
	Explain the pathophysiology of constipation	Medical Physiology integrates with Medicine	
	Discuss the causes of diarrhea Describe the cause of Hirschsprung's disease integrate with Medicine	Medical Physiology	
GIT-P-006	Explain the functions of liver	Medical Physiology	Liver
	Differentiate between liver and gall bladder bile and the hormones acting on them	Medical Physiology	
	Enumerate the causes and composition of developing gall stones	Medical Physiology Integrate with Surgery	
GIT-P-007	Explain function and secretions of pancreas	Medical Physiology	Pancreas
	Enlist the causes and pathophysiology of acute and chronic pancreatitis	Integrate with Medicine	
	Enumerate the features of acute pancreatitis and explain the physiological basis of each feature of pancreatitis	Integrate with Medicine	
GIT-P-008	Describe the stages of vomiting act	Medical Physiology	Vomiting Reflex
	Trace the reflex arc of vomiting	Medical Physiology	
	Explain the role of chemoreceptor trigger zone for initiation of vomiting by drugs or by motion sickness	Medical Physiology	
GIT-P-009	Define Malnutrition	Integrated with Medicine Gastroenterology	Malnutrition
	Identify various causes of malnutrition		
	Identify the risk factors of malnutrition		
	Outline treatment strategies		
GIT-P-010	Define Acute Diarrhea		Acute & Chronic Diarrhea
	Define Chronic Diarrhea		

	Enlist various causes for acute and chronic diarrhea		
CODE	BIOCHEMISTRY	TOTAL HOURS = 40	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
GIT-B-001	Give the composition and importance of saliva and related clinical disorder (xerostomia)	Biochemistry	Biochemistry of GIT /GIT secretions & digestion and absorption of dietary carbohydrates
	Give the composition and importance of gastric juice with special reference to mechanism of HCl secretion and related clinical disorders (achlorhydria, gastric ulcer		
	Give the composition and importance of pancreatic juice, bile and succus entericus and related clinical disorders (pancreatitis, cystic fibrosis, cholelithiasis).		
	Describe digestion and absorption of dietary carbohydrates along with inherited and acquired disorders (lactose intolerance, sucrase-isomaltase deficiency).		
GIT-B-002	Elaborate key features of various transport systems for entry of glucose into cells.	Biochemistry	Carbohydrate metabolism/ Entry of glucose into cells
GIT-B-003	Enlist the hormones that play important roles in regulating carbohydrate metabolism.	Biochemistry	Carbohydrate metabolism/ Hormonal control of BSL
	Elaborate the metabolic effects of these hormones.		
	Infer the consequences of deficiency and excess of these hormones		
GIT-B-004	Describe the glycolytic pathway along with its regulation and significance.	Biochemistry	Carbohydrate metabolism/ Glycolysis
	Compare key features of aerobic and anaerobic glycolysis.		
	Calculate the number of ATP produced during aerobic and anaerobic glycolysis.		
	Explain hemolytic anemia in subjects with pyruvate kinase deficiency based on your biochemical knowledge.		

	Clearly differentiate between substrate level phosphorylation and oxidative phosphorylation.		
GIT-B-005	Discuss the metabolic fates of pyruvate.	Biochemistry	Carbohydrate metabolism/ Metabolic fates of pyruvate
	Describe the transport of pyruvate from cytosol to mitochondria.		
	Elaborate the reaction catalyzed by pyruvate dehydrogenase complex (PDH) along with regulation and significance.		
	Enlist inherited and acquired causes of lactic acidosis and give biochemical explanation for lactic acidosis in each condition.		
GIT-B-006	Describe the TCA cycle along with regulation & significance. Calculate the energy yield of TCA	Biochemistry	Carbohydrate metabolism/ Kreb's Cycle
GIT-B-007	Define gluconeogenesis and enumerate gluconeogenic substrates (precursors)	Biochemistry	Carbohydrate metabolism/ Gluconeogenesis
	Delineate the reactions involved in synthesis of glucose from various gluconeogenic substrates.		
	Elaborate the regulation and importance of gluconeogenesis.		
	Explain the significance of Cori cycle and glucosealanine cycle		
GIT-B-008	Illustrate the reactions of glycogenesis, glycogenolysis along with their regulation and significance	Biochemistry	Carbohydrate metabolism/ Glycogen metabolism
	Enlist various types of glycogen storage diseases (GSDs)		
	Infer the key biochemical and clinical features of various GSDs from the respective enzyme deficiencies.		
GIT-B-009	Describe the reactions and regulation of Hexose Mono Phosphate Pathway (HMP).	Biochemistry	Carbohydrate metabolism/ HMP Hexose Monophosphate Pathway
	Discuss the importance of HMP shunt		
	Explain hemolytic anemia in subjects suffering from		

	G6PD deficiency.		
	Diagnose G6PD (glucose-6-phosphate dehydrogenase) deficiency based on given data.		
GIT-B-010	Describe the reactions, regulation, and biomedical importance of uronic acid pathway and sorbitol pathway	Biochemistry	Carbohydrate metabolism/ Uronic acid pathway & sorbitol pathway
GIT-B-011	Outline the reactions involved in metabolism of galactose and fructose.	Biochemistry	Carbohydrate metabolism/ Metabolism of galactose & fructose
	Infer the key biochemical and clinical features of galactosemia, essential fructosuria, and hereditary fructose intolerance (HFI) from the respective enzyme deficiencies.		
	Explain hypertriacylglycerolemia, hypercholesterolemia, and hyperuricemia associated with fructose loading of liver.		
GIT-B-012	Outline the reactions involved in ethanol metabolism.	Biochemistry	Carbohydrate metabolism/ Ethanol metabolism
	Explain how ethanol consumption causes hypoglycemia and fatty liver.		
GIT-B-013	Diagrammatically illustrate the organization of electron transport chain (ETC) depicting the flow of electrons	Biochemistry	Respiratory chain & oxidative phosphorylation /ETC
	Enlist the components of complex I, II, III, and IV		
	Enumerate clinically important inhibitors of electron transport chain and mention their site of action.		
GIT-B-014	Elaborate the structure of ATP synthase (complex V).	Biochemistry	Respiratory chain & oxidative phosphorylation /ATP synthesis
	Explain how the free energy generated by the transport of electrons by ETC is used to produce ATP from ADP + Pi (i.e. chemiosmotic hypothesis)		
	Elaborate the effect of oligomycin and uncouplers on ATP production.		
	Describe the effect of arsenic poisoning on carbohydrate metabolism and ATP production.		
	Elaborate the glycerol 3-P shuttle and malate-aspartate		

	shuttle for the transfer of reducing equivalents from cytosol into the mitochondria.		
GIT-B-015	Define and classify nutrients into macro and micronutrients.	Biochemistry	Nutrition/ Balanced diet
	Elaborate the concept and importance of Balanced Diet		
	Enlist the components of balanced diet and elaborate the importance of each component.		
GIT-B-016	Delineate special nutritional requirements during pregnancy, lactation, growth, and old age.	Integrate with Community Medicine	Nutrition/ Special nutritional requirements
	Suggest dietary advice for patients suffering from diabetes mellitus, hypertension, obesity, renal disease, lactose intolerance, gluten enteropathy, hypercholesterolemia, and hemorrhoids.		
GIT-B-017	Enlist causes and types of Protein Energy Malnutrition (PEM).	Integrate with community Medicine/ Pediatrics	Nutrition/ PEM
	Differentiate between Kwashiorkor and Marasmus based on the given data		
	Enlist symptoms and signs Outline treatment strategies		
GIT-B-018	Define energy balance.	Biochemistry	Nutrition/ Caloric requirements
	Compare the energy content of macro nutrients and alcohol.		
	Suggest a simple method for estimation of caloric requirements of sedentary adults, moderately active adults, and very active adults		
GIT-B-019	Define basal metabolic rate (BMR)	Biochemistry	Nutrition/ BMR
	Elaborate the effect of various physiological and pathological factors on BMR.		
GIT-B-020	Define body mass index (BMI).	Integrate with community Medicine	Nutrition/ BMI & Obesity
	Categorize individuals into underweight, normal, overweight, obese, and morbidly obese based on their BMI values.		

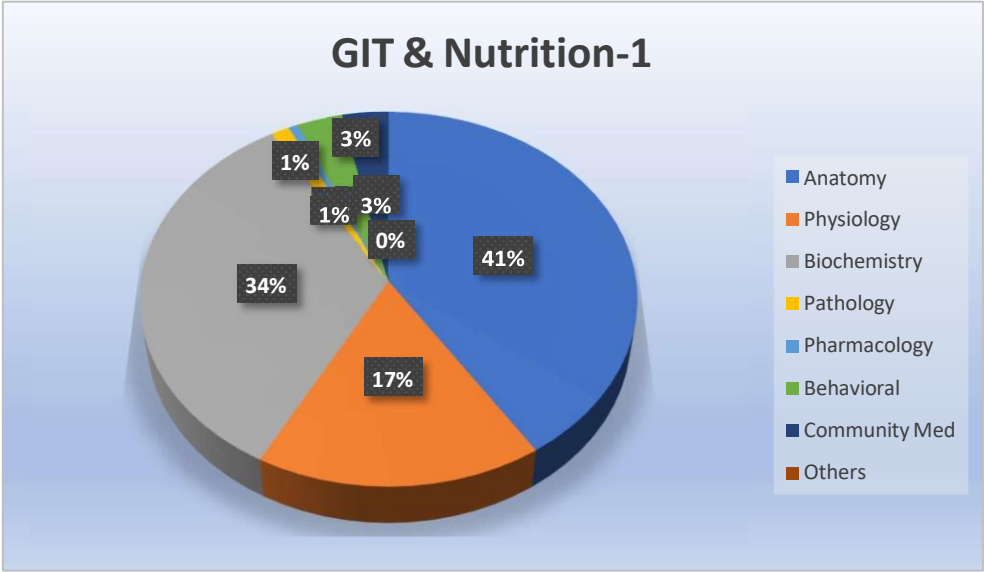
	Elaborate the role of genetic, environmental, and behavioral factors in determining body weight.		
	Clearly differentiate between upper body obesity and lower body obesity.		
	Enlist health risks associated with obesity.		
GIT-B-021	Describe sources, Recommended Dietary Allowance (RDA), biochemical functions, deficiency, and toxicity of vitamin B1, B2, B3, B5 and B7.	Biochemistry	Vitamins/ Energy releasing vitamins & vitamin E and K
	Describe sources, RDA, biochemical functions, deficiency, and toxicity of vitamin E and vitamin K.		
GIT-B-022	Define and classify minerals according to their daily requirements.	Biochemistry	Minerals
	Give sources, functions and biomedical importance of Na, K and Cl.		
	Describe sources, functions and biomedical importance of Mg, Se, I, F, Cu, Cr, Mn, Mo, Zn and Co.		
GIT-B-023	Define Marasmus and Kwashiorkor	Integrated with Pediatrics	Malnutrition
GIT-B-024	Define Acute Hepatitis	Integrated with Medicine Gastroenterology	Acute & Chronic Hepatitis
	Define Chronic Hepatitis		
	Enlist various causes for acute and chronic hepatitis		
	Describe various symptoms and signs of chronic hepatitis		
	Outline treatment strategies		
PRACTICAL			
CODE	BIOCHEMISTRY	TOTAL HOURS = 11+06	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
GIT-B-025	Estimate blood glucose level by glucose oxidase method and interpret the results	Biochemistry Practical	Estimations of blood/urine analytes
	Determine blood glucose level by glucometer and		

	interpret the result.		
	Perform Glucose tolerance test (GTT) and interpret the results.		
	Determine urine glucose by dipstick method and interpret the result.		
	Estimate serum amylase and interpret the result.		
GIT-B-026	Interpret the results of Lactose tolerance test.		
GIT-B-027	Determine BMI of given subject and interpret the results.	Determination & interpretation of results	
GIT-P-011	Demonstrate Cranial nerve V, IX & X testing	Physiology	Cranial nerve
AGING			
CODE	THEORY	TOTAL HOURS = 01	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
GIT-CM-001	Identify causes and risk factors for malnutrition in elderly	Community Medicine	Preventive Medicine in Geriatrics
	Outline treatment strategies		
PATHOPHYSIOLOGY AND PHARMACOTHERAPEUTICS			
CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS=03	
		DISCIPLINE	TOPIC
GIT-Ph-001	Classify anti diarrheal drugs and describe the pharmacokinetics, mechanism of action, pharmacological effects, uses and adverse effects	Pharmacology	Anti Diarrheal Drugs
GIT-Pa-001	Describe the etiology, pathogenesis, morphology and clinical features of peptic ulcer disease	Pathology	Peptic Ulcer
GIT-Pa-002	Enumerate common infectious agents of diarrheal diseases	Pathology	Infectious agents causing Diarrhea
	Discuss pathogenesis and clinical features of common pathogens		

DISEASE PREVENTION & IMPACT

CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 09	
		DISCIPLINE	TOPIC
GIT-BhS-001	Identify health related behaviors and apply principles of learning to modify eating and addictive patterns	Behavioral Sciences	Health related behaviors
GIT-BhS-002	Discuss health belief model and its application in managing common presentations related to gastro- intestinal system		Health related believes
	Explain the transtheoretical model of changing behaviors to modify the diseases pattern		
GIT-BhS-003	Describe motivational interviewing and outline a management plan to help the individuals with obesity and diabetes to lose weight		Management of Obesity
GIT-BhS-004	Describe and distinguish Medically Un described Symptoms (MUS)		Medically Un described Symptoms
	Describe the association of psychosocial factors with MUS		
	Outline the principles of management plan according to biopsychosocial model		
	Describe role of Cognitive Behavioral Therapy (CBT)		
GIT-BhS-005	To identify effect on mental development of nutritional deficiencies		Role of nutritional deficiencies in mental development
GIT-CM-001	Describe prevention and control of polio, viral hepatitis A, cholera, typhoid and food poisoning	Community Medicine	Epidemiology of communicable diseases (Intestinal infection)
	Describe prevention and control of amoebiasis, ascariasis, hook worm infestation		
GIT-CM-002	Describe the advice to be given for breast feeding, weaning and childhood		Preventive medicine in pediatrics
	Discuss risk factors, prevention and management of protein energy malnutrition (PEM)		

GIT-CM-003	Describe balanced diet for adult and obesity		Nutrition & Health
	Plot and interpret growth chart for children under 5 years of age		
	Describe prevention and control of deficiency of Vitamin A and D		



Module Weeks	Recommended Minimum Hours
06	152





Time Table with Assessment Schedules



QUEENS MEDICAL COLLEGE, KASUR
Timetable 2nd Year MBBS
GI-1 MODULE: Week 1 Theme: Oral Cavity

	08.30-9.05	09.05-90.40	09.40-10.15	10.15-10.50	10.50-11.25	11.25-12.00	12.00-01.00	
Monday	Anatomy Dissection GIT-A-001 Oral cavity + tonsils	Embryology LGIS GIT-A-014 Tongue + Tongue tie	Histology SGIS GIT-A-018 Microscopic Structure of Tongue, Lips + Oral Cavity	Physiology LGIS GIT-P-001 Enteric Ner.Sys, Myenteric/ Meissner's plexus	Biochemistry LGIS GIT-B-001 Digestion + Absorption of dietary carbohydrates + disorders	Practical Batch A: Anatomy GIT-023 Salivary Glands Batch B: Physiology GIT-P-011: Cranial V Testing Batch C: Biochem: GIT-B-025 glucose estimation by glucose oxidase method + glucometer	Clinical Skill Foundation CSF- GIT I Abdominal Examination: General + Inspection, Percussion, Auscultation -- Demonstration + Peer Assessment	
Tuesday	Anatomy Dissection GIT-A-001 Tongue + Hypoglossal nerve	Behavioural Sciences LGIS GIT-BhS-001 Health Related Behaviours in eating and addiction	PERL Workshop PERLs 2-03 Reflection on last year + how you improved on weak point	Physiology LGIS GIT-P-001 Slow wave and Spike potential	Biochemistry LGIS GIT-B-002 Glucose entry into cells- transport system	Practical Batch C: Anatomy GIT-023 Salivary Glands Batch A: Physiology GIT-P-011: Cranial V Testing Batch B: Bioche: GIT-B-025 glucose estimation by glucose oxidase method + glucometer	SGIS Batch A: Anatomy GIT-A-014 Cleft Palate Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: GIT-B-0024 Pyruvate kinase deficiency + hemolytic anemia	
Wednesday	Anatomy Dissection GIT-A-001 Hard & Soft Palate with anatomical features, nerve supply and actions		Embryology LGIS GIT-A-014 Palate + Cleft Palate	Physiology LGIS GIT-P-001 Factors polarizing Gi Membrane, Neurotransmitters, role of SNS, PNS on GIT function	Biochemistry LGIS GIT-B-003 Hormonal control of BSL	Practical Batch B: Anatomy GIT-023 Salivary Glands Batch C Physiology GIT-P-011: Cranial V Testing Batch A: Biochemistry: GIT-B-025 glucose estimation by glucose oxidase method + glucometer	SGIS Batch C: Anatomy GIT-A-014 Cleft Palate Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: GIT-B-0024 Pyruvate kinase deficiency + hemolytic anemia	
Thursday	Anatomy Dissection GIT-A-001 Parotid Gland + clinical correlates. Waldeyer's ring	Histology SGIS GIT-A-018 Serous and Mucinous Acini-Serous demilunes	PakStudies/Islamiat LGIS F-PS-IS-007	Physiology LGIS GIT-P-001 GI Reflexes	Biochemistry LGIS GIT-B-004 Glycolytic pathway-regulation + significance	Com. Medicine LGIS GIT-CM-001 Communicable disease- intestinal disease	SGIS Batch B: Anatomy GIT-A-014 Cleft Palate Batch C: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: GIT-B-0024 Pyruvate kinase deficiency + hemolytic anemia	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:30-11:10	11:10-11:40	11:50-12:30	12:30-1:30	1:30-2:30
	Anatomy Dissection GIT-A-001 Submandibular + Sublingual Gland	Behavioural Sciences LGIS GIT-BhS-001 Health Belief Model in GI disease management	Histology SGIS GIT-A-018 Microscopic Structure of Parotid +Submandibular + Sublingual Gland	Physiology LGIS GIT-P-001 Hormones acting on GI + types of GI movement :functions and control	Biochemistry LGIS GIT-B-004 Aerobic and Anerobic glycoslysis	Biochemistry LGIS GIT-B-004 Substrate level phosphorylation + Oxidative phosphorylation	Jumma Prayer	Self-Directed Learning

1. MODULE: Week 2 Theme: Foregut and its functions

	08.30-9.05	09.05-90.40	09.40-10.15	10.15-10.50	10.50-11.25	11.25-12.00	12.00-01.00	
Monday	Anatomy Dissection GIT-A-001 Pharynx + Pharyngeal Constrictor muscles	Embryology LGIS GIT-A-015 Gut tube, mesentery + esophagus(clinical: TES and atresia)	Histology SGIS GIT-A-018 Various layers of GIT and their functions	Physiology LGIS GIT-P-002 Reflex Arc of mastication + Chewing reflex	Biochemistry LGIS GIT-B-005 Metabolic fates of pyruvate + Lactic acidosis	Practical Batch A: Anatomy GIT-024 Esophagus+ Stomach Batch B: Physiology GIT-P-011: Cranial IX Testing Batch C: Biochem: GIT-B-025 GTT	Clinical Skill Foundation CSF- GIT I Abdominal Examination: Palpation of dif. Organs -- Demonstration + Peer Assessment	
Tuesday	Anatomy Substage 1	Behavioural Sciences LGIS GIT-BhS-002 Transtheoretical model of changing behaviors		Physiology LGIS GIT-P-002 Swallowing stages and process of voluntary swallowing	Biochemistry LGIS GIT-B-005 Metabolic fates of pyruvate + Lactic acidosis	Practical Batch C: Anatomy GIT-024 Esophagus+ Stomach Batch A: Physiology GIT-P-011: Cranial IX Testing Batch B: Biochem: GIT-B-025 GTT	SGIS Batch A: Anatomy GIT-A-002 Hernias +Incisions Batch B: Physiology GIT-P-002 LES with Achalasia+ Megaesoph. Batch C: Biochemistry: GIT-B-004 Aero/Anero glycoslysis ATP Calculation	
Wednesday	Anatomy Dissection GIT-A-002 Fasia + Rectus Sheath. Muscles of anterior abdominal wall		Embryology LGIS GIT -A-015 Development and rotation of Stomach+ Pyloric stenosis	Physiology LGIS GIT-P-002 Involuntary Swallowing. Effect of swallowing on respiration	Biochemistry LGIS GIT-B-006 Kreb Cycle + energy yielded in TCA	Practical Batch B: Anatomy GIT-024 Esophagus+ Stomach Batch C Physiology GIT-P-011: Cranial IX Testing Batch A: Biochemistry: GIT-B-025 GTT	SGIS Batch C: Anatomy GIT-A-002 Hernias +Incisions Batch A: Physiology GIT-P-002 LES with Achalasia+ Megaesoph. Batch B: Biochemistry: : GIT-B-004 Aero/Anero glycoslysis ATP Calculation	
Thursday	Anatomy Dissection GIT-A-002 Inguinal Ligament, rings, and Inguinal canal. Hernia+ Spermatic Cord	Embryology LGIS GIT -A-015 Development and rotation of Stomach+ Pyloric stenosis	PakStudies/Islamiat LGIS F-PS-IS-007	Physiology LGIS GIT-P-002 Peristalsis types in esophagus, role of LES- Dysphagia	Biochemistry LGIS GIT-B-006 Gluconeogenesis+ Precursors – regulations	Com. Medicine LGIS GIT-CM-001 Amibiases, acariasis, Hook Worm disease	SGIS Batch B: Anatomy GIT-A-002 Hernias +Incisions Batch C: Physiology GIT-P-002 LES with Achalasia+ Megaesoph. Batch A: Biochemistry: GIT-B-004 Aero/Anero glycoslysis ATP Calculation	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:30-11:10	11:10-11:50	11:50-12:30	12:30-1:30	1:30-2:30
	Anatomy Dissection GIT-A-002 Planes + Quadrant of Abdomen. Abdominal Wall with innervation	Behavioural Sciences LGIS GIT-BhS-004 Medically Unspecified Symptoms + management	Histology SGIS GIT-A-018 Esophagus + Clinical Correlates/Changes	Biochemistry LGIS GIT-B-006 Gluconeogenesis- Regulation Cori Cycle + Glucosealanine cycle	Biochemistry LGIS GIT-B-008 Glycogenesis, Glycogenolysis – regulation + Importance	Jumma Prayer		Self-Directed Learning

GI-1 MODULE: Week 3 Theme: Organs of foregut and their functions

	08.30-9.05	09.05-90.40	09.40-10.15	10.15-10.50	10.50-11.25	11.25-12.00	12.00-01.00	
Monday	Anatomy (Embryology + Histology) Test	Embryology LGIS F-A-015 Development of duodenum, liver	Histology LGIS GIT-A-019 Stomach + Pernicious Anemia	Physiology LGIS GIT-P-003 Stomach-storage function and basic electrical rhythm	Biochemistry LGIS GIT-B-001 Composition and Importance of Gastric Juice- HCL Secretion + clinical Disorders	Practical Batch A: Anatomy GIT-027 Gall Bladder Batch B: Anatomy GIT-027 Liver, pancreas Batch C: Biochem: GIT-B-025 Urine dipstick Glucose determination	Clinical Skill Foundation CSF- GIT I Shifting Dullness Procedure -- Demonstration + Peer Assessment	
Tuesday	Anatomy Dissection GIT-A-004 Gross Anatomical features (Item no 1-8 -see HIS Syllabus)	PERL Workshop PERLS2-07 Literature Review Literature Search Strategy		Physiology LGIS GIT-P-003 Gastric Emptying+ factors	Biochemistry LGIS GIT-B-001 Composition and Importance of Pancreatic Juice- HCL Secretion + clinical Disorders	Practical Batch C: Anatomy GIT-027 Gall Bladder Batch A: Anatomy GIT-027: Liver, pancreas Batch B: Bioche GIT-B-025 Urine dipstick Glucose determination	SGIS Batch A: Anatomy GIT-A-014 Cleft Palate Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: GIT-B-011 Fructose loading- Clinical	
Wednesday	Anatomy Dissection GIT-A-004 Peritoneum nerve supply_ clinical correlates (peritonitis, ascites, adhesions, paracentesis)	Pathology LGIS GIT-Pa-001 Peptic Ulcer Disease	Embryology LGIS F-A-015 Development of Gall Bladder/biliary atresia	Physiology LGIS GIT-P-003 Duodenal factors inhibiting Gastric Emptying + initiating enterogastric inhibitory reflexes	Biochemistry LGIS GIT-B-008 Glycogen storage diseases + key biochemical/clinical features	Practical Batch B: Anatomy GIT-027 Gall Bladder Batch C Anatomy GIT-027 Liver, pancreas Batch A: Biochemistry: GIT-B-025 Urine dipstick Glucose determination	SGIS Batch C: Anatomy GIT-A-014 Cleft Palate Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: : GIT-B-011 Fructose loading- Clinical	
Thursday	Anatomy Dissection GIT-A-005 Esophagus, neurovascular supply+ clinical correlates	Embryology LGIS F-A-015 Development of pancreas- annular pancreas	Com. Medicine LGIS GIT-CM-002 Nutritional advice during breastfeeding, weaning and childhood	Physiology LGIS GIT-P-003 Gastritis, peptic ulcer- physiological basis	Biochemistry LGIS GIT-B-009 HMP Pathway – regulation + Importance	Biochemistry SGIS-All batches GIT-B-009 G6PD Deficiency based on data + occurrence of Hemolytic anemia	SGIS Batch B: Anatomy GIT-A-014 Cleft Palate. Batch C: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: GIT-B-011 Fructose loading- Clinical	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:30-11:10	11:10-11:50	11:50-12:30	12:30-1:30	1:30-2:30
	Anatomy Dissection GIT-A-004 Peritoneal reflections + relationship with viscera	Behavioural Sciences LGIS GIT-BhS-004 CBT in managing MUS	Biochemistry LGIS GIT-B-010 Uronic acid and Sorbitol pathway	Physiology LGIS GIT-P-004 Hormones and movements of small intestine	Biochemistry LGIS GIT-B-011 Galactose and Fructose Metabolism	Jumma Prayer		Self-Directed Learning

	8:00- 9:15	9:15 - 10:00	10:00- 10:45	10:45- 11:15	11:15- 12:00	12:00-12:45	12:45-1:45	1:45 – 3.00	
Monday	Physiology Test	Embryology LGIS F-A-016 Development of midgut	Histology LGIS GIT-A-019 Stomach + Pernicious Anemia	B	Physiology LGIS GIT-P-004 Peristaltic rush+ functions of ileocecal valve and sphincter	Biochemistry LGIS GIT-B-012 Ethanol Metabolism+ consumption	Practical Batch A: Anatomy GIT-025 Small Intestine Batch B: Physiology GIT-P-011: Cranial X Testing Batch C: Biochem: GIT-B-025 Estimate Serum Amylase	Clinical Skill Foundation CSF- GIT I Abdominal Xrays -- Demonstration + Peer Assessment	
Tuesday	Anatomy Dissection GIT-A-006 Stomach, neurovascular/lymphatic supply+ clinical correlates	PERL Workshop PERLs2-05 Portfolio Update with 2 achievements at least		R	Physiology LGIS GIT-P-004 Intestinal Sprue	Biochemistry LGIS GIT-B-013 Electron Transport Chain	Practical Batch C: Anatomy GIT-025 Small Intestine Batch A: Physiology GIT-P-011: Cranial X Testing Batch B: Bioche:GIT-B-025 Estimate Serum Amylase	SGIS Batch A: Anatomy GIT-A-014 Cleft Palate Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: F-B-002 Cell Membrane	
Wednesday	Anatomy Dissection GIT-A-007 Duodenum, neurovascular/lymphatic supply+ clinical correlates	Embryology LGIS F-A-016 Clinical Correlates midgut develop + Meckel's Diverticulum	Com. Medicine LGIS GIT-CM-002 Nutritional advice during childhood	E	Physiology LGIS GIT-P-005 Movements in Colon+ Gastrocolic+ Duodenocolic reflexes	Biochemistry LGIS GIT-B-014 ATP synthesis	Practical Batch B Anatomy GIT-025 Small Intestine Batch C Physiology GIT-P-011: Cranial X Testing Batch A: Biochemistry: GIT-B-025 Estimate Serum Amylase	SGIS Batch C: Anatomy GIT-A-014 Cleft Palate Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: F-B-002 Cell Membrane	
Thursday	Anatomy Substage II	Histology LGIS GIT-A-020 Small Intestine-duodenum, jejunum + ileum	Com. Medicine LGIS GIT-CM-003 Prevention and Control of Vitamin A in D	A	Physiology LGIS GIT-P-005 Defecation Reflexes+ Factors affecting+ Constipation	Biochemistry LGIS GIT-B-014 ATP synthesis- Clinical correlates-arsenic poisoning+ role of shuttles	SGIS/Practical GIT-CM-003 Growth Chart Interpretation under 5 years of age	SGIS Batch B: Anatomy GIT-A-014 Cleft Palate Batch C: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: F-B-002 Cell Membrane	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20- 10:30	10:30-11:10	11:10-11:50	11:50-12:30	12:30- 1:30	1:30-3:00
	Anatomy Dissection GIT-A-007 + 008 Appendix, small + Large intestines--> Blood supply of GIT- formation of hepatportal vein + portosystemic anastomosis	Behavioural Sciences LGIS GIT-BhS-005 Effect on mental development of nutritional deficiencies	Com. Medicine LGIS GIT-CM-002 Balanced Diet for adult and obesity	K	Physiology LGIS GIT-P-006 Liver	Biochemistry LGIS GIT-B-015 Nutrition/Balanced diet	Histology LGIS GIT-A-020	Jumma Prayer	Self-Directed Learning

GI-1 MODULE: Week 5 Theme: Hindgut + Nutrition

	8:00- 9:15	9:15 - 10:00	10:00- 10:45	10:45- 11:15	11:15- 12:00	12:00-12:45	12:45-1:45	1:45 – 3:00	
Monday	Biochemistry Test	Embryology LGIS F-A-017 Development of hindgut	Histology LGIS GIT-A-021 Large Intestine: Colon, Appendix, Rectum	B	Physiology LGIS GIT-P-006 Gallbladder, bile, gall stones	Biochemistry/Com. Med LGIS GIT-B-016 + 018 Caloric Requirement + Special Nutrition requirement	Practical Batch A: Anatomy GIT-028 Lymphatic Tissue ass with GIT Batch B: Physiology F-P-008: Lab Use Batch C: Biochem: GIT-B-026 Lactose Tolerance Test	Clinical Skill Foundation CSF- GIT I Dehydration assessment and formulation of ORS -- Demonstration + Peer Assessment	
Tuesday	Anatomy Dissection GIT-A-008 Liver + Subphrenic spaces neurovascular/lymphatic supply+ clinical correlates	Behavioural Sciences LGIS GIT-BhS-003 Motivational Interviewing in obesity management	PERL Workshop PERLs2-06 Blog Writing or Wiki Writing	R	Physiology LGIS GIT-P-007 Pancreas- function and secretion-pancreatitis	Biochemistry/Paediatrics LGIS GIT-B-019+ 020 BMR + BMI	Practical Batch C: Anatomy GIT-028 Lymphatic Tissue ass with GIT Batch A: Physiology F-P-008: Lab Use Batch B: Biochem: GIT-B-026 Lactose Tolerance Test	SGIS Batch A: Anatomy GIT-A-013 Surgical correlate Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: GIT-B-027 BMI calculation + Interpretation	
Wednesday	Anatomy Dissection GIT-A-009+010+011 Biliary System , Pancreas +Spleen neurovascular/lymphatic supply+ clinical correlates	Biochemistry LGIS GIT-B-021 Vitamins	Embryology LGIS F-A-017 Clinical Correlates-hindgut	E	Physiology LGIS GIT-P-008 Vomiting Act + motion sickness-chemoreceptor trigger zone	Biochemistry LGIS GIT-B-022 Minerals	Practical Batch B: Anatomy GIT-028 Lymphatic Tissue ass with GIT Batch C Physiology F-P-008: Lab Use protocol. Batch A: Biochemistry: GIT-B-026 Lactose Tolerance Test	SGIS Batch C: Anatomy GIT-A-013 Surgical correlate Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: GIT-B-027 BMI calculation + Interpretation	
Thursday 25th	Anatomy Dissection GIT-A-012 Sigmoid, Colon, Rectum and Anal Canal Neurovascular/lymphatic supply+ clinical correlates	Histology LGIS GIT-A-021 Colorectal Cancer, Anal Abscess, Hemorrhoids	Aging/ Com. Medicine LGIS GIT-CM-001 Malnutrition in the elderly and preventive measures	A	SEMINAR: MALNUTRITION			SGIS Batch B: Anatomy GIT-A-013 Surgical correlate Batch C: Physiology F-P-001 Cell organelles. Batch A: Biochemistry GIT-B-027 BMI calculation + Interpretation	
					Physiology LGIS GIT-P-009 Malnutrition	Biochemistry/Pediatrics GIT-B-017+023 Nutrition/PEM	Com. Medicine LGIS GIT-CM-002 Risk factors, prevention, and management of PEM		
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20- 10:30	10:30-11:10	11:10-11:50	11:50-12:30	12:30-1:30	1:30-3:00
	Anatomy STAGE		Biochemistry/Gastroenterology LGIS GIT-B-024 Hepatitis-acute and chronic	K	SEMINAR: DIARRHEA			Jumma Prayer	Self-Directed Learning
					LGIS GIT-P-005+ 010 Diarrhea	LGIS GIT-Pa-002 Infectious agents causing Diarrhea	LGIS GIT-Ph-001 Anti-Diarrheal Drugs		

QUEENS MEDICAL COLLEGE, KASUR

2nd Year MBBS (Session-2024-25)

BLOCK 4 UHS Exam paper

MBBS 2nd Professional

Block-4

Theme	Subject	Written Exam			Oral/Practical/Clinical Exam			
		MCQ (1 mark)	SEQ (5 mark each)	Marks	OSPE (8 marks each observed)	OSCE (8 marks each observed)	OSVE (16 marks each observed)	Marks
Normal Structure	Anatomy applied/clinical	23	03	38	03	-	01	40
Normal Function	Physiology applied/clinical	16	02	26	02	-	01	32
	Biochemistry applied/clinical	20	02	30	02	-	01	32
Disease Burden & Prevention	Community Medicine & Public Health	07	-	07	-	-	-	-
	Behavioral Sciences	06	-	06	-	-	-	-
Pathophysiology & pharmacotherapeutics	Pathology	09	-	09	-	-	-	-
	Pharmacology	04	-	04	-	-	-	-
CFRC	CF-2-1	-	-	-	-	01	-	08
PERLs	PERLs-2-1	-	-	-	-	01	-	08
Total		85	7x5=35	120	07 stations x 08 = 56	02 stations x 08 = 16	03 stations x 16=48	120

HOD Anatomy: _____

HOD Physiology: _____

HOD Biochemistry: _____

HOD-Medical Education
ABWA Medical College
Faisalabad

GIT-I Module Incharge
ABWA Medical College
Faisalabad

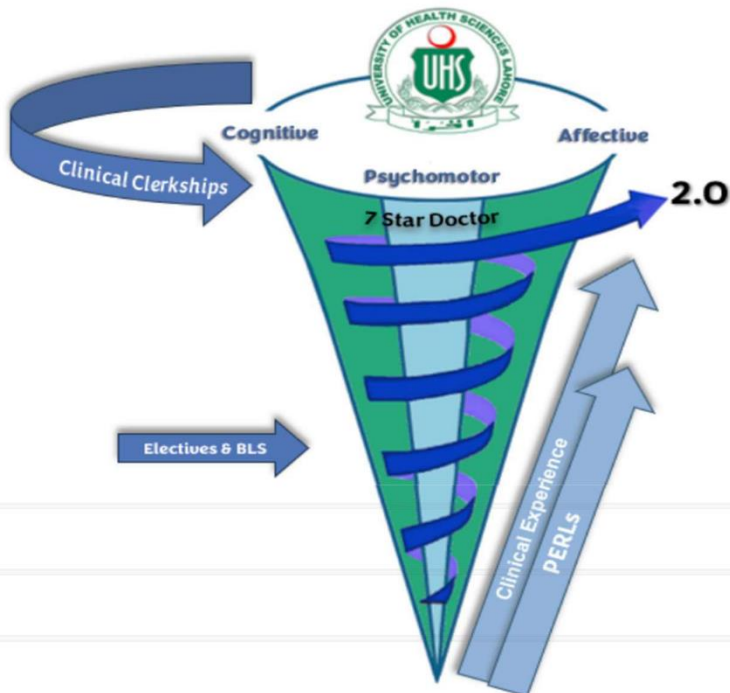
Chairman Curriculum Committee
ABWA Medical College
Faisalabad

Principal
ABWA Medical College
Faisalabad

MODULE NO. 07:

RENAL-I

MODULAR INTEGRATED CURRICULUM 2K23 *version 2.0*



MODULE RATIONALE

The renal module for second-year MBBS (Bachelor of Medicine, Bachelor of Surgery) students is a crucial component of the medical curriculum. This module is designed to provide students with a comprehensive understanding of the structure, function, and pathology of the kidneys, as well as the principles of renal physiology and the clinical management of and electrolyte balance, acid-base balance, and blood pressure. Understanding renal physiology is essential for comprehending various disease renal disorders. Here are some key rationales for including a renal module in the curriculum:

MODULE OUTCOMES

- Discuss the gross and microscopic anatomy of kidney and urinary system.
- Explain the embryological development of kidney and urinary tract
- Explain common developmental abnormalities of renal system
- Identify role of renal system in maintaining blood pressure and acid base balance
- Enlist functions of kidney and pathologies related to them.
- Explain method of electrolyte balance and pathologies related to it.
- Highlight pathologies related to kidneys and their distinctive clinical features
- Interpret investigations done to diagnose abnormal structural and functional presentations.

THEMES

- Kidney
- Ureter
- Bladder
- Acid/base balance

CLINICAL RELEVANCE

- Protein in urine.
- Kidney stones.
- Kidney pain.
- Blood in urine (hematuria)
- Kidney infection.
- Acute kidney injury (AKI)
- Kidney cancer.
- Dialysis

- Control of blood pressure

IMPLEMENTATION TORs

- The time calculation for completion of modules and blocks is based on 35 hours per week. Total hours of teaching, learning and formative/summative internal assessment to be completed in a year are 1200.
- The hours mentioned within each module are the mandatory minimum required. The rest of the hours are left to the discretion of the institution that can be used in teaching, learning and assessment as per decision of the institutional academic council.
- The content and the intended learning outcomes written are mandatory, to be taught, at the level required, as the end year assessment will be based on these.
- However, the level of cognition can be kept at a higher level by the institution.
- The Table of Specifications provided will be used for the three papers of the Second professional examination. The same table of specifications should be used for the respective three block exams for internal assessment.



SYLLABUS OF RENAL-I MODULE



NORMAL STRUCTURE			
THEORY			
CODE	GROSS ANATOMY	TOTAL HOURS = 14	
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC
R-A-001	Describe gross features and facial coverings of kidneys.	Human Anatomy	Kidney
	Compare and contrast the relations of right and left kidneys.		
	Describe blood supply, lymphatics and nerve supply of kidney		
	Discuss the clinical aspects of kidneys		
	Demonstrate the surface marking and radiographic anatomy of kidney. Identify the side of kidney		
R-A-002	Compare and contrast the relations of right and left ureter	Human Anatomy	Ureter
	Give the constrictions of ureter		
	Describe the blood supply nerve supply and lymphatics of ureter		
	Identify the ureter.		
R-A-003	Describe the gross anatomical features, relations, surfaces, blood supply, nerve supply and lymphatics of urinary bladder	Human Anatomy	Urinary bladder
	Give the clinical correlates of urinary bladder		
	Identify the gross features and surfaces of urinary bladder		
R-A-004	Interpret basic urological signs/symptoms & investigations.	Integrate with urology	Sign/symptom/investigations
R-A-005	Describe the etiology, and management of urinary retention.		Urinary retention
R-A-006	Identify and describe the various anatomic landmarks of the renal system on	Integrate with Radiology	radiograph

	radiographs.		
R-A-007	Describe the parts of urethra.	Human Anatomy	Urethra
CODE	EMBRYOLOGY & POST-NATAL DEVELOPMENT	TOTAL HOURS = 05	
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC
R-A-008	Describe development of intermediate mesoderm and its derivatives	Embryology	Development of urinary system
	Describe the development of pronephros, mesonephros and metanephros	Embryology	
	Describe positional changes during descent of kidney with correlation to its blood supply	Embryology	
	Describe the development of urinary bladder and urethra	Embryology	
	List and describe the common congenital anomalies of kidney, urinary bladder and urethra.	Embryology	
CODE	MICROSCOPIC STRUCTURE	TOTAL HOURS = 04	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
R-A-009	Describe the histological, structural organization and functions of kidney with clinicals.	Histology	Structure of kidney
R-A-010	Describe the light and ultrastructure of Juxtaglomerular apparatus and glomerular filtration barrier	Histology	Juxtaglomerular apparatus
R-A-011	Describe the histological structure of ureter	Histology	Structure of ureter
R-A-012	Describe the histological structure of urinary bladder Discuss clinical correlates (Cystitis, Urinary bladder cancer, Urinary Tract Infections (UTIs))	Histology	Structure of urinary bladder

PRACTICAL

CODE	HISTOLOGY	TOTAL HOURS = 06	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
R-A-013	Identify and draw and label the histological structure of kidney and enumerate points of identification	Practical	Kidney
R-A-014	Identify, draw and label the histological structure of ureter and enumerate its points of identification	Practical	Ureter
R-A-015	Identify, draw and label the histological structure of urinary bladder and enumerate its points of identification	Practical	Urinary bladder

NORMAL FUNCTION

THEORY

CODE	MEDICAL PHYSIOLOGY	TOTAL HOURS=36	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
R-P-001	Describe major composition of intracellular and extracellular fluids	Physiology	Body fluid compartment
	Define Hypo and hypernatremia		
	Explain the causes of hypo & hypernatremia and their effects on Composition of body fluid compartments		
	Describe difference between iso-osmotic, hyper-osmotic, hypo-osmotic fluids		
R-P-002	Enumerate causes of Intracellular and extracellular edema	Integrate with Medicine	Edema
	Describe safety factors that prevent edema		
R-P-003	Explain the functions of the kidney	Physiology	Function
R-P-004	Describe the mechanism of micturition and its control		Micturition reflex

	Explain the role of higher center on micturition		
	Explain the physiological anatomy and innervation of bladder		
	Discuss the voluntary control of micturition		
R-P-005	Explain the causes, pathophysiology, and features of atonic bladder. Discuss the causes, pathophysiology, and features of automatic bladder. Write the causes, pathophysiology, and features of uninhibited neurogenic bladder	Integrate with Pathology	Abnormalities of micturition
R-P-006	Enlist the steps of urine formation	Physiology	Urine formation
	Explain the physiological anatomy and functions of glomerular capillary membrane		
	Discuss the composition of filtrate		
	Explain the minimal change nephropathy and increase permeability to plasma protein		
R-P-007	Define Glomerular Filtration Rate (GFR).	Physiology	Glomerular filtration
	Describe the determinants of GFR		
	Explain the factors affecting GFR		
	Discuss the hormones and autocooids that affect GFR		
	Explain mechanisms of autoregulation of GFR		
	Enlist the physiological and pathological factors that decrease GFR		
	Explain the effects of angiotensin II blocker on GFR during renal hypoperfusion		
R-P-008	Enumerate different types of transport along the kidney tubules for reabsorption	Physiology	Reabsorption
	Explain the reabsorption and secretion along different parts of the Nephron		
	Explain the regulation of tubular reabsorption		
	Discuss the forces / pressure and hormones that		

	determine renal tubular reabsorption		
	Explain the reabsorption of water along different parts of nephron		
	Define obligatory and facultative reabsorption		
	Discuss the characteristics of late distal tubules and cortical collecting ducts		
	Discuss the characteristics of medullary collecting ducts		
R-P-009	Explain the use of clearance method to quantify kidney function	Physiology	Clearance method
R-P-010	Describe mechanism of re-absorption of sodium along different parts nephrons	Physiology	Transport maximum
	Define and explain the term Transport maximum for the substances		
	Define filtered load for the substance		
	Justify the difference of transport maximum and renal threshold of glucose in renal tubules		
R-P-011	Explain the renal mechanisms for excreting Dilute urine	Physiology	Urine concentration and dilution
	Explain the mechanism for forming a concentrated urine		
	Discuss the role of urea in the process of counter current multiplier mechanism		
	Describe the countercurrent exchange in vasa Recta to preserve hyperosmolarity of renal medulla		
R-P-012	Define and explain the term obligatory urine volume. Define and explain free water clearance. Define Urine specific gravity.	Physiology	Obligatory urine volume
R-P-013	Enumerate different abnormalities of urinary concentrating ability	Physiology	Disorders of urine concentrating ability
R-P-014	Enumerate the types of Diabetes insipidus	Integrate with	Diabetes

	Enlist the features of diabetes insipidus	Medicine	insipidus
	Explain the pathophysiology and treatment of central diabetes insipidus		
	Discuss the pathophysiology of nephrogenic diabetes insipidus		
R-P-015	Make the flow chart to show the Osmoreceptor-antidiuretic hormone (<i>ADH</i>) feedback mechanism for regulating extracellular fluid osmolarity in response to a water deficit.	Physiology	Osmoreceptor- ADH Feedback System
	Enlist the factors which increase and decrease the release of ADH	Physiology	Thirst
R-P-016	Explain the mechanism of thirst		Renal regulation of potassium
R-P-017	Enumerate the factors that can alter potassium distribution between intracellular and extracellular fluids		
	Discuss the process of secretion of potassium by renal tubules Explain the regulation of internal potassium distribution and potassium secretion		
R-P-018	Explain the control of extracellular fluid osmolarity and sodium concentration		Control of ECF osmolarity
R-P-019	Explain the integration of renal mechanism for control of Extracellular Fluid (ECF)		Control of ECF
	Explain the importance of pressure natriuresis and diuresis in maintaining body sodium and fluid balance		
R-P-020	Explain the renal handling of calcium concentration to regulate plasma calcium concentration		Renal regulation of calcium Renal regulation of phosphate
	Enumerate the factors that alter renal calcium		
	Enlist the factors that alter renal phosphate excretion		

R-P-021	Explain the nervous and hormonal factors that increase the effectiveness of renal body fluid feedback control	Physiology	Renal body fluid feedback control
R-P-022	Explain the conditions that cause large increase in blood volume and ECF volume Explain the conditions that cause large increase ECF volume but with normal blood volume		ECF and blood volume
R-P-023	Explain the renal handling of H ⁺ ion.		Acid base balance
R-P-024	Analyze the acid base disturbances on the basis of pH, HCO ₃ and CO ₂	Physiology	Acid base disturbance
	Explain the causes and compensation of metabolic acidosis		
	Explain the causes and compensation of metabolic alkalosis		
	Explain the causes and compensation of respiratory acidosis		
	Explain the causes and compensation of respiratory alkalosis		
	Explain the causes and compensation of mixed acid base disorder		
R-P-025	Define and explain anion gap	Physiology	Anion gap
CODE	MEDICAL BIOCHEMISTRY	TOTAL HOURS = 23	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
R-B-001	Describe digestion and absorption of dietary proteins along with the inherited and acquired disorders (peptic ulcer, Hartnup disease, gluten enteropathy and cystic fibrosis). Elaborate the mechanisms involved in renal reabsorption of amino acids and discuss related disorders (Hartnup disease and cystinuria)	Medical Biochemistry	Protein digestion and absorption, reabsorption, and related disorders
R-B-002	Clearly differentiate between protein digestion and	Medical	Protein

	degradation. Compare the salient feature of the two major mechanisms for degradation of body proteins. Elaborate the concept of protein turnover and quote examples of short lived and long-lived proteins.	Biochemistry	Metabolism/ Protein degradation and turnover
R-B-003	Define amino acid pool. Delineate the sources and fates of amino acids. Give definition of nitrogen balance and its three states. Give physiological and/or pathological conditions associated with each state of nitrogen balance.	Medical Biochemistry	Protein Metabolism/ Amino acid pool and nitrogen balance
R-B-004	Enlist 7 important reactions involved in amino acid metabolism and give a brief introduction of each. (Deamination, Transamination, Trans-deamination, Deamidation, Decarboxylation, Transmethylation & Transpeptidation)	Medical Biochemistry	Protein Metabolism/ Introduction to Reactions involved in catabolism
R-B-005	Define transamination. Describe the reactions catalyzed by ALT (alanine transaminase) and AST (aspartate aminotransferase) with special reference to the role of pyridoxal phosphate in the transfer of amino group. Give diagnostic and prognostic importance of serum ALT and AST. Elaborate the importance of transamination reaction in amino acid metabolism.	Medical Biochemistry	Protein Metabolism/ Transamination
R-B-006	Define oxidative deamination. Describe the reaction catalyzed by glutamate dehydrogenase (GDH) along with its significance.	Medical Biochemistry	Protein Metabolism/ Trans deamination

	Define trans deamination.		
R-B-007	Define deamidation. Describe deamidation reaction catalyzed by glutaminase and asparaginase along with their significance. Explain how does L-asparaginase help in the management of certain types of leukemia. Elaborate the mechanism for shunting of glutamine from liver to kidneys during acidosis. Give advantage of shunting.	Medical Biochemistry	Protein Metabolism/ Deamidation
R-B-008	Define decarboxylation. Describe important decarboxylation reactions along with their significance	Medical Biochemistry	Protein Metabolism/ Decarboxylation
R-B-009	Give sources of ammonia in human body. Describe how ammonia is transported to liver with special reference to the role of glutamine and alanine in this transport mechanism.	Medical Biochemistry	Protein Metabolism/ Sources and transport of ammonia
R-B-010	Elaborate the reactions and regulation of urea cycle. Enlist the inherited and acquired causes of hyperammonemia in each condition. Give the biochemical mechanisms underlying ammonia intoxication. Discuss dietary and therapeutic measures for the management of patients with hyperammonemia (phenylbutyrate, lactulose, antibiotics).	Medical Biochemistry	Protein Metabolism/ Urea cycle, ammonia intoxication and its management
R-B-011	Trace the pathways for synthesis of non-essential amino acids (NEAA) (alanine, aspartate, glutamate,	Medical Biochemistry	Protein Metabolism/ Biosynthesis of

	glutamine, asparagine, proline, serine, glycine, cysteine, and tyrosine)		NEAA
R-B-012	Discuss the fate of carbon skeletons of amino acids. Categorize amino acids into glucogenic, ketogenic or both depending upon the intermediates produced during their catabolism. Outline the catabolic pathways of amino acids that yield oxaloacetate. Outline the catabolic pathways of amino acids that yield α-ketoglutarate. Outline the catabolic pathways of amino acids that yield pyruvate. Outline the catabolic pathways of amino acids that yield fumarate. Outline the catabolic pathways of amino acids that yield succinyl CoA. Outline the catabolic pathways of amino acids that yield acetyl CoA or acetoacetyl CoA.	Medical Biochemistry	Protein Metabolism/ Degradation of carbon skeleton of amino acids
R-B-013	Describe the metabolism of methionine. Discuss cause, Key diagnostics features and management of homocystinuria.	Biochemistry/ integrate with Pediatrics	Protein Metabolism/ Inborn errors of amino acid metabolism
	Describe the catabolism of branched chain amino acids. Discuss cause, key diagnostic features, and management of Maple Syrup Urine disease	Biochemistry/ integrate with Pediatrics	

	(MSUD).		
	Describe the metabolism of tyrosine. Discuss the cause, key diagnostic features, and management of alkaptonuria, albinism, and type 1 tyrosinemia.	Biochemistry/integrate with Pediatrics	
	Give cause, key diagnostic features, and management of phenylketonuria (PKU)	Biochemistry/integrate with Pediatrics	
	Elaborate special roles of glycine, tryptophan, phenylalanine, tyrosine, and methionine		
R-B-014	Describe ionization of water and elaborate its significance. Discuss water and electrolyte balance in health and disease.	Biochemistry	Water, pH, Buffers/ Ionization of water
R-B-015	Define pH and describe the concept of pH scale.	Biochemistry	Water, pH, Buffers/ pH and pH scale
R-B-016	Define weak acids and conjugate base.		Water, pH, Buffers/ weak acids and their significance
R-B-017	Define K_a and pK_a and give their significance.		Water, pH, Buffers/ K_a And pK_a
R-B-018	Describe Henderson-Hasselbach (HH) equation. (no derivation required) along with its application/use.		Water, pH, Buffers/ HH equation and its applications
R-B-019	Define buffers. Enumerate the component of a buffers system and describe their mechanism of action. Enlist important buffers present in blood, plasma, ECF (Extra Cellular Fluid), ICF (Intra Cellular Fluid) and renal tubular fluid. Elaborate the working of bicarbonate buffer and phosphate buffer.		Water, pH, Buffers/ HH equation and its applications

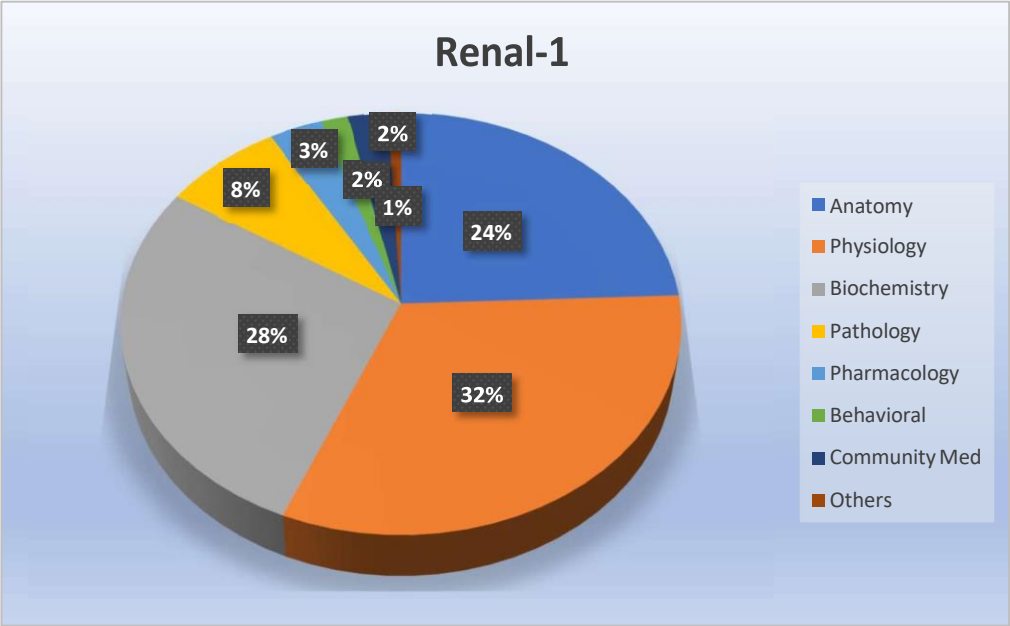
R-B-020	Elaborate the role of kidneys in the regulation of acid base balance.	Biochemistry	Acid Base balance and imbalance/ Renal mechanisms for pH regulation
R-B-021	Elaborate the concept of 1 st , 2 nd and 3 rd line of defense against changes in H ⁺ ion concentration.		Acid Base balance and imbalance/ Defense mechanisms against changes in H ⁺ concentration
R-B-022	Define acidosis and alkalosis. Classify acid base disorders. Enlist causes of metabolic acidosis and give its compensation. Enlist causes of respiratory acidosis and give its compensation. Enlist causes of metabolic alkalosis and give its compensation. Enlist causes of respiratory alkalosis and give its compensation.	Biochemistry/ Integrate with Medicine	Acid Base balance imbalance/ Types of acid base disorders
R-B-023	Interpret disorders metabolic and respiratory disorders of acid base balance on basis of sign, symptoms and arterial blood gas (ABG) findings Give biochemical explanation for tetany associated with alkalosis	Biochemistry	Acid Base balance imbalance/ Tetany in alkalosis

PRACTICAL

CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 02+10=12	
		DISCIPLINE	TOPIC
R-P-026	Perform a complete examination of the urine sample URS-10 (using urine reagent-10) and interpret its report	Physiology Practical	Interpretation of report
	Determine the specific gravity of urine		
R-B-024	Estimate blood urea level and interpret your results.	Biochemistry Practical	Interpretation of results
	Estimate serum creatinine level and interpret your results. Compare the usefulness of blood urea and serum creatinine in assessment of renal functions.		
	Determination of proteins in urine by dipstick method and interpret your results.		
	Estimate serum acid phosphatase level and interpret your results.		
PATHOPHYSIOLOGY AND PHARMACOTHERAPEUTICS			
CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 13	
		DISCIPLINE	TOPIC
R-Ph-001	Classify diuretics & carbonic anhydrase inhibitor. MOA, clinical uses, and adverse effects	Pharmacology & Therapeutics	Diuretics
	Describe Thiazide & loop diuretics their Mechanism of Action, clinical uses, and adverse effects.		
	Describe Potassium sparing and osmotic diuretics their mechanism of action, clinical uses, and adverse effects.		
R-Pa-001	Discuss the etiology and pathogenesis of different types of stones.	Pathology	Renal Stones

R-Pa-002	Identify the causes, morphological aspect & outcome of hydronephrosis.		Hydronephrosis
R-Pa-003	Enlist common causative agents of urinary tract infections and describe pathogenesis and clinical features of common causative agents of UTI.		UTI causative agents
R-Pa-004	Define various presentations of glomerulonephritis. Define nephrotic and nephritic syndrome. List various risk factors and outline management of glomerulonephritis.	Integrate with Medicine	Glomerulonephritis
R-Pa-005	Define AKI (acute kidney injury) Identify various risk factors and causes for AKI. Outline management strategies.		Acute Kidney Injury
R-Pa-006	Define UTI (Urinary Tract Infection)		Urinary tract infection
	Identify various risk factors and causes of UTI.		
	Describe signs and symptoms of UTI.		
	Outline management strategies.		
DISEASE PREVENTION AND IMPACT			
CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 04	
		DISCIPLINE	TOPIC
R-CM-001	Discuss the significance of quality of life in disease and treatment settings. Measures of health status. Disability-Adjusted Life Year (DALY) and Quality-Adjusted Life Year (QALY) Life expectancy.	Community Medicine and Public Health	Quality of life
R-BhS-001	To identify the behavioral abnormalities caused by renal function.	Behavioral Sciences	Dementia, uremic encephalopathy, delusion, muscle paralysis & Societal impact
	To identify the cognitive abnormality.		
	To identify the dangers for the patient, his family, and society.		

AGING			
CODE	THEORY	TOTAL HOURS = 02	
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC
R-Ag-001	To define preventive care in diseases related to urinary system(adults). Primary, secondary, and tertiary prevention.	Community	Disease prevention
R-Ag-002	Define urinary incontinence. Outline management strategies.	Medicine	Urinary incontinence



Module Weeks	Recommended Minimum Hours
04	119



C-FRC

LOGBOOK

C-FRC-1 (YEAR-1)



GIT AND NUTRITION-1 MODULE

Objectives	Skill	Miller's Pyramid Level Reflected
Demonstrate steps of abdominal examination	Abdominal Examination	Shows
Demonstrate the procedure of shifting dullness	shifting dullness	Shows
Identify organs on X-ray abdomen	X-ray Abdomen	Shows
Assess dehydration in infant/young child and explain procedure of making home made ORS	Dehydration	Does

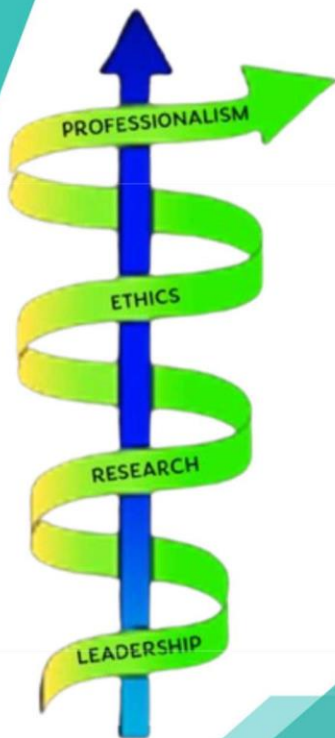
RENAL MODULE		
Objectives	Skill	Miller's Pyramid Level Reflected
Detail the steps of urinary catheterization in females	*Catheterization	Knows how
Detail the steps of urinary catheterization in males	*Catheterization	Knows how

- ❖ These skills are at the 'Knows how' level of the miller's pyramid, meaning thereby that students need not perform them themselves but may develop a perception regarding them by observing performance/working on simulated patients/facilitation with video.



MODULAR INTEGRATED CURRICULUM 2K23

Version 2.0



PERLS

**PROFESSIONALISM, ETHICS
RESEARCH, LEADERSHIP SKILLS**

DOMAIN	ATTRIBUTES	COMPETENCIES
Professionalism	Communicator	Demonstrate non-verbal, verbal communication skills with stable patients
		Write a dialogue between a senior doctor and a patient
	Caring & Empathic	Demonstrate respect of diversity in children with disabilities
	Responsible & Accountable	Develop a dress code for your class
		Demonstrate punctuality in attending classes
		Write an anonymous report on a cheating incident in class during last year
		Actively demonstrate engagement in co-curricular and extracurricular activities
	Team Player	Develop a code of conduct for students in the small group discussions in teams
	Self-Aware	Demonstrate improvement in one area of weakness identified in the previous year
		Build a rapport with a stable patient
Ethics	Digital Citizen	Write a blog or a wiki
		Upgrade the portfolio with at least two academic and personal achievements in last one year
	Ethical Practitioner	Obtain Informed Consent from a stable patient
Research	EvidenceBased Practitioner	Conduct a literature search and write a narrative review on an area of clinical interest
		Make a scientific poster related to the topic
Leadership	Resilient & Adaptable	Write a report on different coping mechanisms used by you during year 1
		Demonstrate patience and tolerance with patients' relatives
	Self-directed Learner	Seek active feedback from peers and teachers
		Set and track learning and improvement goals
		Seek membership in one of the student clubs or societies within or outside the institution.



BLOCK-4

Code	Domain	Attribute	Specific Learning Outcome	Topic	Portfolio Entry
PERLs-2-01	Professionalism	Responsible & Accountable	Develop a dress code for your class	Importance of codes, rules, and regulations in civilized societies Dress codes followed by international medical societies and institutions	Dress Code
PERLs-2-02			Demonstrate punctuality in attending classes	Importance of time	Attendance record
PERLs-2-03		Self-Aware	Demonstrate improvement in one area of weakness identified in the previous year	Setting and tracking milestones in strategic planning	Letter or certificate of accomplishment of a self-reflection
PERLs-2-04		Team Player	Develop a code of conduct for students in the small group discussions in teams	Group discussion Techniques of focus group discussion Democratic vs consensus-based decision making	Code of Conduct
PERLs-2-05	Ethics	Digital Citizen	Upgrade the portfolio with at least two academic and personal achievements in last one year	e-Portfolio Personal websites	Updated entries
PERLs-2-06			Write a blog or a wiki	Different form of digital content Engagement strategies with digital content Structure of a wiki	Published wiki or blog



				and blogpost	
PERLs-2-07	Research	Evidence Based Practitioner	Identify a topic for literature review	What is research What is the scientific method Developing a Literature search strategy	Research topic finalization process record
PERLs-2-08	Leadership	Resilient & Adaptable	Write a report on different coping mechanisms used by you during year 1	Comparison between coping strategies Choosing the right coping strategy for academic and personal issues Report writing	Report





Time Table with Assessment Schedules



Queens Medical College, Kasur

Timetable 2nd Year MBBS (Session-2024-25)

Week 1

	8:00- 9:15	9:15 - 10:00	10:00- 10:45	10:45- 11:15	11:15- 12:00	12:00-12:45	12:45-1:45	1:45 – 3:00	
Monday	Anatomy Dissection R-A-001 Gross Features and facial coverings of kidneys		Embryology LGIS R-A-008 Development of intermediate mesoderm and derivatives	B	Physiology LGIS R-P-001 Body Fluid Compartment	Biochemistry LGIS R-B-001 Protein Digestion, absorption, reabsorption and related disorders	Practical Batch A: Anatomy R-A-013 Kidney Batch B: Physiology F-P-026: Urine Exam Batch C: Biochem:F-b-024: Blood urea + Interpret reports	Clinical Skill Foundation CSF- Renal Female Catheterization- Demonstration + Peer Assessment	
Tuesday	Anatomy Dissection R-A-001 Compare Right Vs left kidney	Behavioural Sciences LGIS R-BhS-001 Behavioral abnormalities caused by renal function	PERL Workshop PERLs2-04 Code of Conduct for Small group Discussions	R	Physiology LGIS R-P-002+003 + Functions of Kidneys + Edema	Biochemistry LGIS R-B-002 Protein Metabolism, Degradation and Turnover	Practical Batch C: Anatomy R-A-013 Kidney Batch A: Physiology F-P-026: Urine Exam Batch B:Bioche: F-b-024: Blood urea + Interpret reports	SGIS Batch A: Anatomy R-A-008 Kidney Development Batch B: Physiology R-P-007 GFR Biochemistry Batch C: R-B-001 Disorders of Protein Digestion, absorption	
Wednes day	Anatomy Dissection R-A-001 Blood Supply, lymphatics and nerve supply of kidneys	Pathology LGIS R-Pa-001 Renal Stones	Embryology LGIS R-A-008 Development of pronephros,mesone phros,and metanephros	E	Physiology LGIS R-P-004 + 005 Micturition Reflex + abnormalities	Biochemistry LGIS R-B-003 Amino acid Pool and Nitrogen Balance	Practical Batch B: Anatomy GIT-028 Anatomy R-A-013 Kidney Batch C Physiology F-P-026: Urine Exam Batch A: Biochemistry: F-b-024: Blood urea + Interpret reports	SGIS Batch C: Anatomy R-A-008 Kidney Development Batch A: Physiology R-P-007 GFR Batch B: Biochemistry: R-B-001 Disorders of Protein Digestion, absorption	
Thursda y	Anatomy Dissection R-A-001 Surface marking and radiographic anatomy of kidney	Histology LGIS R-A-009 Histology of kidneys	PakStudies/Islamiat LGIS	A	Physiology LGIS R-P-006 Urine Formation	Biochemistry LGIS R-B-004 Reactions involved in Catabolism	Com. Medicine LGIS R-CM-001 Quality of life in Disease and treatment settings	SGIS Batch B: Anatomy R-A-008 Kidney Development Batch C: Physiology R-P-007 GFR Batch A: Biochemistry R-B-001 Disorders of Protein Digestion, absorption	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20- 10:30	10:30-11:10	11:10-11:50	11:50-12:30	12:30-1:30	1:30-3:00
	Anatomy Dissection R-A-001 Clinical correlates + Revision of Kidney		Histology LGIS R-A-009 Structural Organization of Kidneys with clinicals	K	Physiology LGIS R-P-007 Glomerular Filtration Rate	Biochemistry LGIS R-B-005 + 006 Transamination + Trans-deamination	Pharmacology LGIS R-Ph-001 Classify Diuretics + Carbonic anhydrase Inhibitor	Jumma Prayer	Self-Directed Learning

Week-2

	8:00- 10:00		10:00- 10:45	10:45-11:15	11:15- 12:00	12:00-12:45	12:45-1:45	1:45 - 3:00	
Monday	Biochemistry Test		Embryology LGIS R-A-008 Descent of Kidneys	B	Physiology LGIS R-P-008 + 009 Reabsorption + Clearance	Biochemistry LGIS R-B- 007 + 008 Deamidation + Decarboxylation	Practical Batch A: Anatomy R-A- 014 Ureter Batch B: Physiology F-P- 026: Urine Exam Interpret reports Batch C: Biochem F-b-024: Blood creatinine + Interpret reports	Clinical Skill Foundation CSF- Renal Male Catheterization-- Demonstration + Peer Assessment	
Tuesday	Anatomy Dissection R-A-002 Gross Features of ureter- Right Vs left ureter	PERL Workshop PERLs2-01+02 Portfolio Update	PERL Workshop PERLs2-01+02 Dress Code + Attendance	R	Physiology LGIS R-P-010 Transport Maximum	Biochemistry LGIS R-B- 009 Sources and transport of ammonia	Practical Batch C: Anatomy R-A-014 Ureter Batch A: Physiology F-P- 026: Urine Exam Interpret reports Batch B: Biochem F-b-024: Blood creatinine + Interpret reports	SGIS Batch A: Anatomy R-A- 008 Kidney Descent Batch B: Physiology R-P- 011+ 013 Urine concen., dilution + volume Batch C: Biochemistry: R- B-005 + 006 Transamination + Trans-deamination	
Wednesday	Anatomy Dissection R-A-002 Blood Supply, lymphatics and nerve supply of ureters	Pathology LGIS R-Pa-003 UTI causative agents	Embryology LGIS R-A-008 Positional changes in descent of kidneys + blood supply	E	Physiology LGIS R-P-011+ 013 Urine concentration, dilution + volume	Biochemistry LGIS R-B- 010 Urea Cycle, ammonia intoxication + Management	Practical Batch B: Anatomy R-A-014 Ureter Batch C Physiology F-P- 026: Urine Exam Interpret reports Batch A: Biochemistry: F-b-024: Blood creatinine + Interpret reports	SGIS Batch C: Anatomy R-A- 008 Kidney Descent Batch A: Physiology R-P- 011+ 013 Urine concen., dilution + volume Batch B: Biochemistry: R- B-005 + 006 Transamination + Trans-deamination	
Thursday	Anatomy Dissection R-A-002 Ureter constrictions	Histology LGIS R-A-010 JG-Apparatus	Biochemistry/Medicine GIT-B-024 Acute + Chronic Hepatitis	A	Physiology LGIS R-P-012 Obligatory Urine Volume	PERL Workshop PERLs2-08 Report Writing on coping strategies	Com. Medicine LGIS R-CM-001 Health status Measure: DALY	SGIS Batch B: Anatomy R-A- 008 Kidney Descent Batch C: Physiology R-P- 011+ 013 Urine concen., dilution + volume Batch A: Biochemistry R- B-005 + 006 Transamination + Trans-deamination	
	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-10:30	10:30-11:10	11:10-11:50	11:50-12:30	12:30-1:30	1:30-3:00
					Physiology				

Friday	Anatomy Dissection R-A-002 Ureters Revision and Clinical Correlates	Pathology/Medicine LGIS R-Pa-006 UTIs+ management	Histology LGIS R-A-010 Glomerular filtration barrier	K	LGIS R-P-013 + 014 Disorders urine concentration ability + Diabetes Insipidus	Biochemistry LGIS R-B- 011 Biosynthesis of NEAA	Pharmacology LGIS R-Ph-001 Thiazide + Loop Diuretics	Jumma Prayer	Self- Directed Learning
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Week 3

	8:00- 9:15	9:15 - 10:00	10:00- 10:45	10:45- 11:15	11:15- 12:00	12:00-12:45	12:45-1:45	1:45 – 3:00	
Monday	Physiology Test		Histology LGIS R-A-008 Development of urinary bladder and urethra	B	Physiology LGIS R-P-0115 ADH Feedback system	Biochemistry LGIS R-B- 012 Degradation of Carbon Skeleton of amino acids	Practical Batch A: Anatomy R-A-015 Urinary Bladder Batch B: Physiology F-P-026: Urine Sp.Gravity Batch C: Biochem: F-b-024: Protein in urine	Clinical Skill Foundation CSF- Renal Revision and Log Book Signing - Demonstration + Peer Assessment	
Tuesday	YOUM-E- TAKBEER								
Wednesday	SGIS Batch A: Anatomy R-A-008 Urethra and Bladder Batch B: Physiology R-P-0017/20 Renal Regulation Batch C: Biochemistry: R-B- 014+015+016 Water, pH, Ionization: Def, pH scale, Weak acids	Pathology LGIS R-Pa-002 Hydronephrosis	Biochemistry LGIS/Pediatrics R-B- 013 Inborn errors of amino acid metabolism	R E	Physiology LGIS R-P-016 +017 Thirst + Renal Regulation of Potassium	Biochemistry LGIS R-B- 014+015+016 Water, pH, Ionization: Def, pH scale, Weak acids	Practical Batch B: Anatomy R-A-015 Urinary Bladder Batch C: Physiology F-P-026: Urine Sp. Gravity Batch A: Biochemistry: F-b-024: Protein in urine	SGIS Batch C: Anatomy R-A-008 Urethra and Bladder Batch A: Physiology R-P-0017/20 Renal Regulation Batch B: Biochemistry: R-B- 014+015+016 Water, pH, Ionization: Def, pH scale, Weak acids	
Thursday	Practical Batch C: Anatomy R-A-015 Urinary Bladder Batch A: Physiology F-P-026: Urine Sp.Gravity Batch B: Biochem: F-b-024: Protein in urine	Histology LGIS R-A-011 Histological Structure of ureter	Biochemistry LGIS R-B- 017 Water, pH, Ionization: Ka,pKa + HH equation	A	Physiology LGIS R-P-018 + 019 Control of ECF and ECF Osmolarity	Biochemistry LGIS R-B- 018 HH equation + applications	Com. Medicine LGIS R-CM-001 Health Status Measure: QALY	SGIS Batch B: Anatomy R-A-008 Urethra and Bladder Batch C: Physiology R-P-0017/20 Renal Regulation Batch A: Biochemistry R-B- 014+015+016 Water, pH, Ionization: Def, pH scale, Weak acids	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20- 10:30	10:30-11:10	11:10-11:50	11:50-12:30	12:30- 1:30	1:30-3:00
	Anatomy Dissection R-A-002 + 007 Urinary Bladder + Parts of urethra		Biochemistry LGIS R-B- 019 Buffers + applications	K	Physiology LGIS R-P-020 Renal Regulation of Calcium + Phosphate	Biochemistry LGIS R-B- 020 Acid Base Balance : Renal mechanisms	Pharmacology LGIS R-Ph-001 K-sparing Diuretics	Jumma Prayer	Self-Directed Learning

Week 4 Theme

	8:00- 9:15	9:15 - 10:00	10:00- 10:45	10:45- 11:15	11:15- 12:00	12:00-12:45	12:45-1:45	1:45 – 3:00
Monday	Biochemistry Test	Pharmacology LGIS R-Ph-001 Osmotic Diuretics	Biochemistry LGIS R-B- 020 Acid Base Balance : Renal mechanisms	B R	Physiology LGIS R-P-022 ECF and blood Volume	Biochemistry LGIS R-B- 020 Acid Base Balance : Renal mechanisms	Practical Batch A: Anatomy R-A-013- 015 Practical test Batch B: Physiology F-P-026: Urine Sp.Gravity Batch C: Biochem: F-b-024: Acid Phosphatase level	Com. Medicine. Aging LGIS R-Ag-001 Disease Prevention in elderly- Primary, secondary, Tertiary
Tuesday	Practical Batch C: Anatomy R-A-013- 015 Practical test Batch A: Physiology F-P-026: Urine Sp.Gravity Batch B: Biochem F-b-024: Acid Phosphatase level	Behavioural Sciences LGIS R-BhS-001 Dangers for patient, his family, society-Renal diseases Muscle paralysis Societal Impact of Renal diseases	Behavioural Sciences LGIS R-BhS-001 Uremic encephalopathy Dementia and Delusion	E A	Physiology LGIS R-P-021 Renal Body Fluid Feedback Control	Biochemistry LGIS R-B- 021 Acid Base Balance : Defense mechanisms	Pathology/Medicine LGIS R-Pa-004+005 Glomerulonephritis + Acute Kidney Injury management	SGIS Batch A + ½ B (Roll no. 1-50): Physiology R-P-024 Acid Base Disturbance Batch ½ B+C (roll no. 51 onwards): Biochemistry: R-B- 020+021 Acid-Base Bal: Renal/Defense mechanisms
Wednesday	Anatomy STAGE		Biochemistry LGIS R-B- 022 Acid Base Balance : Types of acid base disorders	K	Physiology LGIS R-P-023 Acid Base Balance	Biochemistry LGIS R-B- 022 Acid Base Balance : Types of acid base disorders	Practical Batch B: Anatomy R-A-013- 015 Practical test Batch C Physiology F-P-026: Urine Sp.Gravity Batch A: Biochem F-b-024: Acid Phosphatase level	SGIS Batch ½ B+C (roll no. 51 onwards): Physiology R-P-024 Acid Base Disturbance A + ½ B (Roll no. 1- 50): Biochemistry: R-B-020+021 Acid-Base Bal: Renal/Defense mechanisms
Thursday	PREPARATORY LEAVE FOR BLOCK 4 EXAM							
Friday	PREPARATORY LEAVE FOR BLOCK 4 EXAM							

BLOCK 4 – DATE SHEET

Monday	Block 4 Written Examination (Combined) 9 am – 12 pm									
Tuesday	OSPE (Combined) 9 am to 12 pm Venue Batch A: Anatomy Laboratory Batch B: Physiology Laboratory Batch C: Biochemistry Laboratory									
Wednesday	OSPE 8 am to 10 am Batch A: Anatomy OSVE- BLOCK 4 Batch B: Physiology OSVE- BLOCK 4 Batch C: Biochemistry OSVE- BLOCK 4				OSVE 10 am to 12 pm Batch C: Anatomy OSVE- BLOCK 4 Batch A: Physiology OSVE- BLOCK 4 Batch B: Biochemistry OSVE- BLOCK 4			OSVE 12 pm to 2 pm Batch B: Anatomy OSVE- BLOCK 4 Batch C: Physiology OSVE- BLOCK 4 Batch A: Biochemistry OSVE- BLOCK 4		
Thursday	8:00- 9:15	9:15 - 10:00	10:00- 10:45	10:45-11:15	11:15- 12:00	12:00-12:45	12:45-1:45	1:45 – 3:00		
	Anatomy Dissection EnR-A-001 Pituitary Gland: Location, anatomy, Blood Supply and functions		Embryology LGIS EnR-A-026 Development of Thyroid Gland	B R E	Physiology LGIS EnR-P--001 Introduction to Endocrinology-Chemical Messengers, + Hormones/organs	Biochemistry LGIS EnR-B--001 Introduction to Endocrinology-Chemical Messengers, + Hormones/organs	PERLs-2-13 Workshop Informed Consent	Clinical Skill Foundation CSF Thyroid Examination-- Demonstration + Peer Assessment		
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-10:30	10:30-11:10	11:10-11:50	11:50-12:30	12:30 - 01:30	1:30 - 3:00	
	Anatomy Dissection EnR-A-001 Thyroid and Parathyroid Gland		Behavioral Sciences EnR-BhS-001 Barriers to seek Help	A K	Physiology LGIS EnR-P--001 Introduction to Endocrinology-Feedback control	Biochemistry LGIS EnR-B- 001 Chemical Basis of Hormones	Histology LGIS EnR-A-039 Development of Thyroid Gland	Jumma Prayer	Self-Directed Learning	

Reporting Time for Examinations is 8:45 am
No student will be allowed to enter Examination Hall after 9 am

BLOCK 4 – UHS TABLE OF SPECIFICATIONS

MBBS 2nd Professional

Block-4

Theme	Subject	Written Exam			Oral/Practical/Clinical Exam			
		MCQ (1 mark)	SEQ (5 mark each)	Marks	OSPE (8 marks each observed)	OSCE (8 marks each observed)	OSVE (16 marks each observed)	Marks
Normal Structure	Anatomy applied/clinical	23	03	38	03	-	01	40
Normal Function	Physiology applied/clinical	16	02	26	02	-	01	32
	Biochemistry applied/clinical	20	02	30	02	-	01	32
Disease Burden & Prevention	Community Medicine & Public Health	07	-	07	-	-	-	-
	Behavioral Sciences	06	-	06	-	-	-	-
Pathophysiology & pharmacotherapeutics	Pathology	09	-	09	-	-	-	-
	Pharmacology	04	-	04	-	-	-	-
CFRC	CF-2-1	-	-	-	-	01	-	08
PERLs	PERLs-2-1	-	-	-	-	01	-	08
Total		85	7x5=35	120	07 stations x 08 = 56	02 stations x 08 = 16	03 stations x 16=48	120



MODULAR INTEGRATED CURRICULUM 2K23

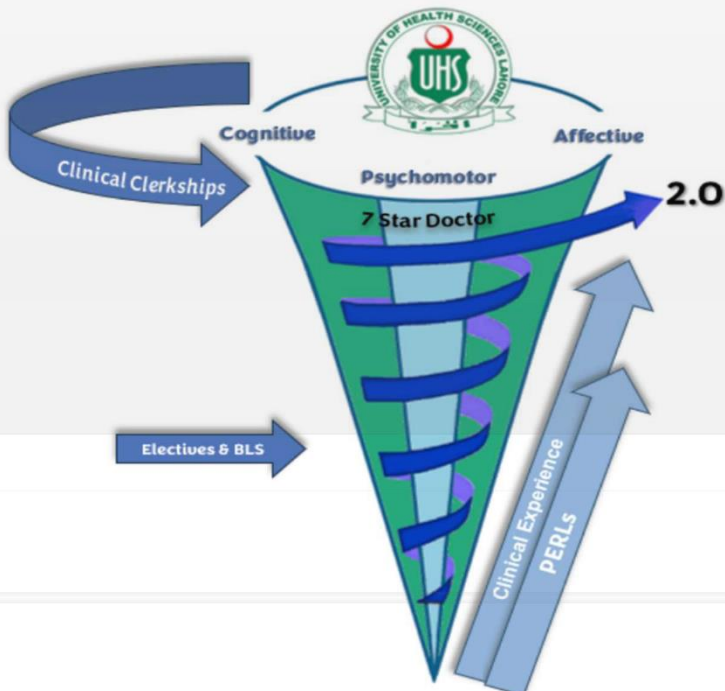
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**THE HOLY QURAN
PAKISTAN STUDIES
ISLAMIYAT
CIVICS**



CURRICULUM
OF
The Holy Quran

**MODULAR INTEGRATED
CURRICULUM 2K23** *version 2.0*



1. MODULE RATIONALE

The Holy Quran provides wisdom and knowledge to be followed in every applied component of modern civilization covering Ethical, Social, Legal, Financial and Healthcare Domains. The complete Quran encompasses the guidelines, all full of 'Hikmah' (wisdom) to deal with all practical scenarios encountering patients and health professionals. As the Holy Quran is the guiding light for humanity and a way of life for all the believers of one true Allah, therefore, understanding the message of this Holy Book is mandatory for realizing the duties which one has towards other human beings in general and the profession in particular. Holy Quran is a guide for the modern society and scientific development therefore, orbiting around Quranic doctrines and axioms of Hadith, all challenges faced by modern healthcare can be solved. Therefore, this longitudinal curriculum is developed so that all health professionals can get, as enunciated by the Holy Quran itself, "the best of this world as well as the best of the Hereafter".

2. VISION & MISSION

2.11: Vision: Building the personality and character of health professionals in light of teachings of the Holy Quran and Sunnah, to alleviate human sufferings.

2.22: Mission: Teaching Holy Quran and Sunnah to undergraduate students of Health Sciences, building their personality and character, enabling them to apply these principles in patient care and innovative research.

3. CURRICULUM DESIGN AND ORGANIZATION

3.1: Course Aim: The Holy Quran course aims to imbibe Health profession students with professionalism, general and medical, based on Divine teachings. The professionals thus groomed shall be able to correlate religion with healthcare delivery and modern science with an understanding that evidence-based practice itself originated from the system by which the "Hadith" was preserved after centuries.

3.2: Mode of Delivery: The module will be taught in the form of interactive lectures.

3.3: Learning Experience: Classroom environment will be used.

3.4: Attendance: Seventy five percent (75%) attendance is mandatory to be eligible to sit in the professional examination.

3.5: Course Modules for Year 1 and Year 2

The curriculum will be taught under three Major Sections

- Faith
- Worship
- Specific Quranic Commandments

3.6: Module Credit hours & Contact hours: This will be a three (03) credit hour course where each credit hour will be equivalent to eighteen (18) contact hours distributed over four years.

3.7: Assessment Portfolio

The assessment will be done through student portfolios based on four written assignments and two quizzes per year. The portfolio submission to the Quran teacher will be mandatory for sending admission to the university and sitting in the professional examination. The assignments will be based on the topics discussed during the year. One will be given after first half of the course will be completed for the year and second will be given at the completion of the Quran course.

3.8: Reference Material

- Translations of the Holy Quran approved by the Quran Board
- Six Authentic Books of Hadith

3.9. Module Faculty

At least one full time faculty member (Lecturer or above) will be hired for running the Holy Quran course throughout four years. The qualifications of the faculty member will be certified by the academic council of the college/institution to be declared as the teacher of Holy Quran course.

A decorative vertical bar on the left side of the page, composed of a light gray rectangle and a darker gray rectangle. At the bottom of the bar, there is a geometric shape made of three triangles: a dark blue triangle pointing right, a light blue triangle pointing left, and a dark purple triangle pointing left. To the right of the text, there is a similar geometric shape made of three triangles: a dark blue triangle pointing right, a light blue triangle pointing left, and a dark purple triangle pointing left.

SYLLABUS OF THE HOLY QURAN

Quran: Year-1

SECTION ONE: FAITH (AQAIID)

LEARNING OUTCOMES

a. Oneness of Allah (SWT) (Tawheed)

- i. Describe Unity of Allah in being
- ii. Describe Unity of Allah in attributes
- iii. Describe concept of Shirk
- iv. Impact of Tawheed in human life

b. Prophethood (Risalat)

- i. Explain Significance of Risalat
- ii. Identify Prophets as role models
- iii. Recognize finality of Prophethood - Prophet Muhammad (PBUH)

c. Belief in Hereafter (Aakhirat)

- i. Appraise continuity of life beyond material world
- ii. Concept of Doomsday and its various stages
- iii. Concept of Day of Judgment and accountability in the Hereafter
- iv. Concept of "Meezan"

d. Divine Revelations (Holy Books)

- i. Explain the divine decree in sending the Holy Books
- ii. Identify the Holy Quran as the only preserved & authenticated divine revelation to date
- iii. Interpret Quran as Furqan

e. Angels

- i. Discuss belief in angels and its significance
- ii. Describe the universal role of angels (their specific duties)

f. Qadr

- i. Identify Taqdeer as Knowledge of Allah
- ii. Explain the concept of Faith in Good and Evil

CONTENTS

1. Oneness of Allah subhan wa taala (Tawheed)
2. Prophethood (Risalat)

3. Belief in Hereafter (Akhirat)

4. Devine revelations (Holy Books)

SECTION TWO: WORSHIP (IBADAAT)

LEARNING OUTCOMES

a. Prayer (Namaz)

- i. Recognize the importance of physical purity (Taharah)
- ii. Discuss the philosophy of prayer and its role in purification of soul
- iii. Recognize the importance of prayer in building personal character - sense of duty, patience, perseverance, punctuality and self/social discipline
- iv. Spiritual, moral and social impact of prayer in building of righteous community
- v. Role in creating brotherhood, equality and unity in ummah
- vi. Identify the conditions in which relaxation in prayer is allowed e.g. during operation, travelling etc.

b. Obligatory Charity (Zakat)

- i. Identify obligatory importance of Zakat and other items as outlined under the title of 'Infaq-fee-sabilillah'
- ii. Categorize the people who can be the beneficiaries of Zakat
- iii. Role of zakat in eradication of greed and love of material world
- iv. Effect of Zakat and sadaqat in circulation of wealth and alleviation of poverty
- v. Explain the essence of zakat and sadaqat in building just communities
- vi. Describe the role of state in collection and disbursement of zakat

c. Fasting (Roza)

- i. Discuss the importance and significance of fasting
- ii. Relate the Holy Quran and the month of Ramadan
- iii. Role of fasting in building personal qualities like self-control, piety and soft corner for the poor and needy persons
- iv. Identify the applications of "Taqwa" through fasting

d. Pilgrimage (Hajj)

- i. Discuss the importance and significance of Hajj
- ii. Identify the conditions in which Hajj becomes an obligation
- iii. Role of manasik-e-Hajj in producing discipline and complete submission
- iv. Recognize the importance of Hajj in uniting the ummah
- v. Sacrifice for Allah subhan wa taala (essence of qurbani)

TOPIC AREAS
1. Prayer (Salah/Namaz) 2. Obligatory charity (Zakat) 3. Fasting (Saum/Roza) 4. Pilgrimage (Hajj)

Quran: Year-2

SECTION THREE: SPECIFIC QURANIC COMMANDMENTS

LEARNING OUTCOMES

a. Importance of the protection of Human life

- i. Concept of the sanctity of human life in Quran and Sunnah
- ii. Importance and significance of a single human being even during war
- iii. Concept of punishment in regard to the killing of a human being, voluntarily or involuntarily

b. Jihad

- i. Concept of Jihad and its significance (hikmat)
- ii. Different forms of Jihad and their importance
- iii. Principles and preparation of Jihad
- iv. Divine reward of Jihad

c. Heirship/Inheritance (Virasat)

- i. Heirship and division of wealth in accordance with divine teachings
- ii. Heirs and their shares
- iii. Legal aspect of virasat (Hud-e-Illahi)

d. Amar-bil-marooif-wa-Nahi-anil-munkar

- i. Differentiation between Marooif and Munkar
- ii. Importance and significance (effects of avoiding this principle)
- iii. Necessary conditions of both amar-bil-marooif and nahi-anil-munkar
- iv. The different stages and the necessary prerequisites

e. Hadood-e Illahee and taazeerat

- i. Meaning and various types of hadood-e-Illahee
- ii. Authority for fixation of limit (hudd)
- iii. Criteria and permissible relaxation in fixing the limits
- iv. Difference between 'Hadood', 'Qisas' and 'Tazeerat'. Punishments which are left to the court of law
- v. Benefits for the good of community

f. Justice (Adal-o-insaf)

- i. Justice of Allah subhan wa taala
- ii. Importance of justice for the survival of community
- iii. Need of justice to be prevailed irrespective of religion
- iv. Devine reward for fair justice

g. Business (Bay-o-tijarat)

- i. Importance of fair business and its necessary constituents
- ii. Permissible and impermissible conditions of businesses
- iii. Concept of loan in businesses

h. Interest (Riba or Sudi karobar)

- i. Meaning of Riba or interest and its different forms
- ii. Impact of Riba on a society in general
- iii. Devine declaration and its punishment both in this world and Hereafter

i. Nikah-o-talaq

- i. Basic rulings regarding marriage and divorce
- ii. Importance of Nikah and its constituents
- iii. Conditions of Nikah and various forms of prohibited/impermissible nikah
- iv. Misconception of dowry
- v. Talaq and its various forms
- vi. Meaning of Khula and its conditions

CONTENTS

1. Importance of the protection of Human life
2. Jihad
3. Heirship/Inheritance (Virasat)
4. Amar-bil-marooif-wa-Nahi-anil-munkar
5. Haddood-e Illahee and taazeerat
6. Justice (Adal-o-insaf)
7. Business (Bay-o-tijarat)

8. Interest (Riba or Sudi karobar)

9. Nikah-o-talaq

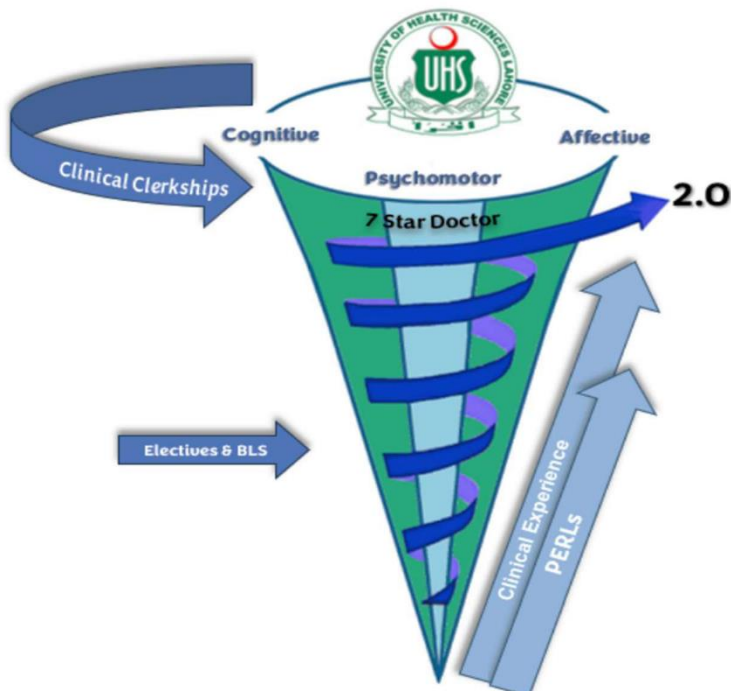


CURRICULUM

OF

Islamiyat & Pakistan Studies

MODULAR INTEGRATED
CURRICULUM 2K23 *version 2.0*



MODULE RATIONALE

This module comprises of Islamiyat & Pakistan Studies. All the medical or other curricula relate to our core context and internal fiber. The study of religion and country endorses all relevancy and competency acquisition for the purpose of service to humanity and community orientation.

ISLAMIYAT

A short course on Islamic Studies will be completed in First and Second year with an exam at the end of second year.

Course Content:

1. Understand the basic principles of Islam.
2. Explain the concept of the Islamic state.
3. Explain the Quran as a guide for modern society and scientific development.
4. Describe the life of the Holy Prophet Peace be upon him as an example to follow.
5. Explain ethics in the Islamic prospective.
6. Describe the rights of the individual in Islam.
7. Describe the rights of women and children in Islam.
8. Explain the contribution of Islamic scholars to science and medicine.
9. Understand Islam in terms of modern scientific development.
10. Explain the concept of Rizk-e-Hilal.
11. Explain the concept of Hukook-ul-Ibad.

PAKISTAN STUDIES

A short course on Pakistan Studies will be completed in First and Second year with an exam at the end of second year.

Course Content:

1. Describe brief the salient features of the Pakistan movement.
2. Explain the basis for the creation of Pakistan.
3. Give a brief account of the history of Pakistan.
4. Explain the ethnic and cultural distribution of the population of Pakistan.
5. Describe the Provinces and resources available in Pakistan.
6. Explain current problems faced by Pakistan.

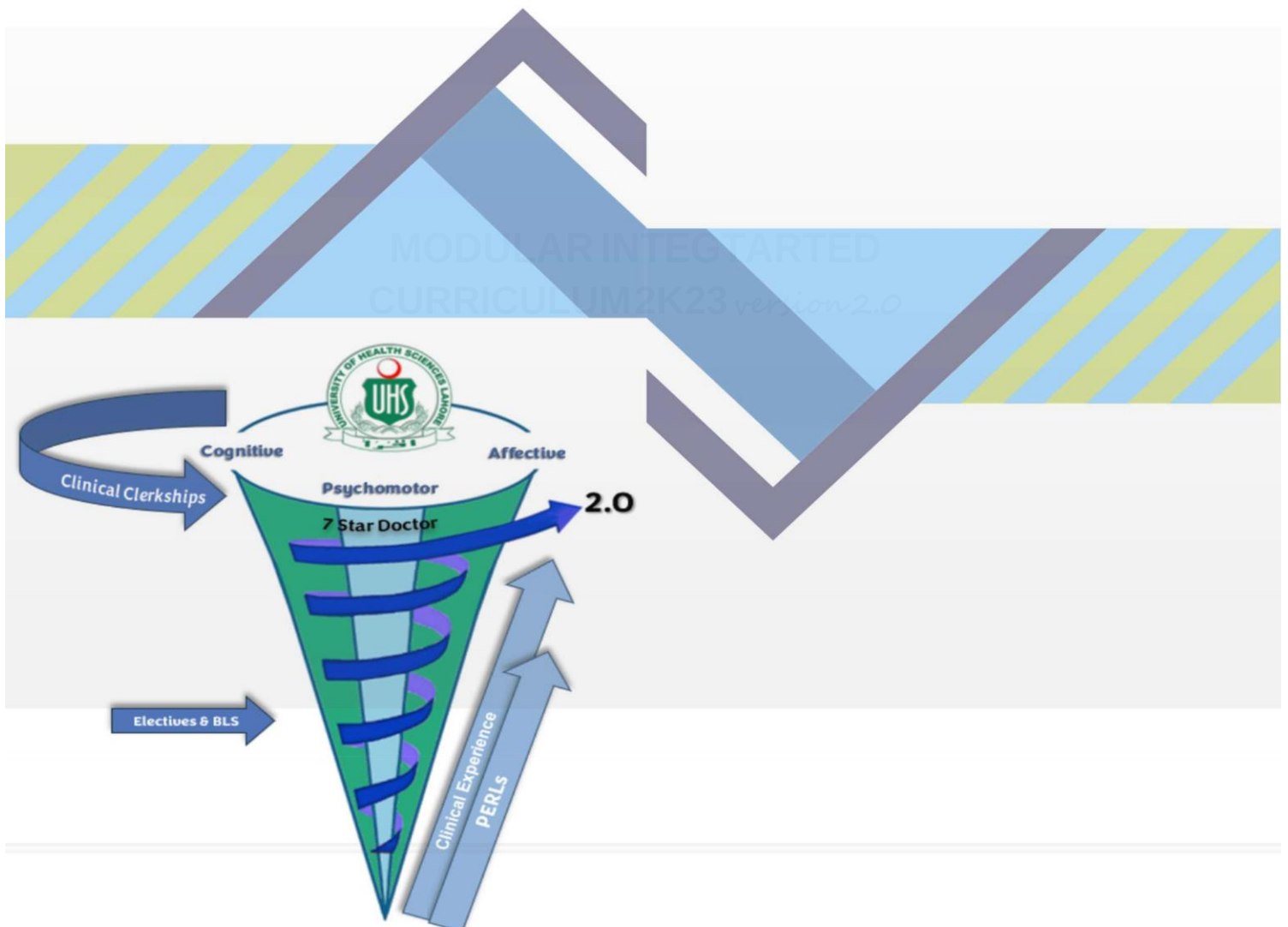
7. Describe the social, economic and health problems of the rural population of Pakistan.

ISLAMIYAT AND PAKISTAN STUDIES BOOKS

- Standard Islamiyat (Compulsory) for B.A, B.Sc., M.A, M.Sc., MBBS by Prof. M.Sharif
Islahi Ilmi Islamiyat (Compulsory) for B.A. B.Sc., & equivalent.
- Pakistan studies (Compulsory) for B.A. B.Sc., B.Com., Medical/Engineering by Prof. Shah Jahan Kahlun
- Pakistan studies (Compulsory) for B.A, B.Sc., B.Com., B.Ed., Medical/Engineering by Prof. Shah Jahan Kahlun



CURRICULUM OF Civics



MBBS YEAR 1 CURRICULUM

1. MODULE RATIONALE

Civics is part and parcel of life and the study of Civics has major thrust on improvement of the quality of life and welfare of human beings. This discipline enhances the approach towards rational behavior and daily life.

There is a need for us to know role of a citizen with specific reference to Global Village, the Citizen and Daily life issues, Citizenship, Rights and Responsibility, Role of Government and State, Implementation

Issues of Devolution plan, Social Welfare Institutions/ NGOs and their role at basic level, social interactions and the new discoveries in IT and mass media, relations with International Organizations and Pakistan and its neighbors. Civics goes beyond the cognitive level to deal with social values and attitudes. From the earliest stages of the course, it is important to respect students' opinions while helping them to develop a rationale for their opinions. This curriculum is adapted from Agha Khan University Examination Board curriculum for higher secondary examination.

2. VISION & MISSION

2.11: Vision: Building the personality and character of health professionals

2.22: Mission: Teaching Civics to undergraduate students of Health Sciences, building their personality and character, enabling them to apply these principles in patient care.

3. CURRICULUM DESIGN AND ORGANIZATION

3.11: Course Aim:

- To develop understanding of the social nature and significance of civics, its key concepts and civic life.
- To emphasize learning of related themes in a way that encourages creativity, curiosity, observation, exploration and questioning.
- To create awareness of the nature of civic life and the relationship between civics and other social sciences.
- To promote understanding about the ideology of Pakistan and the struggle of an independent state.

- To inculcate the behavior patterns of national character, and qualities of a good citizen,
- self-reliance, patriotism and leadership.
- To create a strong sense of national unity, integration and cohesion.
- To prepare students as future citizens, conscious of their positive role in a society and the world at large.

3.22: Mode of Delivery: The module will be taught in the form of interactive lectures.

3.33: Learning Experience: Classroom environment will be used.

3.44: Attendance: Seventy-five percent (75%) attendance is mandatory to be eligible to sit in the professional examination.

3.55: Assessment: The assessment will be done through two written assignments and two quizzes per year. The assignments will be based on the topics discussed during the year. One will be given after first half of the course will be completed for the year and second will be given at the completion of the course.

3.77: Module Faculty: At least one full time faculty member (Lecturer or above) will be hired to run the civics course throughout four years. The qualifications of the faculty member will be certified by the academic council of the college/institution to be declared as the teacher of civics.



SYLLABUS OF CIVICS



LEARNING OUTCOMES	TOPICS
i. Define civics ii. Describe how civics can improve the citizenship iii. Illustrate the scope of civics iv. Discuss the nature of civics v. Give examples how civics can help in the national development	Civics-Meaning & Nature
i. Examine the significance of civics ii. Explain how civics is important to know the problems of daily life iii. Discuss how civics can help to bring improvements in the civics life of citizens iv. Evaluate how civics can improve the sense of love and respect for human relationship v. Discuss that studying civics can develop a sense of gratitude vi. Give examples how civics is important to develop the global unity	Significance and Utility
i. Compare civics with political science, history, economics, sociology and ethics	Relationship with Social Sciences
i. Describe the term harmonic relationship ii. Explain the harmonic relationship among different members of society. (Women, children and senior citizens) iii. Explain how harmonic relationship develop for respect of religion	Harmonic Relationship
i. Define the term individual in relation to civics ii. Define the term state iii. Explain the relation between an individual and a state iv. Describe the importance of an individual in a state v. Enlist the responsibilities of an individual in a state	Individual and state
i. Identify the basic unit of social institution Discuss and characterize the different types of family ii. Give the importance of basic unit of social institution in the development of a state Enlist the responsibilities of family in	Family

general iii. Analyze your role for the betterment of the family Compare and contrast the impact of the deterioration of family in the western society and give examples	
i. Define community ii. Explain the nature and significance of community iii. Discuss the role of a family in community iv. Analyze the role of an individual for the betterment of the community	Community
i. Define society ii. Elaborate the relation between an individual and society and society and state iii. Analyze the role of an individual for the betterment of society	Society
i. Define the term nation, nationality and ummah differentiate between nation and nationality distinguish between nation and ummah analyze the value, behavior and the pattern of society based on religions ii. Evaluate the characteristics of society developed by religions	Nation, Nationality
i. Trace the origin of state with reference to the theories of Divine Origin, Force and Social ii. Contract (Hobbs, Lock, Rousseau) iii. Describe the elements of a state (sovereignty, population, territory, Government) iv. Compare and distinguish the role of state, society and government	Origin and elements of State
i. Describe the functions of state ii. Describe the factors which are necessary for proper functioning of state iii. Analyze the situation when a state does not function properly iv. Describe the characteristics of a welfare state Analyze how a welfare state guarantees the equity and justice on the issues of gender, religion, and social classes	Functions of state. (Defense, law and order, welfare etc.)

Queens Medical College

Instructional Strategies

The following instructional strategies are being used in this module:

1. Interactive lectures
2. Case-based discussion.
3. Problem-Based Learning
4. Team-Based Learning
5. Small group discussions
6. Demonstrations
7. Dissection
8. Practical

Assessment

The following Assessment strategies are being used in this n module:

1. Weekly written tests
2. Tutorials / Small group discussions
3. Substages/ Stages
4. End of Module Exam

Queens Medical College

Counselling

PSYCHOSOCIAL COUNSELLING:

Assigned Mentor

HOD – Department of Behavioural Sciences

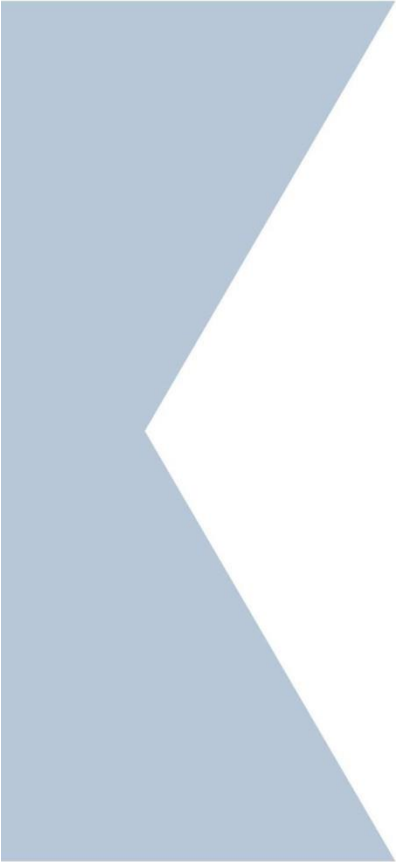
CAREER GUIDANCE:

Dr. Syed Hasan Shoaib

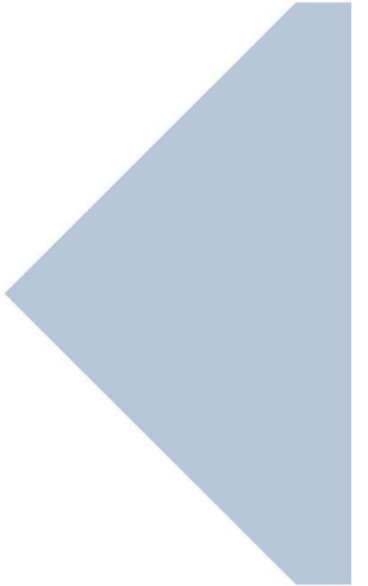
Department of Medical Education

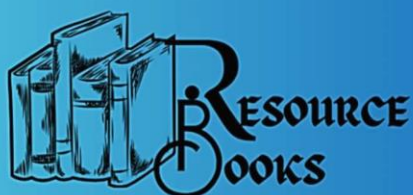
Dr. Sadaf Sajid

Department of Forensic Medicine



List of Resources





Anatomy

- Snell's Clinical Anatomy 10th ed.
- Langman's Medical Embryology 12th ed
- Medical Histology by Laiq Hussain Siddiqui 8th ed.
- General Anatomy by Laiq Hussain Siddiqui 6th ed.

Physiology

- Guyton AC and Hall JE. Textbook of Medical Physiology. W. B. Saunders & Co., Philadelphia 14th Edition.
- Essentials of Medical Physiology by Mushtaq Ahmed

Biochemistry

- Harpers illustrated Biochemistry 32nd edition. Rodwell.V.W MCGrawHill publishers.
- Lippincott illustrated Review 8th edition Kluwer.W.
- Essentials of Medical Biochemistry vol 1&2 by Mushtaq Ahmed.

Pathology

- Vinary Kumar, Abul K. Abbas and Nelson Fausto Robbins and Cotran, Pathologic basis of disease. WB Saunders.
- Richard Mitchall, Vinary Kumar, Abul K. Abbas and Nelson Fausto Robbins and
- Cotran, Pocket Companion to Pathologic basis of diseases. Saunder Harcourt.
- Walter and Israel. General Pathology.
- ChurchillLivingstone.

Medicine

- Davidson's Principles and Practice of Medicine

Pharmacology

- Basic and Clinical Pharmacology by Katzung, McGraw-Hill.
- Pharmacology by Champe and Harvey, Lippincott Williams & Wilkins

Behavioural Sciences

- Handbook of Behavioural Sciences by Prof. Mowadat H.Rana, 3rd Edition
- Medical and Psychosocial aspects of chronic illness and disability SIXTH EDITION by Donna R.Falvo, PhD
Beverly E.Holland, PhD, RN

Community medicine

- Parks Textbook of Preventive and Social Medicine. K. Park (Editor)
- Public Health and Community Medicine

- Ilyas, Ansari (Editors)

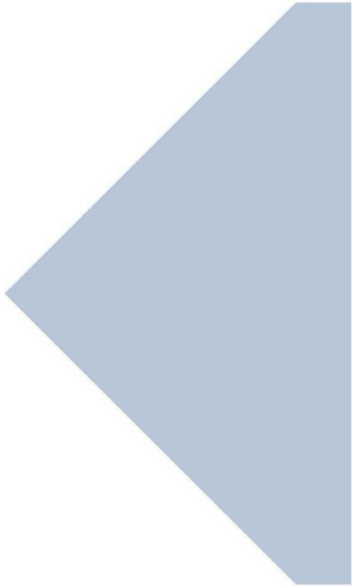
Surgery

- Bailey and Love's short practice of surgery

Islamiyat

- Standard Islamiyat (compulsory) for B.A, BSc, MA, MSc, MBBS by Prof M Sharif Islahi.
- Ilmi Islamiyat(compulsory) for BA, BSc & equivalent.





Assessment Policy



Statutes

1. The First Professional MBBS Examination shall be held at the end of the first year MBBS, whereas, the Second Professional MBBS Examination shall be held at the end of the second year.
2. Every candidate shall be required to study contents of Anatomy (including Histology), Physiology, Biochemistry, Behavioural Sciences, Community Medicine & Public Health, Pathology, Pharmacology & Therapeutics, Islamic Studies/ Civics and Pakistan Studies, Clinical skills and Professionalism, Ethics, Research and Leadership. The teaching and assessment shall be done in three modular blocks.
3. There will be three papers in the first professional examination, and four papers in the second professional examination:

First Professional Exam:

- a. Paper 1 will be based on contents of Block 1;
- b. Paper 2 will be based on contents of Block 2;
- c. Paper 3 will be based on contents of Block 3;

Second Professional Exam:

- a. Paper 1 will be based on contents of Block 4;
- b. Paper 2 will be based on contents of Block 5;
- c. Paper 3 will be based on contents of Block 6;
- d. Paper 4 will be based on contents of Islamic studies/Civics and Pakistan Studies

4. Each paper will comprise of two components 'Written' and 'Oral/Practical/Clinical' examinations.
5. The Written and 'Oral/Practical/Clinical' examination in each paper will carry 150 marks each, making the total marks of 300 for each of the papers 1,2, and 3 (inclusive of Internal Assessment).
6. Total marks for the First and Second Professional Examinations shall be 900, each. Marks of Islamic Studies/Civics and Pakistan Studies shall not be counted towards total marks of any professional examination, and determination of position or merit of a candidate. However, the candidates shall have to take the examination in the subject in their Second Professional MBBS Examination. Those failing the subject in both annual & supplementary examinations, while passing all the other subjects of Second Professional Examination shall be promoted to the 3rd year MBBS, however they will be allowed two more attempts to clear the subject with Second professional Examination of the next session, failing which they shall be detained in the 3rd Professional MBBS.
7. Major content areas of the first two professional years shall be from:
 - a. Anatomy including applied/clinical Anatomy;
 - b. Physiology including applied/clinical Physiology;
 - c. Biochemistry including applied/clinical Biochemistry.
8. The Applied/Clinical content for the Anatomy, Physiology and Biochemistry shall be based on

clinical correlations.

9. Integrated clinical content areas of the both years include Behavioral Sciences, Community Medicine & Public Health, Pathology, Pharmacology & Therapeutics, Clinical Foundation- I & II and PERLS- I & II.

10. Written Examination

- a. The written component of Papers 1, 2, and 3 will consist of 'One-best-type' Multiple Choice Questions (MCQ) and Structured Essay Questions (SEQ) in a ratio of 70:30 %.
- b. Each MCQ will have five options (one best response and four distractors) and will carry one (01) mark.
- c. There will be no negative marking.
- d. There will be no sections within an SEQ, and it will be a structured question with five (05) marks each.
- e. SEQ's will only be based on the major content areas of the year.
- f. There will be total of 85 MCQs and 07 SEQs in every written paper in Papers 1, 2, and 3.
- g. The duration of each written paper will be 180 minutes (03 hours).
- h. The MCQ section will be of 110 minutes duration and the SEQ section of 70 minutes.

11. Oral/Practical/Clinical Examination

- a. The 'Oral/Practical/Clinical' component of each Papers 1, 2, and 3 will consist of a total of twelve (12) OSPE/OSCE/OSVE stations in each 'Oral/Practical/Clinical' examination.
- b. There will be seven (07) Observed OSPE (Objective Structured Practical Examination) stations from major subject areas. Each OSPE station will have the practical component and an evaluation of the underlying principle relevant to that practical with a component of applied knowledge.
- c. There will be two (02) Observed OSCE (Objective Structured Clinical Examination) stations, based on C-FRC1 and PERLS-1 in each 'Oral/Practical/Clinical' examination.
- d. There will be three (03) Observed interactive OSVE (Objective Structured Viva Examination) from major subject areas. Each OSVE station will have a structured viva, to assess a practical component along with evaluation of the underlying principle relevant to that practical with a component of applied/practical knowledge and related clinical application.
- e. Each OSPE/OSCE station will carry eight (08) marks.
- f. Each OSVE station will carry sixteen (16) marks.
- g. The duration of each 'Oral/Practical/Clinical' examination will be 120 minutes (2 hours).
- h. Time for each OSPE, OSCE and OSVE station will be eight (08) minutes.

12. Every candidate shall take the examination in the following Blocks (Modules) in First & Second Professional MBBS Examinations: -

Year 1

A. Block 1 (Foundation-I + Hematopoietic & Lymphatic) Marks	300
B. Block 2 (Musculoskeletal & Locomotion-I) Marks	300
C. Block 3 (Cardiovascular-I+ Respiratory-I) Marks	300

Year 2

I. Block 4 (Gastrointestinal Tract & Nutrition-I + Renal-I) Marks	300
II. Block 5 (Endocrinology & Reproduction-I + Head & Neck, Special Senses) Marks	300
III. Block 6 (Neurosciences-I + Inflammation) Marks	300
IV. Islamic Studies/ Civics + Pakistan Studies Marks	100

A. Block 1 (Foundation-I + Hematopoietic and Lymphatic)

The examination in Block 1 shall be as follows: -

- I. One written paper of 120 marks having two parts:
 - i. Part I shall have eighty-five Multiple Choice Questions (MCQs) of total 85 marks (01 mark for each MCQ) and the time allotted shall be 110 minutes. There will be no negative marking.
 - ii. Part II shall have seven Structured Essay Questions (SEQs) of total 35 marks (05 marks for each SEQ) and the time allotted shall be 70 minutes.
- II. 'Oral/Practical/Clinical' examination shall have 120 marks in total.
- III. The continuous internal assessment through 'Block Examination', conducted by the college of enrollment shall carry 60 marks, i.e., 20% of the total allocated marks (300) for the block. The score will be equally distributed to the Written and 'Oral/Practical/Clinical' Examinations.

B. Block 2 (Musculoskeletal & Locomotion-I)

The examination in Block 2 shall be as follows: -

- I. One written paper of 120 marks having two parts:
 - i. Part I shall have eighty-five Multiple Choice Questions (MCQs) of total 85 marks (01 mark for each MCQ) and the time allotted shall be 110 minutes. There will be no negative marking.
 - ii. Part II shall have seven Structured Essay Questions (SEQs) of total 35 marks (05 marks for each SEQ) and the time allotted shall be 70 minutes.
- II. 'Oral/Practical/Clinical' examination shall have 120 marks in total.
- III. The continuous internal assessment through 'Block Examination', conducted by the college of enrollment shall carry 60 marks, i.e., 20% of the total allocated marks (300) for the block. The score will be equally distributed to the Written and 'Oral/Practical/Clinical' Examinations.

C. Block 3 (Cardiovascular-I + Respiratory-I)

The examination in Block 3 shall be as follows: -

- I. One written paper of 120 marks having two parts:
 - i. Part I shall have eighty-five Multiple Choice Questions (MCQs) of total 85 marks (01 mark for each MCQ) and the time allotted shall be 110 minutes. There will be no negative marking.
 - ii. Part II shall have seven Structured Essay Questions (SEQs) of total 35 marks (05 marks for each SEQ) and the time allotted shall be 70 minutes.
- II. 'Oral/Practical/Clinical' examination shall have 120 marks in total.
- III. The continuous internal assessment through 'Block Examination', conducted by the college of enrollment shall carry 60 marks, i.e., 20% of the total allocated marks (300) for the block. The score will be equally distributed to the Written and 'Oral/Practical/Clinical' Examinations.

D. Block 4 (Gastrointestinal & Nutrition-I + Renal-I)

The examination in Block 2 shall be as follows: -

- I. One written paper of 120 marks having two parts:
 - i. Part I shall have eighty-five Multiple Choice Questions (MCQs) of total 85 marks (01 mark for each MCQ) and the time allotted shall be 110 minutes. There will be no negative marking.
 - ii. Part II shall have seven Structured Essay Questions (SEQs) of total 35 marks (05 marks for each SEQ) and the time allotted shall be 70 minutes.
- II. 'Oral/Practical/Clinical' examination shall have 120 marks in total.
- III. The continuous internal assessment through 'Block Examination', conducted by the college of enrollment shall carry 60 marks, i.e., 20% of the total allocated marks (300) for the block. The score will be equally distributed to the Written and 'Oral/Practical/Clinical' Examinations.

E. Block 5 (Endocrinology & Reproduction-I + Head & Neck, Special Senses)

The examination in Block 2 shall be as follows: -

- I. One written paper of 120 marks having two parts:
 - i. Part I shall have eighty-five Multiple Choice Questions (MCQs) of total 85 marks (01 mark for each MCQ) and the time allotted shall be 110 minutes. There will be no negative marking.
 - ii. Part II shall have seven Structured Essay Questions (SEQs) of total 35 marks (05 marks for each SEQ) and the time allotted shall be 70 minutes.
- II. 'Oral/Practical/Clinical' examination shall have 120 marks in total.
- III. The continuous internal assessment through 'Block Examination', conducted by the college of enrollment shall carry 60 marks, i.e., 20% of the total allocated marks (300) for the block. The score will be equally distributed to the Written and 'Oral/Practical/Clinical' Examinations.

F. Block 6 (Neurosciences-I + Inflammation)

The examination in Block 2 shall be as follows: -

- I. One written paper of 120 marks having two parts:
 - i. Part I shall have eighty-five Multiple Choice Questions (MCQs) of total 85

marks (01 mark for each MCQ) and the time allotted shall be 110 minutes. There will be no negative marking.

- ii. Part II shall have seven Structured Essay Questions (SEQs) of total 35 marks (05 marks for each SEQ) and the time allotted shall be 70 minutes.

II. 'Oral/Practical/Clinical' examination shall have 120 marks in total.

III. The continuous internal assessment through 'Block Examination', conducted by the college of enrollment shall carry 60 marks, i.e., 20% of the total allocated marks (300) for the block. The score will be equally distributed to the Written and 'Oral/Practical/Clinical' Examinations.

G. ISLAMIC STUDIES/CIVICS AND PAKISTAN STUDIES

The examination in Islamic Studies/Civics and Pakistan Studies shall be as follows: -

- I. One written paper of 100 marks in Islamic Studies/ Civics and Pakistan Studies having two components:
 - i. Islamic Studies/Civics component having total 60 marks. There will be three (3) Long Essay Questions (LEQs) to be attempted out of five (5), having 20 marks each.
 - ii. Pakistan Studies component having total 40 marks. There will be two (2) Long Essay Questions (LEQs) to be attempted out of four (4), having 20 marks each.

Note: Islamic Studies for Muslims, and Civics for Non-Muslims candidates.

13. The marks distribution in each subject is given in Table 1:

Table 1

YEAR-1							
Subject	Theory		Practical			Total	
Block 1 Modules (Foundation-I + Hematopoietic and Lymphatic)	Part I MCQs (85)	85 Marks	Practical / Clinical Examination	07 OSPE	Marks 56	300	
	Part II SEQs (7)	35 Marks		02 OSCE	16		
	Internal Assessment 10%	30 Marks	Internal Assessment 10%	30 Marks			48
	Total	150	Total	150			
Block 2 Modules (Musculoskeletal & Locomotion-I)	Part I MCQs (85)	85 Marks	Practical / Clinical Examination	07 OSPE	Marks 56	300	
	Part II SEQs (7)	35 Marks		02 OSCE	16		
	Internal Assessment 10%	30 Marks	Internal Assessment 10%	30 Marks			48
	Total	150	Total	150			
Block 3 Modules (Cardiovascular-I &	Part I MCQs (85)	85 Marks	Practical / Clinical Examination	07 OSPE	Marks 56		
	Part II SEQs (7)	35 Marks		02 OSCE	16		
				03 OSVE	48		

Respiratory-I)	Internal Assessment 10%	30 Marks	Internal Assessment 10%	30 Marks	300	
	Total	150	Total	150		
Total Marks:					900	
YEAR-2						
Block 4 Modules (GIT & Nutrition-I + Renal-I)	Part I MCQs (85)	85 Marks	Practical / Clinical Examination	07 OSPE 02 OSCE 03 OSVE	Marks 56 16 48	300
	Part II SEQs (7)	35 Marks				
	Internal Assessment 10%	30 Marks	Internal Assessment 10%	30 Marks		
	Total	150	Total	150		
Block 5 Modules (Endocrinology & Reproduction-I + Head& Neck, Special Senses)	Part I MCQs (85)	85 Marks	Practical / Clinical Examination	07 OSPE 02 OSCE 03 OSVE	Marks 56 16 48	300
	Part II SEQs (7)	35 Marks				
	Internal Assessment 10%	30 Marks	Internal Assessment 10%	30 Marks		
	Total	150	Total	150		
Block 6 Modules (Neurosciences-I + Inflammation)	Part I MCQsPart II SEQs	85 Marks 35 Marks	Practical / Clinical Examination	120 Marks		300
	Internal Assessment	30 Marks	Internal Assessment	30 Marks		
	Total	150	Total	150		
	Total Marks					900
Islamic Studies/ Civics and PakistanStudies	Islamic Studies/Civics 3 LEQs of 20 marks each			60 Marks		100*
	Pakistan Studies 2 LEQs of 20 marks each			40 Marks		
	Total			100		

* Total marks for the First and Second Professional Examinations shall be 900, each. Marks of Islamic Studies/Civics and Pakistan Studies shall not be counted towards total marks of any professional examination, and determination of position or merit of a candidate. However, the candidates shall have to take the examination in the subject in their Second Professional MBBS Examination. Those failing the subject in both annual & supplementary examinations, while passing all the other subjects of Second Professional Examination shall be promoted to the 3rd year MBBS, however they will be allowed two more attempts to clear the subject with Second professional Examination of the next session, failing which they shall be detained in the 3rd Professional MBBS.

14. No grace marks shall be allowed in any examination or practical under any guise or name.

15. At least 25% MCQs & 25% SEQs shall be based on applied/clinical/case scenario to assess high order thinking in the papers set for the students of First and second Professional MBBS Examinations.

Regulations

1. Professional examination shall be open to any student who: -
 - a. has been enrolled/registered and completed one academic year preceding the concerned professional examination in a constituent/affiliated College of the University.
 - b. has his/her name submitted to the Controller of Examinations, for the purpose of examination, by the Principal of the College in which he / she is enrolled & is eligible as per all prerequisites of the examination.
 - c. has his/her marks of internal assessment in all the Blocks sent to the Controller of Examinations by the Principal of the College along with the admission form.
 - d. produces the following certificates duly verified by the Principal of his / her College:
 - (i) of good character;
 - (ii) of having attended not less than 85% of the full course of lectures delivered and practical conducted in the particular academic session, in each block, as well as in the aggregate;
 - (iii) Certificate of having appeared at the Block Examinations conducted by the college of enrolment with at least 50 % cumulative percentage in aggregate of blocks 1, 2 and 3 for the first year and blocks 4,5 and 6 for the second year;
 - (iv) Candidates falling short of attendance requirement shall not be admitted to the annual examination but may be permitted to appear at the supplementary examination if they make up the deficiency up to the commencement of the next examination by remaining on the rolls of a College as regular student, subject to fulfillment of all other mandatory requirements to appear at the examination.
2. The minimum number of marks required to pass the professional examination for each paper shall be fifty percent (50%) in Written and fifty percent (50%) in the 'Oral/Practical/Clinical' examinations and fifty percent (50%) in aggregate, independently and concomitantly, at one and the same time.
3. Candidates who secure eighty five percent (85%) or above marks in any of the papers shall be declared to have passed "with distinction" in that Block, subject to having at least 80 % marks in the Written component of that paper, concomitantly. However, no candidate shall be declared to have passed "with distinction" in any paper, who does not pass in all the papers of the Professional Examination as a whole at one and the same time,
4. A candidate failing in one or more paper of the annual examination shall be provisionally allowed to join the next professional class till the commencement of supplementary examinations. Under no circumstances, a candidate shall be promoted to the next professional class till he / she has passed all the papers in the preceding Professional MBBS Examination.
5. If a student appears in the supplementary examination for the first time as he/she did not

appear in the annual examination because of any reason and fails in any paper in the Supplementary Examination, he/she will be detained in the same class and will not be promoted to the next class.

6. Any student who fails to clear the First or Second Professional MBBS Examination in four consecutive attempts, inclusive of both availed as well as un-availed, after becoming eligible for the examination, and has been expelled on that account shall not be eligible for continuation of studies and shall not be eligible for admission as a fresh candidate in either MBBS or BDS. (Ref. UHS Circulars/137-20/2750 dated 23-11-2020).
7. The colleges may arrange remedial classes and one re-sit for each block examination, either with the subsequent block examination or before completion of the subsequent block, and before or during preparatory leave in case of the terminal block of the professional year, before issuance of the date sheet for the concerned professional examination, subject to the following conditions:
 - i. At the completion of each block, the principals of the colleges shall submit a detailed report to the university, including cases of students with short attendance, poor performance/absence in the block examination along with the reasons and evidence for the same, proposed schedule for remedial classes and re-sit examination.
 - ii. Competent Authority UHS will have the cause and the submitted evidence evaluated and documented, before permitting the colleges to arrange remedial classes and re-sit examination at the concerned block. No college is allowed to conduct remedial classes or re-sit examination without prior approval of the competent authority.
 - iii. The students can appear in re-sit of a block examination, along with the subsequent block, and before or during preparatory leave for the terminal block of the professional year, once the requirement of 'attendance' is met with. However, conduct of remedial classes shall be permitted only in the cases of students, who shall have attended at least 50 % of total attendance of the concerned block in the first instance.
 - iv. The valid reasons for short attendance in a block or absence from a block examination may include major illness/accident/surgery of the student or death of an immediate relative/being afflicted by a natural calamity or disaster.
8. The application for admission of each candidate for examination shall be submitted to the Controller of Examination, through the Principal of the College, in a prescribed format, as per notified schedule, accompanied by the prescribed fee.
9. The marks of internal assessment and attendance shall be submitted to Controller of Examinations three times, within two weeks of completion of each block examination.
10. At the end of each block, the colleges are required to submit question papers and keys for the block examination, internal assessment marks and attendance record to the Department of Examinations UHS. Further, parent-teacher meetings shall be arranged by the colleges after every block examination to share feedback on the progress of students with their parents. Minutes of parent teacher meetings shall be submitted to the Department of Medical Education UHS.
11. It is emphasized that fresh internal assessment or a revision of assessment for supplementary examination shall not be permissible. However, a revised internal assessment for the detained students can be submitted. The internal assessment award in a particular year will not be decreased subsequently detrimental to the detainee

candidate. A proper record of the continuous internal assessment shall be maintained by the concerned department/s in the colleges.

12. The candidates shall pay their fee through the Principals of their respective Colleges who shall forward a bank draft / pay order / crossed cheque in favor of Treasurer, University of Health Sciences Lahore, along with their Admission Forms.
13. Only one annual and one supplementary of First and Second Professional MBBS Examinations shall be allowed in a particular academic session. In exceptional situations, i.e., national calamities, war or loss of solved answer books in case of accident, special examination may be arranged after having observed due process of law. This will require permission of relevant authorities, i.e., Syndicate and Board of Governors.

MBBS 2nd Professional**Block-4**

Theme	Subject	Written Exam			Oral/Practical/Clinical Exam			
		MCQ (1 mark)	SEQ (5 mark each)	Marks	OSPE (8 marks each observed)	OSCE (8 marks each observed)	OSVE (16 marks each observed)	Marks
Normal Structure	Anatomy applied/clinical	23	03	38	03	-	01	40
Normal Function	Physiology applied/clinical	16	02	26	02	-	01	32
	Biochemistry applied/clinical	20	02	30	02	-	01	32
Disease Burden & Prevention	Community Medicine & Public Health	07	-	07	-	-	-	-
	Behavioral Sciences	06	-	06	-	-	-	-
Pathophysiology & pharmacotherapeutics	Pathology	09	-	09	-	-	-	-
	Pharmacology	04	-	04	-	-	-	-
CFRC	CF-2-1	-	-	-	-	01	-	08
PERLs	PERLs-2-1	-	-	-	-	01	-	08
Total		85	7x5=35	120	07 stations x 08 = 56	02 stations x 08 = 16	03 stations x 16=48	120

