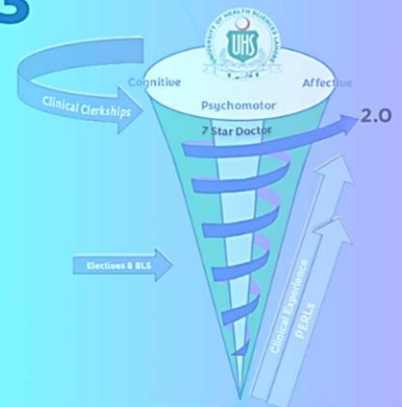




MODULAR INTEGRATED CURRICULUM 2K23



version 2.0



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,

A handwritten signature in blue ink, appearing to read 'Shireen Khawar'.

Prof. Shireen Khawar
Principal, QMCK



Vision, of Queen Medical College

Improving health through excellence in teachings and learnings, leaderships and innovations in health care practice and research.

Mission, of Queen Medical College

To make a valuable contribution to the undergraduate medical education in the country, by developing core knowledge, practical skills and ethical attitudes towards patient's care in our graduates.

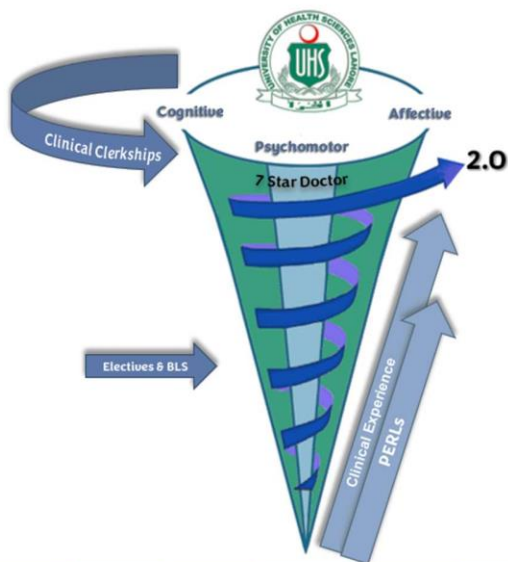
To produce health care professionals who will enhance and extend quality of life in diverse clinical settings, offering the best in terms of efficacy and safety. To strive to attain high standards in education, researches and clinical cares and develop tomorrow's health care leaders who practice patient centered medicine of highest professional standard.



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BLOCK-1



Foundation Module 1

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MEDICAL BIOCHEMISTRY.....	
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PROFESSIONALISM, ETHICS, RESEARCH, LEADERSHIP skills (PERLs).....	
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List of Abbreviations

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Abbreviations	Subjects
A	Anatomy
Ag	Aging
B	Biochemistry
BS	Behavioral sciences
C	Civics
CSIM	Clinical Skills In Medicine
CM	Community Medicine
P	Physiology
Ph	Pharmacology
Pa	Pathology
FM	Forensic Medicine
ENT	Ear Nose Throat
O	Ophthalmology
Psy	Psychiatry
M	Medicine
S	Surgery
Pe	Pediatrics
GO	Gynecology and Obstetrics
QI	Quran and islamiyat
PERLs	Professionalism, Ethics, Research, Leadership

MODULE RATIONALE

Tomorrow's doctor is required to acquire competencies, which could align his knowledge base and skill set for his professional practices. The foundation of knowledge needs to commence from 'The Cell'. The cell is a structural and functional unit of life and has a role in normal homeostasis ensuring appropriate cellular functions. Hence, this module has been designed to introduce a blend of molecular, genetic, anatomical, physiological, and psychosocial information essential for developing a perspective on the function of the human body in health and disease. Besides, an initial orientation to pharmacology and pathology subject has been provided so that students are able to use this information in the coming modules.

MODULE OUTCOMES

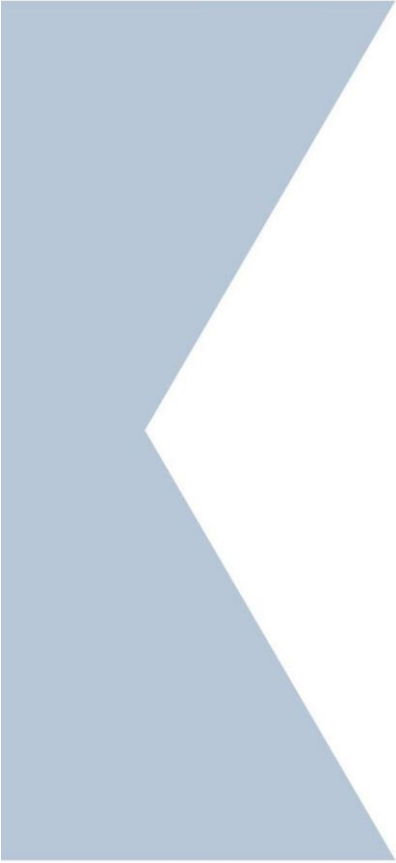
- Describe the microscopic features of nerve cells, muscle cells, general features of epithelia of the body.
- Appraise the functional characteristics of various components of cell membrane and organelles of cell.
- Differentiate between the dynamics of various transport mechanisms along the cell membrane.
- Compare the functional differences between RBCs, WBCs and blood groups.
- Explain the significance of homeostatic mechanisms in keeping body's internal environment nearly constant.
- Appraise the formation and functions of autonomic nervous system.
- Correlate the structural design of each organ to its function.
- Acquire information about the different fascial planes in the different regions of the body & their surgical importance.
- Use descriptive anatomical terms of position to describe the different body structures in relation to each other.
- Describe the movements of body using proper anatomical terms of movement.
- Describe and demonstrate the various bony landmarks.
- Describe the types of joints and correlate them to the mechanisms of movement.
- Classify the bone, joints and muscles based on the structure, function, phylogenetic origin.
- Describe the structures associated with muscles and explain their functional correlations.
- Classify and describe the cardiovascular system and correlate it functionally.

- Amplify the anatomical basis for radiological, cross-sectional, anatomy.
- Correlate clinicopathologically the apoptosis in health & diseases.

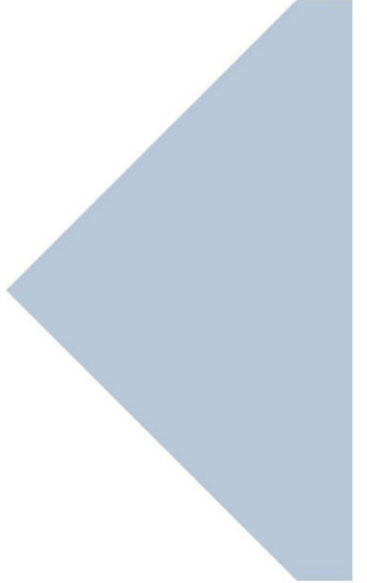
THEMES

- Cell structure
- Cell transport and signaling
- Cell chemistry
- Homeostasis and blood
- Autonomic nervous system
- Body movement
- Muscles
- Growth and development

SYLLABUS OF FOUNDATION-1 MODULE

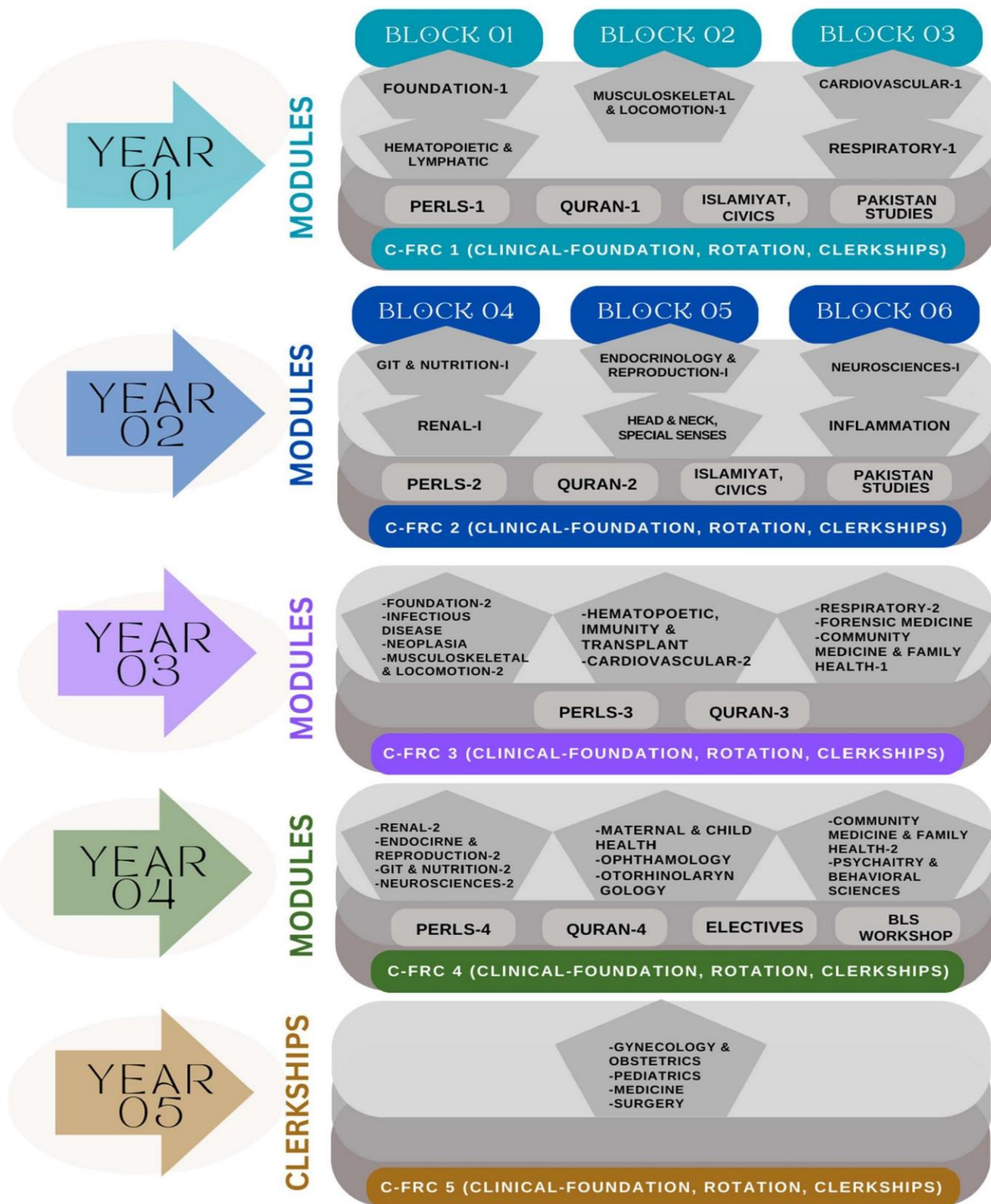


Curriculum Framework



Curriculum 2K23 version 2.0

CURRICULUM FRAMEWORK



Over View of Curriculum

Curriculum 2K23 version 2.0 has been purposefully developed and using the expertise of a group of medical educationists from the affiliated colleges, with the input of subject experts & healthcare leaders to have outcomes which are not only locally contextualized but also globally acceptable. With the final professional profile as the foundational underpinning for a framework, the need for precisely defined competencies and outcomes becomes a must.

University of Health Sciences Lahore emphasizing on the knowledge base, attributes, professional behaviours, and skills set that the yield of the doctors which are brought forth into the healthcare landscape of the country possess at the time of graduating from its affiliated colleges.

A competency is a blend of background knowledge, skills, and attitude that enables a professional to perform as a job requirement.

The competency framework defined during the development of **Curriculum 2K23** version 2.0 has further been categorized into the competencies and behavioral descriptors required to enter the clinical segment of the competency continuum and the exit competencies at the end of the 5-year program.

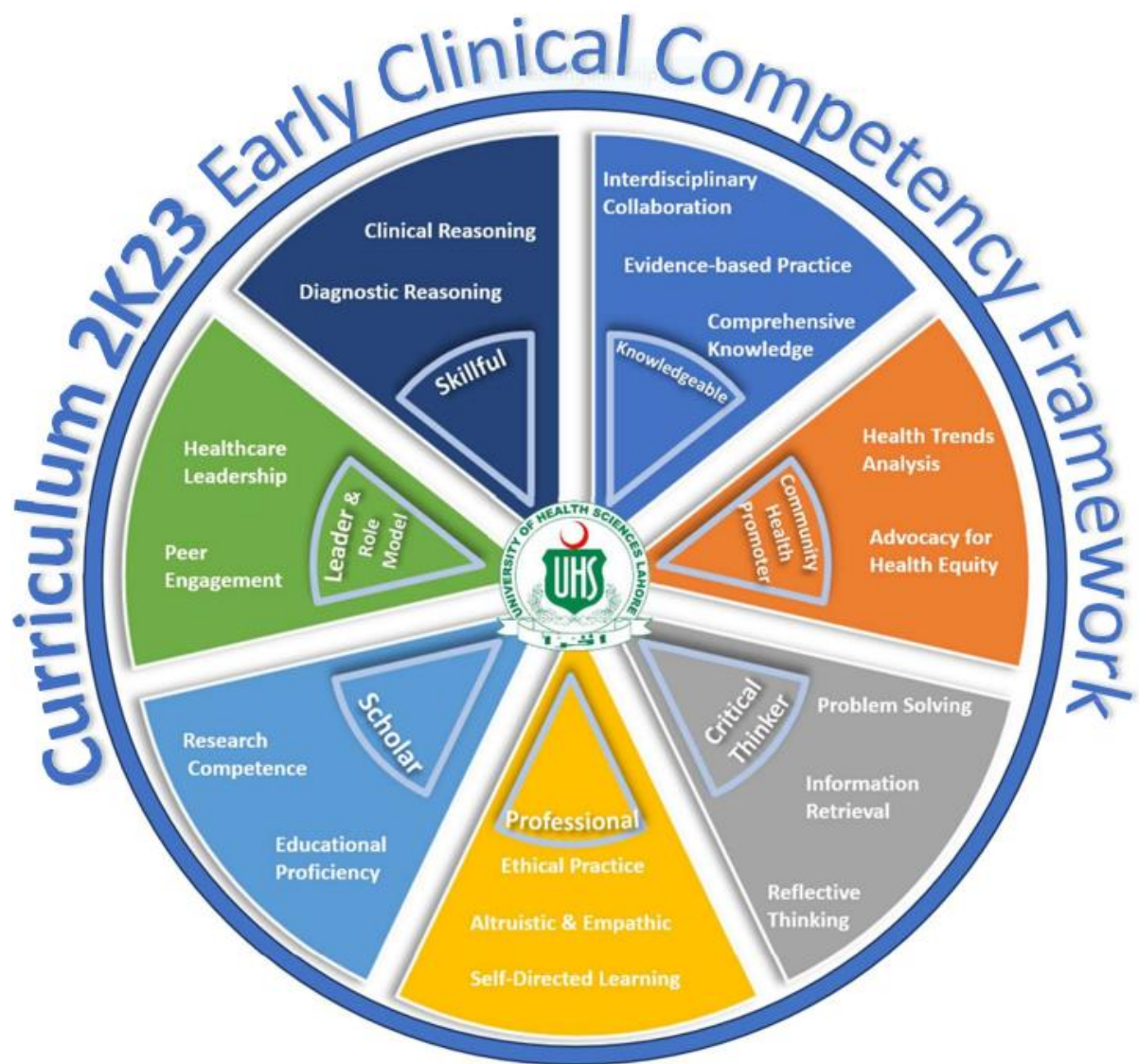
Current edition of **Curriculum 2K23** version 2.0 contains the competency framework for the preclinical years. This framework elaborates the competencies, sub competencies and their behavioral descriptors which the student must possess before entering the clinical years. The module and assessments of the C-FRC and the early clinically oriented activities that have commenced in the first two years will help steer the students to achieve these goals.

Competency framework anchors the professional requirements, training benchmarks and societal expectations in a concise manner. The relatable aspect of attainment sets the path for the institutional implementation. The students should be capable of a deeper understanding of the concepts of competencies and what professional requirements do they need to fulfill before every next stage of their educational journey and skill acquisition. The departments of Medical Education should not only

endorse these expectations but should also help establish a culture of professing to the community and stakeholders for an upkeep of laid down standards. The professed standards defined by the regulatory authority, community or religious integrity.

The current chapter contains the competency framework for the 'Preclinical' years, only. This may serve as a base guideline framework for the institutional designing for their undergraduate training protocols. The sub competencies and their behavioral descriptors are all aligned to the requirements of the 7-star doctor which has been defined by the national regulatory authority and mentioned verbatim in chapter 5. The same set of sub competencies and their behavioral descriptors will diversify into the attributes, clinical competencies, and sub competencies for the remainder of the competency framework which will follow in the next and final version.

The current framework scopes the behaviour requirements and attributes to be achieved. However, all the affiliate institutions have the latitude to further define the sub competencies and their behavioral descriptors to be achieved, based on their own institutional core values and ideology.



Core Competencies & Sub- Competencies to be achieved before entering the 3rd Year

Competency	Sub Competency	Behavioral Descriptors for Early Clinical Years
Skillful	Clinical Reasoning	1. Demonstrate the ability to apply fundamental scientific knowledge to clinical scenarios, such as patient histories and hypothetical case presentations showcasing the integration of theoretical learning into practical clinical reasoning. 2. Critically assess and evaluate existing medical literature and research to inform decision-making in hypothetical patient scenarios during preclinical case studies. 3. Engage in collaborative problem-solving exercises with peers, actively participating in preclinical problem-based discussions to enhance clinical reasoning skills through dialogue and debate.
	Diagnostic reasoning	1. Apply foundational knowledge from basic sciences to critically evaluate the clinical scenarios, to formulate differential diagnoses during preclinical case discussions.
Knowledgeable	Holistic Understanding and Comprehensive Knowledge	1. Demonstrate a thorough understanding of normal and abnormal structures and functions of the body. 2. Apply comprehensive knowledge in identifying molecular, cellular, biochemical, and physiological mechanisms. 3. Evaluate the impact of growth, development, and aging. 4. Explain the various etiological causes and causative agents for specific injuries, illnesses, and diseases. 5. Identify and analyse biological and social determinants and risk factors of diseases. 6. Recognize and explain patterns of normal and abnormal human behavior
	Synthesis of Interdisciplinary Knowledge	1. Integrate knowledge from various medical disciplines to inform hypothetical clinical decision-making and synthesize information for a comprehensive understanding of hypothetical patient cases. 2. Apply a holistic approach by considering the interconnectedness of biological, social, and psychological factors in theoretical healthcare scenarios, and propose integrated solutions to hypothetical clinical problems using interdisciplinary knowledge.
	Evidence Based	1. Critically assess and evaluate existing medical literature and research to inform decision-making in hypothetical patient scenarios during preclinical case studies.

	Practice	2. Integrate knowledge from various scientific disciplines to develop comprehensive and evidence- based explanations for medical phenomena encountered in preclinical coursework.
Community Health Promoter	Health Trends Analysis	1. Critically review scientific literature to stay informed about health trends.
	Advocacy for Health Equity, Promotion, and Prevention	1. Engage in discussions on health disparities and social determinants of health. 2. Demonstrate an understanding of community health concerns
Critical thinking	Information Retrieval	1. Seeks information from various academic sources, including textbooks, research articles, and online resources.
	Problem solving	1. Critically assesses experimental data during laboratory sessions, showing attention to detail and an understanding of its relevance to medical concepts. 2. Demonstrates effective identification and analysis of medical issues during case-based and problem based discussions. 3. Applies logical reasoning to propose viable solutions in problem-solving exercises. 4. Displays adaptability in integrating knowledge to address complex medical challenges. 5. Shows proficiency in utilizing evidence-based strategies to resolve clinical puzzles during preclinical training.
	Reflective Thinking	1. Sets specific learning goals, creates plans to achieve them, and reflects on progress regularly. 2. Reflects on problem-solving processes, identifying strategies that were effective and areas for refinement.
Professional	Self-directed Learning	1. Regularly evaluates personal academic progress and adjusts study strategies accordingly. 2. Actively engages in collaborative peer study groups to enhance learning. 3. Demonstrates effective use of technology to manage and organize study materials.
	Altruistic and Empathetic:	1. Displays empathy and understanding in peer, faculty, and staff interactions.
	Ethical Practice	1. Demonstrates self and professional accountability, honesty, and ethical behaviour. 2. Uphold principles of academic integrity in all

		coursework. 3. Consistently exhibits professional conduct, respecting academic and ethical standards, serving as a positive example for classmates.
Scholar	Research Competency	1. Displays foundational skills in research, including the identification of researchable problems, formulation of clear research questions, and engagement in literature reviews, setting the groundwork for future research endeavors.

	Educational Proficiency	1. Demonstrates consistent high performance in coursework, showcasing a deep understanding of foundational medical sciences during preclinical years. 2. Actively engages in self-directed learning, displaying a strong commitment to mastering educational content and fostering a solid academic foundation in the early years of MBBS.
Leader and Role Model	Healthcare Leadership	1. Demonstrating effective communication and teamwork skills during PBLs, simulations or practical sessions. 2. Actively seeks collaboration on group projects, fostering teamwork and collective problem-solving skills.
	Peer Engagement	1. Actively seeks opportunities to assist peers in understanding complex medical concepts, displaying a collaborative and supportive attitude that fosters a culture of shared learning and growth.

Institutional Implementation

Curriculum 2K23 version 2.0 requires to be implemented by all institutions based on their own unique identity but with true letter and spirit.

Competency framework should be adopted, translated, and implemented through all the methodologies and integrated into all the educational processes of the institutions.

The pre-clinical competency framework will serve as the main scaffold for developing the clinical competencies and clerkship related attributes. So, the significance of implementing this is foundational for developing a seven-star doctor.

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PLANNER
YEAR 1 

Year 1					
Week	BLOCKS	Modules	Spirals		
1	Block 1	Module 1 : Foundation-1 03 rd March 2025 –25 th April 2025	PERLs	CFRC	Quran , Islamiyat & Pak Studies
2					
3					
4					
5					
6					
7					
8	Block 1	Module 1 : Foundation-1 03 rd March 2025 –25 th April 2025	PERLs	CFRC	Quran , Islamiyat & Pak Studies
9					
10					
11					
12					
13					
14					
15	Block 2	Module 2: Haematopoietic & Lymphatic 29 th April 2025 – 16 th May 2025 Space for Spirals & CIA	PERLs	CFRC	Quran , Islam & Pak Stud
16					
17					
18					
19					
20					
21					
22	Block 2	Module 3: Musculoskeletal & Locomotion-1 28 th May 2025 –6 th August 2025 Eid ul Azha 7.6.2025-9.6.2025 Summer Break 01 July,25 - 30 July,25	PERLs	CFRC	Quran , Islam & Pak Studies
23					
24					
25					
26					
27					
28					
29	Block 3	Module 3 (continues): Musculoskeletal & Locomotion-1 28 th May 2025 –6 th August 2025 Space for Spirals & CIA Block Exam 2	PERLs	CFRC	Quran , Islamiyat & Pak Studies
30					
31					
32					
33					
34					
35					
36	Block 3	Module 4: Cardiovascular-1 10 th Sep 2025 – 24 th October 2025 Module 5: Respiratory-1 28 th October 2025 – 14 th November 2025 Space for Spirals & CIA Block Exam 3	PERLs	CFRC	Quran , Islamiyat & Pak Studies
37					
38					
39					
40					
41					
42					
43	Prep Leave	Prep Leave			
44					
45					
46					
47					
48					
49					
50	Professional Exam	Professional Exam			
51					



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YEAR-1
FOUNDATION MODULE

Week 1
Theme: Orientation

Day	08:30 – 09:30	09:30- 11:00		11:00-12:00	12:00-01:30	01.30-2.30	
Monday	Receiving Kit	Welcome address, White Coat ceremony, Introduction of students and HOD Main Auditorium		Department of medical education Lecture Hall	Campus Tour	Refreshments	
Tuesday	08:00- 11:00			11:00 - 11.30 Break	11:30-02:30		
	IT\Library Muhammad Nadir/ Abdul Razzaq	Group Dynamics& Leadership Dr. Syed Hasan Shoaib	Study Skills Dr. Sadaf Sajid		IT\Library Muhammad Nadir/ Abdul Razzaq	Group Dynamics& Leadership Dr. Syed Hasan Shoaib	Study Skills Dr. Sadaf Sajid
	Group 1	Group 2	Group 3		Group 2	Group 3	Group 1
Wednesday	IT\Library	Group Dynamics & Leadership	Study Skills		Visit to Anatomy, Physiology and Biochemistry department in three batches (40mins each)		
					Group 1-2-3		
					Anatomy Group-1 Biochemistry Group-2 Physiology Group-3	Anatomy Group-2 Biochemistry Group-3 Physiology Group-1	Anatomy Group-3 Biochemistry Group-1 Physiology Group-2
	11:30-12:30	12:30-1:30	1:30-02:30		Venue: Anatomy- Physiology- Biochemistry Departments		
Thursday	08:00- 11:00				11:30-02:30		
	Meet the Mentors				Introduction of co-curricular clubs/committees Lecture Hall	Introduction of co-curricular clubs/committees Lecture Hall	Open Session with students
Friday	08:00-12.00						
	Visit to Hospital Medical facilities available to students Introduction to Foundation Module					12:00-01:00 Jumma Prayer	

Venue for Workshops:	
IT/ Library	IT lab (QMC)
Study Skills	Tutorial Room 1 (QMC)
Group Dynamics and Leadership	Tutorial Room 2 (QMC)

Detail of Group A, B, C (for visit to clinical and basic science departments)	
Group	Roll #
1	1-33
2	34-66
3	67-100

NORMAL STRUCTURE					
THEORY					
CODE	GROSS ANATOMY	TOTAL HOURS = 15		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC		
F-A-001	Briefly describe the applied branches of anatomy. Describe the "Anatomical Position" Describe the anatomical planes of body. Describe the terms of relationship, commonly used in Anatomy. Describe the anatomical terms used specifically for Limbs. Describe the terms related to movements.	General Anatomy	Introduction to General Anatomy	Interactive lecture SGD	MCQS
F-A-002	Describe, identify, and exemplify the general morphological features of bones. Describe the developmental classification of bones. Describe the regional classification of bones. Describe the morphological classification of bones. Describe and exemplify Sesamoid, Pneumatic, Wormian and Heterotopic bones. Describe the general features of adult typical long bone. Describe the types of epiphyses Discuss the general concept of ossification (primary and secondary centers and rule of ossification) Describe the relationship of growing end of bones with the direction of nutrient foramen Describe the blood supply of various types of bones. Describe the salient features of common types of fractures and basic concept of healing of fracture.	General Anatomy	Bones (Osteology)	Interactive lecture SGD	MCQ'S SEQ'S
F-A-003	Describe the general features of cartilage and its importance in gross anatomy. Describe the subtypes and gross features of Hyaline, elastic and fibro Cartilage. Differentiate the three types of cartilages	General Anatomy	Cartilage (Chondrology)	Interactive lecture SGD	MCQ'S SEQ'S

F-A-004	Describe and exemplify the structural classification of Joints (synovial, cartilaginous & fibrous) along with their sub-classification. Describe the components and characteristic features of a Synovial Joints. Describe the blood supply, innervation of Synovial Joints, cartilaginous joints, and fibrous joints. List the factors stabilizing a synovial joint. Define common joint injuries and diseases	General Anatomy	Joints (Arthrology)	Interactive lecture SGD	MCQ'S SEQ'S
F-A-005	Describe the structure and function of Skin on the basis of its two layers; Epidermis and Dermis Describe the structure of Hair as an appendage of skin. Describe the structure of Nail as an appendage of skin. Describe the structure of Sweat and Sebaceous Glands Describe the structure and function of Superficial Fascia Describe the structure, function, and modifications of Deep Fascia Describe important clinical correlates of skin (skin infections, sebaceous cyst, skin burns and skin grafting)	General Anatomy	Integumentary System	Interactive lecture	MCQ'S
F-A-006	Classify and describe Muscle Tissue based on Structure, Function and Development Describe Somatic and Visceral Muscles Describe and differentiate the Red and White Variety of Skeletal Muscles Classify and describe the skeletal muscles based on architecture. Classify skeletal muscle based on action. Describe the parts of a skeletal muscle. Describe and differentiate the basic organization of innervation to skeletal, smooth, and cardiac muscle. Describe the structure of Synovial Bursae Comprehend the meaning of Hypertrophy, Hemiplegia, quadriplegia, paraplegia, hemiparesis	General Anatomy	Muscle Tissue (Myology)	Interactive lecture SGD	MCQ'S SEQ'S

F-A-007	Classify the types of blood circulation. Classify and exemplify various types of blood vessels. Describe and exemplify various types of anastomoses. Explain the importance of End Arteries Describe the general organization of Lymphatic Circulation Define the terms: Lymphoid Tissue, Tissue Fluid, Lymphatic, Capillaries, Lymph and Lymphatic Vessels Define the terms; Lymphangitis, Lymphadenitis. Define neuron. Describe the anatomical structure of a neuron. Classify neurons based on morphology with examples.	General Anatomy	Vascular System (Angiology)	Interactive lecture SGD	MCQ'S SEQ'S
F-A-008	Classify neurons based on function. Describe the components of the central nervous system. Describe the components of the peripheral nervous system. Name the supporting cells (neuroglia) of the central nervous system. Describe the structure and functions of the neuroglia of the central nervous system. Enumerate the supporting cells (neuroglia) of the peripheral nervous system. Describe the structure and functions of the neuroglia of the peripheral nervous system. Enlist the cranial nerves I to XII Describe the types of nerve fibers carried by and distribution of the cranial nerves. Describe the formation, types of modalities carried by, and distribution of the spinal nerves. Explain Dermatome (s) Explain Myotome (s) Describe the formation of Plexuses. Differentiate between Somatic and Visceral nervous system. Define Receptors Describe the functions of receptors.	General Anatomy	Nervous Tissue (Neurology)	Interactive lecture SGD	MCQ'S SEQ'S

	Classify sensory receptors based on modality (with location) Define Effectors Describe the functions of effectors. Describe ANS (Autonomic Nervous System) and differentiate between sympathetic and parasympathetic nervous system				
F-A-009	Identify displacement of fracture segments of the bone Identify dislocation of joints	Imaging in Anatomy		Interactive lecture	MCQ'S

CODE	EMBRYOLOGY & POST-NATAL DEVELOPMENT	TOTAL HOURS = 25		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	Topic		
F-A-010	Define Chromosome Theory of inheritance Enlist different stages of Mitosis and Meiosis Compare and contrast Mitosis and Meiosis Enlist the numerical chromosomal anomalies Describe the anatomical basis for numerical chromosomal abnormalities. Describe the clinical presentation of numerical chromosomal abnormalities	Embryology	Cell division and Chromosomal abnormalities	Interactive lecture	MCQ'S
F-A-011	Describe the Process of spermatogenesis and spermiogenesis Describe the embryological basis for Abnormal gametes	Embryology	Gametogenesis Spermatogenesis	Interactive lecture	MCQ'S
F-A-012	Describe the Prenatal and postnatal maturation of oocyte	Integrate with Gynecology	Gametogenesis Oogenesis	Interactive lecture	MCQ'S
F-A-013	Describe the significance of arrested development of oocyte	Embryology	Gametogenesis Oogenesis	Interactive lecture	MCQ'S
F-A-014	Compare and contrast oogenesis and spermatogenesis		Gametogenesis	Interactive lecture	MCQ'S
F-A-015	Describe the hormonal control of female reproductive cycles Enumerate and describe the steps of the ovarian cycle Describe the process of ovulation Describe the formation, function and fate of corpus luteum Define Mittelschmerz pain Define menstrual cycle Describe the phases	Integrate with Gynecology	Female Reproductive Cycle	Interactive lecture	MCQ'S
F-A-016	Describe the transportation of Oocyte	Embryology	Transportation of gametes	Interactive lecture	MCQ'S
F-A-017	Describe the Prenatal and postnatal maturation of oocyte		Fertilization	Interactive lecture	MCQ'S
	Define contraception Explain the mechanisms of following contraceptive techniques: 1. Barrier methods 2. Hormonal methods				

F-A-018	3. Intrauterine device (IUD) 4. Emergency contraceptive pills (ECPs) Male and female sterilization	Integrate with physiology	Contraception		
F-A-019	Describe the anatomical and physiological basis of male and female infertility Define assisted reproductive techniques Describe the mechanisms of In vitro fertilization (IVF) & embryo transfer Explain the correlation of multiple births with assisted reproductive techniques	Integrate with Gynecology	Infertility & assisted reproductive techniques	Interactive lecture SGD	MCQ'S SEQ'S
F-A-020	Describe the process of cleavage of embryo and blastocyst formation Describe the origin and uses of embryonic stem cells and the techniques of obtaining these cells from the embryo (reproductive cloning & therapeutic cloning) Explain the embryological basis of spontaneous abortion.	Embryology	Cleavage, blastocyst formation	Interactive lecture SGD	MCQ'S SEQ'S
	Compare and contrast the villi.	Integrate with Gynecology			
	Describe the process of Compaction. Describe the Formation of morula (division into inner and outer cell mass)	Embryology		Interactive lecture SGD	
F-A-021	Describe the Uterus at the time of implantation (decidua reaction) Illustrate the concept of Implantation. Describe the Abnormal implantation/ extra uterine implantations. Define the Molar pregnancy. Describe the formation of amniotic cavity, embryonic disc, and umbilical vesicle Describe the formation of chorionic sac	Embryology	Implantation Week 2 of Development	Interactive lecture SGD	SEQ'S
F-A-022	Describe the Establishment of uteroplacental circulation.		Utero-Placental circulation	Interactive lecture SGD	SEQ'S
F-A-023	Describe the Formation & fate of primitive streak. Draw a concept map highlighting the sequence of events responsible for transformation of bilaminar germ disc into trilaminar germ disc. Describe the embryology behind sacrococcygeal teratoma and justify its clinical picture. Describe the molecular factors responsible for gastrulation.	Embryology Integrate with Gynecology	Gastrulation	Interactive lecture SGD	MCQ'S SEQ'S OSPE

	Describe the Invagination and movement of PR notochordal cells Describe the Notochordal plate formation Describe the Neurogenetic			Interactive lecture SGD	MCQ'S SEQ'S
F-A-024	canal formation Describe the fate of the notochord Describe the Establishment of body axis Draw and label the fate map establishment Describe the Fate map establishment Describe the molecular basis for notochord formation Describe the role of notochord as an inducer Describe the embryological basis for situs inversus, Sirenomelia, holoprosencephaly Describe the development of trophoblast and chorionic villi during 3rd week of development	Embryology	Formation of notochord		
F-A-025	Describe the Formation of neural tube from neural plate. Justify embryologically the clinical picture seen in various neural tube defects Describe the process of Migration of neural crest cells Enlist the Derivatives of neural tube and describe the fate of each Enlist the Derivatives of neural crest cells Enlist the ectodermal derivatives Describe the molecular and genetic factors for the process of neurulation Describe important Neural tube defects	Embryology	Derivatives of ectoderm	Interactive lecture SGD	MCQ'S SEQ'S OSVE
F-A-026	Describe the Differentiation of mesoderm into its constituting components Describe the Somite formation and its fate Describe the Estimation of age by somite's Describe the formation of intra-embryonic coelom	Integrate with pediatrics	Mesoderm derivatives	Interactive lecture SGD	MCQ'S SEQ'S OSVE
F-A-027	Describe the processes of vasculogenesis & angiogenesis Explain the features of primordial cardiovascular system Describe the anatomical justification for Capillary hemangiomas	Integrate with Cardiology	Early development of CVS	Interactive lecture SGD	MCQ'S SEQ'S

F-A-028	Describe the Cephalo-caudal folding Describe the Lateral folding	Integrate with Gynecology	Folding of embryo	Interactive lecture SGD	MCQ'S SEQ'S
F-A-029	Enlist the derivatives of germ layers Enlist and Describe the Derivatives of intermediate and lateral plate mesoderm Enlist & Describe the Derivatives of endoderm	Embryology	Germ layer derivatives	Interactive lecture SGD	MCQ'S SEQ'S
	Enlist & describe the derivatives of ectoderm	Integrate with Gynecology/ Pediatrics			
F-A-030	Describe the Regulation of embryonic development by Homeobox genes	Embryology	Control of the embryonic development	Interactive lecture SGD	MCQ'S SEQ'S
F-A-031	Enlist the characteristic features of the embryo during		Folding of Embryo	Interactive lecture SGD	MCQ'S SEQ'S
	2nd month Describe the criteria for estimating the developmental staging in human embryos Explain the estimation of gestational & embryonic age		Embryonic period		
F-A-032	Explain the measurement and characteristics of fetus/Key events during Embryonic Period. Describe the Overview of External appearance of fetus during fetal period. Enlist developmental horizons during fetal life event. Describe Viability of fetuses and low birth weight babies Explain the factors influencing fetal growth Describe the clinical problems encountered by babies born with IUGR (Intra Uterine Growth Restriction)		Fetal Period	Interactive lecture SGD	MCQ'S SEQ'S OSVE
F-A-033	Tabulate the criteria for estimating fertilization age during the fetal period Describe the procedures for assessing fetal status Describe the clinical picture of IUGR & factors resulting in IUGR (Intra Uterine Growth Restriction) Define Pre-eclampsia	Integrate with Gynecology	Fetal Status	Interactive lecture SGD	MCQ'S SEQ'S OSVE
F-A-034	List the fetal membranes Describe the macroscopic & microscopic features of Decidua Enlist the various parts of decidua Functionally correlate the parts of the decidua with its structure Describe the Changes in the trophoblast leading to the development of placenta Describe the Structure (macroscopic & microscopic) of placenta	Integrate with Gynaecology	Placenta	Interactive lecture SGD	MCQ'S SEQ'S OSVE

	Enlist & correlate the Functions of placenta with its structure Describe the Microscopic anatomy of Placental membrane Describe the Placental circulation (fetal& maternal) Embryologically justify the hemolytic disease of the neonate (Erythroblastosis fetalis) Describe the functions of placenta				
	Describe the Formation & fate of Umbilical cord Describe the Cord abnormalities Justify embryologically the clinical features observed in Absence of umbilical artery Describe the formation			Interactive lecture SGD	MCQ'S SEQ'S OSPE OSVE
F-A-035	and circulation of Amniotic fluid Describe the Procedure of diagnostic amniocentesis Explain the significance of amniotic fluid Describe the factors responsible for Polyhydramnios and oligohydramnios Describe the consequences of oligohydramnios and polyhydramnios Define Amniotic Bands Explain the formation and fate of umbilical vesicle (yolk sac) Define Physiological Umbilical Hernia	Integrate with Gynecology	Fetal membranes		
F-A-036	Describe the development of Dizygotic twins Describe the development of Monozygotic twins Describe the fetal membranes in twin pregnancy Describe Fetus Papyraceous Explain the zygoty of the twins Describe the characteristics of various types of conjoined monozygotic twins		Multiple pregnancies	Interactive lecture SGD	MCQ'S SEQ'S OSVE
F-A-037	Define preterm Birth Describe parturition & three stages of Labor. Describe the Various methods of prenatal diagnosis Describe the Fetal therapy Describe Maternal serum Screening Corelate levels of Alpha fetoprotein levels and fetal anomalies		Prenatal diagnosis and fetal therapy	Interactive lecture SGD	MCQ'S SEQ'S
	Describe stem cell transplantation and gene therapy				
F-A-038	Define morphogens, protein kinases, notch delta pathway, transcription factors, epigenetics	Embryology	Molecular regulations and signaling pathways	Interactive lecture	MCQ'S SEQ'S

F-A-039	Define teratology and causes of birth defects Define genomic imprinting Define human disorders associated with genetic mutations Describe birth defects caused by genetic factors: numerical and structural anomalies Define and enlist the teratogens Describe the role of following in causing teratogenicity in humans: 1. Drugs 2. Environmental agents 3. Chemicals & heavy metals 4. Infectious agents 5. Radiation 6. Hormones 7. Maternal diseases Describe the basis for male-mediated teratogens Describe prevention of birth defects		Interactive lecture SGD	MCQ'S SEQ'S OSVE
		Teratogenicity		

CODE	MICROSCOPIC ANATOMY (HISTOLOGY AND PATHOLOGY)	TOTAL HOURS = 08		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
F-A-040	Describe different types of microscopies Describe Staining methods and their significance	Basic technique in Histology	Introduction to microscopy & Basic staining technique	SGD	MCQ'S OSPE
F-A-041	Describe the electron microscopic structure and fluid mosaic model of plasma membrane Draw the fluid mosaic model of plasma membrane Describe the structure of glycocalyx coat and lipid raft and correlate it with function	Basic Histology	Cell membrane	Interactive lecture	MCQ'S
	Describe different types of membrane proteins and their functions			Interactive lecture	MCQ'S
	Explain different modes of transport across the cell membrane			Interactive lecture	MCQ'S
	List the membranous and non-membranous cellular organelles Describe the structure of the following cellular organelles and correlate with their function: 1. Ribosomes 2. Endoplasmic reticulum (rough & smooth) 3. Golgi apparatus 4. Lysosomes 5. Proteasomes 6. Mitochondria 7. Peroxisomes Describe the structural components of cytoskeleton, and correlate them with their functions Explain the histological basis of immotile cilia syndrome	Basic Histology	Cell membrane	Interactive lecture	MCQ'S
F-A-042	Describe the histological features of cytoplasmic inclusions	Integrate with Pathology	Cell organelles		
	Describe the structure of nuclear envelope and nuclear pores	Integrate with Physiology		Interactive lecture	MCQ'S

F-A-043	Describe the structure of chromatin Describe the structure of chromosome Describe the structure of nucleolus Describe the structure and types of DNA (Deoxy Ribonucleic Acid) and RNA (Ribonucleic Acid) Describe the histological basis for apoptosis and necrosis	Histology	Cell nucleus	Interactive lecture SGD	MCQ'S SEQ'S
	Describe structure of different types of cell junctions	Integrate with Pathology		Interactive lecture	MCQ'S SEQ'S
	Describe the cell cycle & cell division Define important clinicopathological terms:				
F-A-044	Atresia, Hypertrophy, Atrophy, Hyperplasia, Metaplasia, Anaplasia, Neoplasia, Inflammation, Metastasis		Epithelium	Interactive lecture	MCQ'S SEQ'S OSPE OSVE
	Describe the histological structure and function of basement membrane (light and electron) Draw and label a diagram illustrating the electron microscopic structure of basement membrane Describe the basal surface modifications of epithelia Describe the electron microscopic structure and functions of intercellular junctions (lateral surface modifications) and give their locations	Histology		SGD	MCQ'S SEQ'S OSPE
	Describe the Biochemical composition of the basolateral modifications				
	Describe the electron microscopic structure & functions of the following apical cell surface specializations: 1. Microvilli 2. Stereocilia Cilia	Integrate with Biochemistry		Interactive lecture SGD	MCQ'S SEQ'S OSPE OSVE

	Classify and exemplify the epithelia with their histological structure, locations and functions	Integrate with Pathology			MCQ'S SEQ'S OSPE OSVE
	Describe the structure of exocrine glands Explain the mechanism of transport across the epithelia Describe the classification of exocrine glands on the basis of: 1. Shape of secretory portions and ducts 2. Mode of secretion Type of secretion	Histology		Interactive lecture SGD	MCQ'S SEQ'S
F-A-045	Describe the composition and list the constituents of connective tissue Classify the connective tissue with examples Describe the composition of ground substance of connective tissue	Histology	Connective tissue	Interactive lecture SGD	MCQ'S SEQ'S OSVE
	Describe the composition, distribution, and function of glycosaminoglycans in connective tissue Describe connective tissue fibers, cells. Define Fibrosis			Interactive lecture SGD	MCQ'S SEQ'S
	Describe the structure, distribution, and functions of the cells of macrophage mononuclear phagocytic system	Integrate with Biochemistry/ Physiology		Interactive lecture SGD	MCQ'S SEQ'S
	Describe the role of macrophages in innate immunity & formation of foreign body Giant cell Describe the structure & functions of Mast cells. Role of Mast cells in immediate hypersensitivity reactions. Describe structure of Plasma cells and their role in antibody formation.			Interactive lecture	MCQ'S

	Describe the types of adipose tissue (white & brown), their histogenesis, locations and function	Histology		Interactive lecture	MCQ'S
	Describe lipid storage and mobilization in and from adipocytes and compare the brown and white adipose tissue	Integrate with Pathology		Interactive lecture	MCQ'S

CODE	ANATOMY	TOTAL HOURS = 03		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
F-A-046	Demonstrate the anatomical terms of position and movement, in particular on limbs.	Anatomy	Osteology Imaging and cross-sectional Anatomy Arthrology	SGD	MCQ'S SEQ'S OSPE
	Demonstrate various anatomical movements of body Identify various elevations and anatomical landmarks on bones. Identify and interpret normal radiographs of various body regions Identify and interpret joint dislocations and displaced fracture bone segments radiographically.			SGD	MCQ'S SEQ'S OSPE

CODE	EMBRYOLOGY	TOTAL HOURS = 05		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
	Calculate fertilization age, gestational age, embryonic/fetal age and expected date of delivery.			SGD	OSPE
	On models, charts, aborted embryos and fetal specimens, identify the: Events of embryonic period, i.e., cleavage, morula and blastula formation, yolk sac, amniotic cavity, connecting stalk,			SGD	OSPE

F-A-047	Gastrulation (notochord & primitive streak, three germ layers and their parts/derivatives), angiogenesis, neurulation, somites and embryonic age determination based on it, chorionic villi (primary, secondary & tertiary), developmental defects (sacroccygealteratoma, neural tube defects) Placenta and it's positional & Implational variations, umbilical cord and its contents Fetal features during fetal period. Determine age of fetus based on these features.	Anatomy	Embryology	SGD	OSPE
	Describe the USG (Ultrasonography) report for the: Fetal features, fetal age estimation, placental attachment with variations, fetal membranes and multiple pregnancies				
	Gastrulation (notochord & primitive streak, three germ layers and their parts/derivatives), angiogenesis, neurulation, somites and embryonic age determination based on it, chorionic villi (primary, secondary & tertiary), developmental defects (sacroccygeal teratoma, neural tube defects) fetal features during fetal period. Determine age of fetus based on these features.			SGD	OSPE
	Describe the USG (Ultrasonography) report for the:				
	Fetal features, fetal age estimation, placental attachment with variations, fetal membranes and multiple pregnancies				OSPE
CODE	HISTOLOGY	TOTAL HOURS =14		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
F-A-048	Describe different types of staining techniques and their significance with special emphasis on H&E (Hematoxylin and Eosin) staining	Microscopic Anatomy	Staining techniques	SGD	MCQ'S
F-A-049	Enlist important features of different parts of light microscope		Microscope	SGD	OSPE
F-A-050	Identify and draw & label different cell shapes under the microscope		Cell shape	SGD	MCQ'S SEQ'S
F-A-051	Identify under light microscope and Draw & Label the following types of epithelia: 1. Simple squamous 2. Simple cuboidal 3. Simple columnar (ciliated & non-ciliated) 4. Pseudostratified columnar (ciliated & non-ciliated) 5. Stratified squamous (keratinized & nonkeratinized) 6. Stratified cuboidal 7. Stratified columnar 8. Transitional		Epithelium	SGD	MCQ'S SEQ'S OSPE

F-A-052	Identify under light microscope and Draw & Label serous & mucous secreting glands under light microscope	Microscopic Anatomy	Epithelium	SGD	MCQ'S SEQ'S OSPE
F-A-053	Identify under light microscope and Draw & Label the various types of connective tissue		Connective tissue	SGD	MCQ'S SEQ'S OSPE

NORMAL FUNCTION					
THEORY					
CODE	MEDICAL PHYSIOLOGY	TOTAL HOURS = 40		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
F-P-001	Define Homeostasis Explain control system of body by giving examples Differentiate between Extracellular and Intracellular Fluids Explain the positive and negative feedback mechanisms with examples Explain the significance of feed forward/ adaptive control/delayed negative feedback mechanisms Explain the structure of cell membrane Enlist the types of cell membrane proteins Enumerate the functions of membrane proteins Define and enumerate the functions of cell Glycocalyx	Medical Physiology	Cell Biology	Interactive lecture SGD SDL	SEQ'S MCQ'S OSVE
	Enlist membranous and non-membranous organelles Enlist the self-replicative organelles Differentiate between the functions of smooth and rough endoplasmic reticulum Explain the functions of Golgi apparatus Enlist the enzymes of lysosomes Explain the functions of lysosomes Enlist the enzymes of peroxisomes Explain the functions of peroxisomes Enumerate the components and functions of cytoskeleton Define and enlist types of endocytosis Explain the mechanism of pinocytosis Classify different transport mechanisms Compare the composition of Na (Sodium), K			Interactive lecture SGD SDL	SEQ'S MCQ'S OSVE
	(Potassium) and Cl (Chloride) in extracellular and intracellular fluid Define and enlist different types of diffusion Explain the process of facilitated diffusion with the aid of diagram Define and classify different types of active transport Describe primary and secondary active transport with examples Explain voltage and ligand gated channels with examples Name Na, K channel Blockers. Discuss functions and significance of Na/K ATPase pump.			Interactive lecture SGD SDL	SEQ'S MCQ'S OSVE
F-P-002	Enumerate the functions of blood Explain the composition of blood Enumerate the plasma proteins	Medical Physiology	Blood	Interactive lecture SGD SDL	SEQ'S MCQ'S OSVE
	Discuss functions of plasma proteins Describe the pathophysiology of edema			Interactive lecture	SEQ'S MCQ'S

F-P-003	Discuss the characteristics of red blood cells Explain different types of Bone marrows Enumerate the different sites of erythropoiesis at different ages Explain the stages of erythropoiesis Enumerate factors that regulate erythropoiesis Discuss the site and role of erythropoietin in red blood cell production Explain the significance of vitamin B12 and folic acid in maturation of red blood cell		Red Blood Cells	Interactive lecture SGD SDL	SEQ'S MCQ'S OSVE PRESENTATION POSTERS
F-P-004	Enumerate the types of normal hemoglobin in different ages of life Explain the role of Iron in Hemoglobin formation. Define blood indices, give their normal values & enumerate the conditions in which these values are disturbed	Medical Physiology	Hemoglobin	Interactive lecture SGD SDL	SEQ'S MCQ'S PRESENTATION POSTERS
	Enlist the abnormal types of hemoglobin			Interactive lecture	SEQ'S MCQ'S
F-P-005	Enumerate the types of white blood cells Describe the characteristics and functions of Neutrophils Explain the process of defense against invading agent by neutrophils Define leukocytosis and leukopenia Explain the effects of leukemia on body Explain the process of defense against invading agent by macrophages Discuss different lines of defense during inflammation	Medical Physiology	White Blood Cells	Interactive lecture SGD SDL	SEQ'S MCQ'S PRESENTATION POSTERS
	Explain the functions of neutrophils and macrophages in spread of inflammation (walling off effect) Define the Reticuloendothelial system Enlist the different components of Reticuloendothelial system Explain the characteristics and functions of basophils Explain the characteristics and functions of eosinophils and enlist conditions in which these cells are raised.			Interactive lecture SGD SDL	SEQ'S MCQ'S PRESENTATION POSTERS
F-P-006	Enumerate different blood group types. Explain the basis of ABO and Rh blood system Explain the Landsteiner law	Medical Physiology	Blood Types	Interactive lecture SGD SDL	SEQ'S MCQ'S PRESENTATION POSTERS
F-P-007	Discuss Components of ANS (Autonomic nervous system) Explain the physiological anatomy of sympathetic and parasympathetic nervous system Describe the types of adrenergic and cholinergic receptors and their functions Explain the effects of sympathetic and parasympathetic on various organs/ system of body	Medical Physiology Also integrate with Anatomy part of ANS	Autonomic nervous system	Interactive lecture SGD SDL	SEQ'S MCQ'S PRESENTATION POSTERS

PRACTICAL

CODE	PHYSIOLOGY	TOTAL HOURS = 12		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
F-P-008	Explain laboratory/clinical procedure to the subject. Obtain verbal consent from subject before starting a procedure. Reassure the subject after the procedure.	Medical Physiology	Consent	Demonstration Role play	TABLEVIVA
F-P-009	Determine Erythrocyte Sedimentation Rate and packed cell volume		RBCs (Red Blood Cells)	Demonstration+ performance	OSPE
F-P-010	Determination of blood group		Blood Group	Demonstration+ performance	TABLEVIVA OSPE
F-P-011	Interpret Total Leucocyte Count, Differential Leucocyte Count (normal & abnormal) in a CBC (Complete Blood Count) report generated by Automated Cell Counter Identify various types of WBCs in a prepared DLC (Differential Leukocyte Count)		WBCs (White Blood Cells)	Demonstration+ performance	TABLEVIVA OSPE

THEORY

CODE	MEDICAL BIOCHEMISTRY	TOTAL HOURS = 36		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
F-B-001	Differentiate between different types of cells. Explain the concept of organization of cells to tissue, tissues to organ, organs to system. Differentiate between the eukaryotic and prokaryotic cell	Biochemistry y Cell Biology	Structure of cell	Lecture	MCQ'S
F-B-002	Describe the composition and structure of cell on biochemical basis and justify it as fluid mosaic model. Describe the structure and function of cell membrane with particular reference to the role of - Lipids - Carbohydrates - Proteins		Cell Membrane	SGD Flipped classroom	MCQ'S

	Explain why the cell membrane is called fluid mosaic model			Lecture	SEQ'S
F-B-003	Discuss the various ways of cell- to-cell communication and to the environment. Describe cell to cell communications. Cell signaling pathways (only G protein signaling i.e. Gs, Gi and Gq) Describe cell to cell adhesion.		Signal transduction	Interactive lecture Role play	SEQ's MCQ'S
F-B-004	Explain the biochemical markers and importance of subcellular organelles and their inherited disorders especially: 1. cell disease 2. Refsum disease 3. Parkinsonism 4. Progeria		Subcellular organelles	Flipped classroom	SEQ's MCQ'S
F-B-005	Describe the chemistry of purines and pyrimidines and their linkage in nucleic acid synthesis and their metabolism		Chemistry of purine and pyrimidines	Lecture	SEQ's MCQ'S
F-B-006	Discuss the organization of DNA with special reference to Watson and Crick model, composition, structure, role of pairing Describe the structural forms of DNA		DNA (Deoxy Ribonucleic Acid)	Interactive lecture SGD	MCQ'S
F-B-007	Discuss the structure of different types of RNAs with special reference to composition, linkage, functions of RNA, micro-RNA Illustrate the structure and functions of various types of RNAs Describe the functions of various small RNAs present in cell	Biochemistry Cell Biology	RNA (Ribonucleic Acid)	Group presentation time	MCQ'S
F-B-008	Explain the structure and nomenclature of nucleotides, biomedical importance of natural and synthetic analogues Interpret the role of synthetic analogues of	Biochemistry Cell Biology	Nucleotides	Interactive lecture SGD	SEQ's MCQ'S
	nucleotides in medicine based on signs/symptoms and data e.g. Methotrexate, 5-Fluorouracil and Allopurinol.				
F-B-009	Explain the higher organization of DNA. Difference between DNA, chromatid and chromosome		Chromosome	Interactive lecture SGD	Page 48

F-B-010	Describe enzymes with reference to: 1. Active sites 2. Specificity 3. Catalytic efficiency 4. Cofactor 5. Coenzyme 6. Holoenzyme 7. Apoenzyme 8. Prosthetic group 9. Zymogens 10. Location	Enzymes		
	Classify enzymes according to the reaction they catalyze and their nomenclature		Interactive lecture	SEQ'S VIVA
	Explain the mechanism of enzyme action from reactants to products (catalysis).		Interactive lecture	VIVA MCQ'S
	Discuss the effect of various factors on enzymatic activity: 1. Substrate concentration 2. Temperature 3. PH 4. Enzyme concentration		Interactive lecture	SEQ'S
	Explain the regulation of enzymatic activity (Michaelis Menten and Line weaver Burk's equation). Discuss inhibitors of enzymatic activity (with special reference to Km/V max) 1. Competitive 2. Non competitive 3. uncompetitive	Biochemistry Cell Biology	Interactive lecture	SEQ'S MCQ'S
	Explain the application of enzyme in clinical diagnosis and therapeutic use		TBL	MCQ'S
F-B-011	Classify amino acids based on polarity, nutritional importance and glucogenic/Ketogenic properties		Interactive lecture	
	Explain the structure, physical, chemical properties of amino acids and their biomedical importance		Amino acids	
F-B-12	Classify proteins on the basis of functions, solubility and physicochemical properties 1. Explain its biomedical importance 2. Distinguish between class A and B proteins		Interactive lecture	SEQ'S VIVA
	Explain the structural levels of proteins 1. Differentiate between alpha helix and beta pleated protein structures 2. Identify bonding at different levels of proteins		Interactive lecture	SEQ'S VIVA
		Protein		

	Describe the role of chaperons in protein folding 1. Interpret disorders related to protein misfolding on basis of given data 2. Describe the biochemical basis of Alzheimer's disease/ prion disease	Biochemistry Cell Biology		Interactive lecture	SEQ'S VIVA
F-B-13	Classify and explain the bio-chemical role of each class of plasma proteins		Plasma proteins	Interactive lecture	SEQ'S
F-B-14	Explain the structure and biochemical role of immunoglobulins 1. Describe the production, structure and functions of B cells, plasma cells, and antibodies (IgA, IgD, IgE, IgG, and IgM). 2. Discuss the functions of the cytokines (Interleukins (ILs), Tumor Necrosis Factor (TNFs), IFs, Platelet derived growth factor (PDGF), and Platelet activating factor (PAF)). 3. Interpret multiple myeloma on basis of given data		Immunoglobulins	Interactive lecture	SEQ'S TBL

CODE	BIOCHEMISTRY	TOTAL HOURS = 09		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIP LINE	TOPIC		
F-B-015	Demonstrate the step taken to prevent or rectify the Laboratory Hazards	Biochemistry	Lab hazards	Demonstration	OSPE
F-B-016	Identify the structure of cells under microscope		cell	Demonstration+ performance	OSPE TABLE VIVA
F-B-017	Identify the methods of isolation of cell organelles'		Cell organelles	Demonstration	OSPE TABLE VIVA
F-B-018	Identify the different parts of equipment i.e., centrifuge, Microlab, Electrophoresis, Hot Oven, water bath		Equipment	Demonstration+ performance	OSPE TABLE VIVA
F-B-019	Detection of amino acids by paper chromatography		Chromatography Solutions	Demonstration+ performance	OSPE TABLE VIVA
	Prepare different types of solution Molar, Molal, Normal and %			Demonstration+ performance	OSPE TABLE VIVA
THEORY					
CODE	PATHOLOGY	TOTAL HOURS = 12		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
F-Pa-001	Discuss the significance of pathology.	General Pathology	Cell Injury	Interactive lecture	MCQ'S
	Discuss the causes of cell injury. Identify the types of cell injury. Describe the mechanism of cell injury. Identify the types of cell death. Define necrosis and apoptosis. Describe different types of necrosis. Compare apoptosis with necrosis. Identify different types and mechanism of cellular adaptations to stress Discuss the mechanism and types of intracellular accumulations and pathological calcifications				

F-Pa-002	Enumerate the microbes causing infectious diseases. Describe the structure of bacterial cell Differentiate cell walls of gram positive and gram-negative bacteria. Compare the structure of bacterial cell and virus Discuss the growth curve of bacteria. Enlist steps of viral replication Identify types of bacterial infections Enlist stages of bacterial pathogenesis	General Microbiology	Introduction to Microorganisms	Interactive lecture	MCQ'S
	Discuss the determinants of bacterial pathogenesis			Interactive lecture	MCQ'S
F-Pa-003	Define sterilization and disinfection. Describe the principles of sterilization and disinfection. Describe clinical uses of common disinfectants and their mode of sterilization Discuss physical and chemical agents of sterilization		Sterilization & Disinfection	Interactive lecture	MCQ'S Activity

PHARMACOLOGY AND THERAPEUTICS

THEORY

CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 04		Teaching strategy	Assessment strategy
		DISCIPLINE	TOPIC		
F-Ph-001	Definitions of Pharmacology, drug, pro-drug, placebo, active principles, sources of drugs; Brief outline of Absorption, Distribution, Metabolism and Excretion	General Pharmacology	Absorption, Distribution, Metabolism and Excretion of drugs	Interactive lecture	MCQ'S
F-Ph-002	Definitions of receptor, agonist, partial agonist, inverse agonist, antagonist and types of receptors and second messengers; Diagrammatic concept of signaling mechanisms	General Pharmacology	Basic terminologies of Pharmacology	Interactive lecture	MCQ'S
F-Ph-003	Pharmacological aspects of Autonomic Receptors (types of autonomic receptors, important sites and actions)		Autonomic System	Interactive lecture	MCQ'S

COMMUNITY MEDICINE & PUBLIC HEALTH

THEORY

CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 08		Teaching strategy	Assessment strategy
		DISCIPLINE	TOPIC		

F-CM-001	Describe the changing concepts and new philosophy of health Explain responsibility for health	Community Medicine and Public Health	Concept of Health	Interactive lecture	MCQ'S
F-CM-002	Explain dimensions and determinants of health and their role in achieving positive health Discuss concept of health and wellbeing Describe the Physical quality of Life Index & Human Development Index		Positive Health Dimensions, Health Determinants	Interactive lecture	MCQ'S
F-CM-003	Describe the importance of health indicators Classify health indicators Calculate Morbidity and Mortality Describe Disability indicators Compare indicators among countries		Health indicators	Interactive lecture	MCQ'S
F-CM-004	Conceptualize disease causation and natural history of disease	Community Medicine and Public Health	Disease causation	Interactive lecture	MCQ'S
	Explain Germ theory & multifactorial causation Describe Epidemiological Triad Discuss Web of disease causation Describe Gradient of infection	Health		Interactive lecture	MCQ'S
F-CM-005	Describe principles of prevention and control on prevalent diseases Explain difference between elimination and eradication Describe disease surveillance, types and cycle Explain Primary, secondary, & tertiary prevention Describe five levels of interventions	Community Medicine and Public Health	Disease Prevention	Interactive lecture	MCQ'S

IMPACT (EPIDEMIOLOGY, SOCIOLOGY/SOCIETY, COMMUNITY MEDICINE & PUBLIC HEALTH)

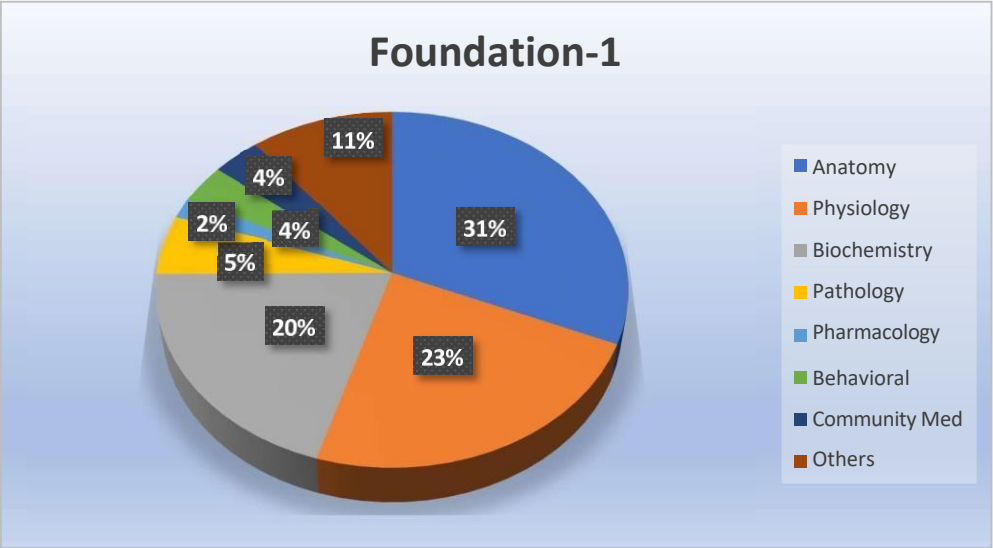
THEORY					
CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 08		Teaching strategy	Assessment strategy
		DISCIPLINE	TOPIC		
F-BhS-001	Identify the Biological Basis of human behavior and discuss social behavior Describe processes such as neurobiology of memory, emotions, sleep, learning, motivation, sex, arousal, reward and punishment		Biological Basis of Behavior	Interactive lecture	MCQ'S

F-BhS-002	Identify the burden of mental illness on the person, family and society Describe Intellectual disability, Mental Disorders and Personality Disorders	Behavioral Sciences	Psychological Disorders	Interactive lecture	MCQ'S
F-BhS-003	Identify the role of psychosocial factors in various illnesses Describe psychosocial aspects of various system diseases such as Cardio-vascular system (CVS), Central Nervous System (CNS), Gastro Intestinal Tract (GIT), Respiration, renal, endocrine and Cancer		Psychology and Disease	Interactive lecture	MCQ'S
F-BhS-004	Identify the behavioral factors associated with pharmacological treatment of diseases Discuss Health belief model, treatment compliance and its psychosocial factors, social factors in drugs prescription and drug resistance		Behavioral Factors & Pharmacological Treatment	Interactive lecture	MCQ'S
F-BhS-005	Identify the rehabilitation work for patients on dialysis and any kind of physical disability Discuss the care requirements in chronic debilitating conditions like Diabetes, Multi-infarcts Dementia, chronic renal disease, limb amputation	Behavioral Sciences	Palliative Care	Interactive lecture	MCQ'S
F-BhS-006	Identify the various physiological effects of stress Explain ANS response to stress, Describe Behavioural manifestations of stress, Stress related multiple sclerosis and autoimmune diseases		Stress	Interactive lecture	MCQ'S

AGING

THEORY

CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 01		Teaching strategy	Assessment strategy
		DISCIPLINE	TOPIC		
F-Ag-001	Discuss telomeres and telomerase and their clinical significance in aging.	Geriatrics Integrate with Biochemistry	Process of Aging	Interactive lecture	MCQ'S



Module Weeks	Recommended Minimum Hours
08	223

Time Table with Assessment Schedules

Queens Medical College, Kasur

Timetable 1st Year MBBS (Session-2024-25)

Week 1 Theme: Orientation

Day	08:30 – 09:30	09:30- 11:00		11:00-12:00		12:00-01:30	01.30-2.30
Monday	Receiving Kit	Welcome address, White Coat ceremony, Introduction of students and HOD Main Auditorium		Department of medical education Lecture Hall		Campus Tour	Refreshments
Tuesday	08:00- 11:00			11:00-11.30 Break	11:30-02:30		
	<i>IT\Library</i> Muhammad Nadir/ Abdul Razzaq	<i>Group Dynamics & Leadership</i> Dr. Syed Hasan Shoaib	<i>Study Skills</i> Dr. Sadaf Sajid		<i>IT\Library</i> Muhammad Nadir/ Abdul Razzaq	<i>Group Dynamics& Leadership</i> Dr. Syed Hasan Shoaib	<i>Study Skills</i> Dr. Sadaf Sajid
	Group 1	Group 2	Group 3		Group 2	Group 3	Group 1
Wednesday	<i>IT\Library</i>	<i>Group Dynamics & Leadership</i>	<i>Study Skills</i>		Visit to Anatomy, Physiology and Biochemistry department in three batches (40mins each)		
					Group 1-2-3		
				Anatomy Group-1 Biochemistry Group-2 Physiology Group-3	Anatomy Group-2 Biochemistry Group-3 Physiology Group-1	Anatomy Group-3 Biochemistry Group-1 Physiology Group-2	
Thursday	08:00- 11:00			11:30-02:30			
	Meet the Mentors				Introduction of co-curricular clubs/committees Lecture Hall		
					Introduction of co-curricular clubs/committees Lecture Hall		
Friday	08-00-12.00				12:00-01:00		
	Visit to Hospital Medical facilities available to students Introduction to Foundation Module					Jumma Prayer	

Queens Medical College, Kasur
Timetable 1st Year MBBS (Session-2024-25)

Detail of Group A, B, C (for visit to clinical and basic science departments)	
Group	Roll #
1	1-33
2	34-66
3	67-100
Venue for Workshops:	
IT/ Library	IT lab (QMC)
Study Skills	Tutorial Room 1 (QMC)
Group Dynamics and Leadership	Tutorial Room 2 (QMC)

Queens Medical College, Kasur

Timetable 1st Year MBBS (Session-2024-25)

Week 2-Theme: Cellular Basis of Life

Days	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15-11:45	11:45 – 12:30	12:30-1:45	1:45 – 3.00
Monday	Medical Education Workshop F-O-007 + PERLs 1-07 Personal Development Plan + Strategic Planning Dr. Shoaib	Physiology LGIS F-P-001 Structure of Cell Membrane/ membrane protein types & functions Prof. Tanzeela Waqar	Biochemistry LGIS F-B-001+ F-B-002 Structure of a cell + Biochemical Basis of Structure and Function of Cell Dr. Hassan	General Anatomy SGIS F-A-002 Osteology: Bones Classification Dr. Naeem Shehzad	Break	Com. Medicine LGIS F-CM-002 Health Determinants Dr. Rizwan ullah	Physiology LGIS Cellular organelles Dr. Tanzila	Practical Batch A: Anatomy Histology A: Anatomy F- 040+048+ 049+050 Microscopy basics Batch B: Physiology: F-P- 008: Lab Use protocol. Batch C: Biochemistry F- B- 015 Lab hazards Batch D: Clinical Skill Lab Hand washing All Demo
Tuesday	SGIS Batch A: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: F-B- 002 Cell Membrane Batch D: Anatomy Practical Anatomy F- 040+048+ 049+050 Microscopy basics All Demo	Physiology LGIS F-P-001+ F-A-042 Cytoskeleton, structure, and function Prof. Tanzeela Waqar	PERL Workshop PERLs1-02 Communication Skills Dr. Shoaib	Behavioural Sciences Hands-On Session F-O-007 Metacognitive Strategies for Learning Prof. Dr. Altaf Qadir		Behavioural Sciences LGIS F-BhS- 006 Stress Management Techniques/ ANS response to stress, behavioral Manifestations Prof. Dr. Altaf Qadir	Histology/Pathology LGIS F-A-042 Histological basis of immotile cilia syndrome, cytoplasmic Inclusions Prof. M. Yasoob	Practical Batch B: Anatomy Histology A: Anatomy F- 040+048+ 049+050 Microscopy basics Batch C: Physiology: F-P- 008: Lab Use protocol. Batch D: Biochemistry F- B- 015 Lab hazards Batch A: Clinical Skill Lab Hand washing All Demo
Wednesday	SGIS Batch B : Anatomy F-A 002+009 Fractures + Healing + imaging. Batch C: Physiology F-P-001 Cell organelles. Batch D: Biochemistry: : F-B- 002 Cell Membrane Batch A: Anatomy Practical Anatomy F- 040+048+ 049+050 Microscopy basics All Demo	Physiology LGIS F-P-001 + F-A-042 SER, RER, Golgi bodies Prof. Tanzeela Waqar	Biochemistry LGIS F-B-002+F-A-041 Stru. Function of Cell membrane with role of lipids, carbohydrates & Proteins Dr. Gul-e-Raana	General Anatomy SGIS F-A-002 Osteology: Features of long bone + types of epiphyses Dr. Naeem Shehzad		Mentoring Session		Practical Batch C: Anatomy Histology A: Anatomy F- 040+048+ 049+050 Microscopy basics Batch D: Physiology: F-P- 008: Lab Use protocol. Batch A: Biochemistry F- B- 015 Lab hazards Batch B: Clinical Skill Lab Hand washing All Demo
Thursday	SGIS Batch C: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch D: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: F-B- 002 Cell Membrane Batch B: Anatomy Practical Anatomy F- 040+048+ 049+050 Microscopy basics All Demo	Physiology LGIS F-P-001 + F-A-042 Lysosomes, peroxisomes Dr. Shaista	Biochemistry LGIS F-B-002 + F-A-041 Fluid Mosaic Model Dr. Gul-e-Raana	Com. Medicine LGIS F-CM-003 Health Indicators Demos		Pathology LGIS F-Pa-001 Cell Injury Prof. Farooq Aziz	Histology LGIS F-A-042+043 Cell Nucleus+ DNA/RNA Prof. M. Yasoob	Practical Batch D: Anatomy Histology A: Anatomy F- 040+048+ 049+050 Microscopy basics Batch A: Physiology: F-P- 008: Lab Use protocol. Batch B: Biochemistry F- B- 015 Lab hazards Batch C: Clinical Skill Lab Hand washing All Demo
Fri	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00- 11:20	11:20-03:00		

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	SGIS Batch D: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: F-B-002 Cell Membrane Batch C: Anatomy Practical Anatomy F- 040+048+ 049+050 Microscopy basics All Demo	Physiology LGIS F-P-001 Endocytosis Pinocytosis Dr. Shaista	Biochemistry LGIS F-B-002+ F-A-041 Fluid Mosaic Model Dr. Gul-e-Raana	Pathology LGIS F-Pa-002 + F-A-043 Cell death Prof. Farooq Aziz	Break	Integrated Seminar by Medical Education Department
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Week 3 -Theme: Cell Signaling and transport

Days	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15-11:45	11:45 – 12:30	12:30-1:45	1:45 – 3.00
Monday	Test Physiology All Faculty	Physiology LGIS F-P-001 Transport Mechanisms Classification Dr. Usama	Biochemistry LGIS F-B-003 Cell to Cell Communication Dr. Hassan	Anatomy LGIS F-A-004 Arthrology: Synovial Joints + joint injuries + diseases Dr. Naeem Shahzad	Break	Pharmacology LGIS Orientation F-Ph002 Basic Terminology on Pharmacology Dr. Fauzia	Embryology LGIS F-A-011 Spermatogenesis + abnormal gametes Dr. M. Amin	Practical Batch A: Anatomy Histology Anatomy F-A-051-Epithelia- 1-4 Batch B: Physiology: Physiology F-P- 009: ESR Batch C: Biochemistry F-B-016 Cell Structure Batch D: Clinical Skill Lab Radial Pulse All Demo
Tuesday	SGIS Batch A: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: F-B- 002 Cell Membrane Batch D: Anatomy Practical F-A-051-Epithelia- 1-4 All Demo	Physiology LGIS F-P-001 Diffusion Dr. Usama	Biochemistry LGIS F-B-003 Cell to cell communication Dr. Hassan	Embryology/O bgyn LGIS Spermiogenesis Dr Amin		PERL Workshop PERLs1-03 Responsibility towards institutions and profession Dr. Shoaib	Embryology LGIS F-A-012 Oogenesis: Prenatal and Postnatal maturation of oocytes Dr. M. Amin	Practical Batch B: Anatomy Histology Anatomy F-A-051-Epithelia- 1-4 Batch C: Physiology: Physiology F-P- 009: ESR Batch D: Biochemistry F-B-016 Cell Structure Batch A: Clinical Skill Lab Radial Pulse All Demo
Wednesday	SGIS Batch B : Anatomy F-A 002+009 Fractures + Healing + imaging. Batch C: Physiology F-P-001 Cell organelles. Batch D: Biochemistry: : F-B- 002 Cell Membrane Batch A: Anatomy Practical F-A-051-Epithelia- 1-4 All Demo	Physiology LGIS F-P-001 Active Transport Dr. Usama	Biochemistry LGIS F-B-003 Cell Signalling pathways Dr. Gul e Raana	Com. Medicine LGIS F-CM-004 Disease Causation Dr. Amber Arshad		Behavioural Sciences LGIS F-BhS-002 Psychological Disorder Prof. Dr. Altaf Qadir	Histology LGIS F-A-044 Epithelium- basement membrane + intracellular junctions+ Biolateral Modification Dr. M. Yasooob	Practical Batch C: Anatomy Histology Anatomy F-A-051-Epithelia- 1-4 Batch D: Physiology: Physiology F-P- 009: ESR Batch A: Biochemistry F-B-016 Cell Structure Batch B: Clinical Skill Lab Radial Pulse All Demo
Thursday	SGIS Batch C: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch D: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: F-B-002 Cell Membrane Batch B: Anatomy Practical F-A-051-Epithelia- 1-4 All Demo	Physiology LGIS F-P-001 Gated Channels/ Na/ATPase Pump Dr. Shaista	Biochemistry LGIS F-B-003 Cell Signaling pathways Dr. Gul e Raana	Behavioural Sciences LGIS		Quran Describe Unity of Allah in being Ms. Ulfat	Pathology LGIS Necrosis Dr. Zubaira	Practical Batch D: Anatomy Histology Anatomy F-A-051-Epithelia- 1-4 Batch A: Physiology: Physiology F-P- 009: ESR Batch B: Biochemistry F-B-016 Cell Structure Batch C: Clinical Skill Lab Radial Pulse All Demo

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	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00-11:40	11:40-12:20	12:20-01:00	01:00– 1:30	1:30-3:00
Friday	SGIS Batch D: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: F-B-002 Cell Membrane Batch C: Anatomy Practical F-A-051-Epithelia- 1-4 All Demo	Physiology LGIS F-P-002 Blood: Functions & Composition Prof. Tanzeela Waqar	Biochemistry LGIS F-B-003 Cell to cell adhesions Dr. Hassan	Pathology LGIS F-Pa-001 Apoptosis + clinicopathological Terms Dr. Zubairia	Break	Anatomy Dissection F-A-004 Arthrology: Joint classification Dr. M. Amin	Physiology LGIS Gated Channels 2 Dr. Shaista Husain	Jumm a Prayer	Self-Directed Learning

Week 4 Theme: Basis of proteins + nucleotides

Days	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15-11:45	11:45 – 12:30	12:30-1:45	1:45 – 3.00
Monday	Test Anatomy All Faculty	Physiology LGIS F-P-002 Plasma Protein: Types & Functions Dr. Shaista	Biochemistry LGIS F-B-004 Subcellular organelles – Biochemical markers & Imp. Dr. Hassan	Anatomy LGIS F-A-006 Myology Dr. Naeem Shahzad	Break	ISLAMIYAT Understand the basic principles of Islam. Ms. Ulfat	PERL Workshop PERLs1-04 Teamwork Dr. Shoaib	Practical Batch A: Anatomy Histology F-A-051 Epithelia- 5-8 Batch B: Physiology: F-P- 009: Packed Cell Volume Batch C: Biochemistry F-B-017 Cell Organelles Batch D: Clinical Skill Lab Respiratory Rate measurement All Demo
Tuesday	SGIS Batch A: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: F-B-002 Cell Membrane Batch D: Anatomy Practical F-A-051 Epithelia- 5-8 All Demo	Physiology LGIS F-P-002 Edema: Pathophysiology Dr. Shaista	Biochemistry LGIS F-B-005 Chemistry of purine & pyrimidine Dr. Gul e Raana	Embryology/O bgyn LGIS Gamete abnormalities Dr. Amin		Embryology/O bgyn LGIS F-A-015 Female reproductive Cycle Dr. Naeem Shahzad	Embryology LGIS F-A-016 Transportation of gametes Dr. M. Amin	Practical Batch B: Anatomy Histology F-A-051 Epithelia- 5-8 Batch C: Physiology: F-P- 009: Packed Cell Volume Batch D: Biochemistry F-B-017 Cell Organelles Batch A: Clinical Skill Lab Respiratory Rate measurement All Demo
Wednesday	SGIS Batch B : Anatomy F-A 002+009 Fractures + Healing + imaging. Batch C: Physiology F-P-001 Cell organelles. Batch D: Biochemistry: : F-B-002 Cell Membrane Batch A: Anatomy Practical F-A-051 Epithelia- 5-8 All Demo	Physiology LGIS F-P-002 RBCs Characteristics + Bone Marrow types Dr. Usama	Biochemistry LGIS F-B-005 Linkage of purine & pyrimidine link with NA Synthesis Dr. Gul e Raana	Pak Study Describe brief the salient features of the Pakistan movement (1)		Com. Medicine LGIS F-CM-005 Disease Prevention Dr. M. Irfan	Histology LGIS F-A-045 Connective Tissue- Constituents + Classification Dr. M. Yasoob	Practical Batch C: Anatomy Histology F-A-051 Epithelia- 5-8 Batch D: Physiology: F-P- 009: Packed Cell Volume Batch A: Biochemistry F-B-017 Cell Organelles Batch B: Clinical Skill Lab Respiratory Rate measurement All Demo

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Thursday	SGIS Batch C: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch D: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: F-B-002 Cell Membrane Batch B: Anatomy Practical F-A-051 Epithelia- 5-8 All Demo	Physiology LGIS F-P-002 Erythropoiesis stages + factors Prof. Tanzeela Waqa	Biochemistry LGIS F-B-005 Purine & pyrimidine metabolism Dr. Gul e Raana	Com. Medicine LGIS F-CM-005 Disease Prevention Dr. Sadia Shahzad		Quran Describe Unity of Allah in attributes Ms. Ulfat	Pathology LGIS Intracellular equitation Dr. Gazala	Practical Batch D: Anatomy Histology F-A-051 Epithelia- 5-8 Batch A: Physiology: F-P- 009: Packed Cell Volume Batch B: Biochemistry F-B-017 Cell Organelles Batch C: Clinical Skill Lab Respiratory Rate measurement All Demo	
Friday	8:00- 9:00 SGIS Batch D: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: F-B-002 Cell Membrane Batch C: Anatomy Practical F-A-051 Epithelia- 5-8 All Demo	9:00-9:40 Physiology LGIS F-P-002 Erythropoietin Prof. Tanzeela Waqa	9:40- 10:20 Biochemistry LGIS F-B-006 DNA Organization Dr. Hassan	10:20-11:00 Pathology LGIS F-Pa-003 Pathological calcifications Dr. Gazala	11:00-11:40 Break	11:40-12:20 Behavioural Sciences LGIS F-BhS-003 Psychology and Disease Prof. Dr. Altaf Qadir	12:20-01:00 Anatomy LGIS F-A-008 Neurology: Structure of neuron + classification Dr. Naeem Shahzad	01:00– 1:30 Jumma Prayer	1:30-2:30 Self-Directed Learning

Week 5 Theme: Embryo Development

	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15-11:45	11:45 – 12:30	12:30-1:45	1:45 – 3.00
Monday	Test Biochemistry All Faculty	Physiology LGIS F-P-002 B12 and folic acid in red cell maturation Prof. Tanzeela Waqar	Biochemistry LGIS F-B-006 Structural forms of DNA Dr. Hassan	Anatomy- Movement and synovial joints Dr. Neam	Break	Embryology LGIS F-A-017 Gamete Transport Prof. M. Amin	Histology CT – Functions Dr. Yaqub	Practical Batch A: Anatomy Histology F-A-052 Secretory glands Batch B: Physiology: F-P-010: Blood Group Determination Batch C: Biochemistry F-B-018 Cell Equipment Batch D: Clinical Skill Lab Blood Pressure All Demo
Tuesday	SGIS Batch A: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: F-B-002 Cell Membrane Batch D: Anatomy Practical F-A-052 Secretory glands All Demo	Physiology LGIS F-P-004 Hemoglobin in different ages, Normal indices, Elist abnormal Hb Dr. Shaista	Biochemistry LGIS F-B-007 RNA Structure and Types Dr. Hassan	Pharmacology LGIS F-Ph002 Pharmacokinetics Dr. Waleed		Embryology LGIS F-A-017 Capacitation and Acrosome Reaction Prof. M. Amin	Com. Medicine LGIS Calculate morbidity and mortality indicators Dr. Irfan	Practical Batch B: Anatomy Histology F-A-052 Secretory glands Batch C: Physiology: F-P-010: Blood Group Determination Batch D: Biochemistry F-B-018 Cell Equipment Batch A: Clinical Skill Lab Blood Pressure All Demo

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Wednesday	SGIS Batch B : Anatomy F-A 002+009 Fractures + Healing + imaging. Batch C: Physiology F-P-001 Cell organelles. Batch D: Biochemistry: F-B- B- 002 Cell Membrane Batch A: Anatomy Practical F-A-052 Secretory glands All Demo	Physiology LGIS F-P-004 Role of iron in Hb formation Dr. Shaista	Biochemistry LGIS F-B-007 RNA Types: Structure & Function Dr. Hassan	Histology LGIS F-A-045 Connective Tissue- Ground Substance + Glycosaminoglycans + Fibers – Define fibrosis Dr. M. Amin		Embryology LGIS Fertilization IVF and infertility Dr. Amin	Pak Study Describe brief the salient features of the Pakistan movement (2)	Practical Batch C: Anatomy Histology F-A-052 Secretory glands Batch D: Physiology: F-P-010: Blood Group Determination Batch A: Biochemistry F-B-018 Cell Equipment Batch B: Clinical Skill Lab Blood Pressure All Demo	
Thursday	SGIS Batch C: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch D: Physiology F-P- 001 Cell organelles. Batch A: Biochemistry: F-B- 002 Cell Membrane Batch B: Anatomy Practical F-A-052 Secretory glands All Demo	Physiology LGIS F-P-005 WBC types- Neutrophils: characteristics & Functions Prof. Tanzeela Waqar	Biochemistry LGIS F-B-008 Nucleotides- Nomenclature & Structure Dr. Gul e Raana	PERL Workshop P ERLs1-04 Digital Identity and Footprint Dr. Sadaf Sajid		Embryology LGIS Cleavage and blastocyst formation Dr. Naem	Islamyat Explain the concept of the Islamic state Ms. Ulfat	Practical Batch D: Anatomy Histology F-A-052 Secretory glands Batch A: Physiology: F-P-010: Blood Group Determination Batch B: Biochemistry F-B-018 Cell Equipment Batch C: Clinical Skill Lab Blood Pressure All Demo	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00-11:40	11:40-12:20	12:20-01:00	01:00– 1:30	1:30-2:30
	SGIS Batch D: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch A: Physiology F-P- 001 Cell organelles. Batch B: Biochemistry: F-B- 002 Cell Membrane Batch C: Anatomy Practical F-A-052 Secretory glands All Demo	Physiology LGIS F-P-005 Defense process by neutrophils+ Leukocytosis + Leukopenia Dr. Usama	Biochemistry LGIS F-B-008 Nucleotides – Biomedical Importance Dr. Hassan	Pathology LGIS F-Pa-002 Sterilization and disinfection Dr. Ashraf	Break	Behavioural Sciences LGIS F-BhS-004 Behavioural factors and Pharmacologic al Treatment Prof. Dr. Altaf Qadir	Embryology LGIS F-A-020 Compaction + morula formation- Basis of abortion(villi) Dr. M. Amin	Jumma Prayer	Self-Directed Learning

Week 6 Theme: Implantation and defects

	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15- 11:45	11:45 – 12:30	12:30-1:45	1:45 – 3.00
Monday	Test Anatomy All Faculty	Physiology LGIS F-P-005 Defence process by macrophages Dr. Usama	Biochemistry LGIS F-B-009 Chromosome Dr. Hassan	Ageing LGIS Theories of Aging Dr. Hassan	Break	Histology LGIS F-A-045 Role of macrophages in innate immunity- Mast cells Dr. Naem	Embryology LGIS F-A-021 Week 2: Amniotic cavity, embryonic disc + umbilical vessels- Chorionic sac Dr. M. Amin	Practical Batch A: Anatomy Histology F-A-053 Connective Tissue Batch B: Physiology: F-P- 011: TLC/DLC Interpretation Batch C: Biochemistry F-B-019 Chromatography Batch D: Clinical Skill Lab Donning and Doffing All Demo
Tuesday	SGIS Batch A: Anatomy F-A-002+009 Fractures + Healing + imaging.	Physiology LGIS F-P-005 Lines of defense: Role of neutrophils & macrophages	Biochemistry LGIS F-B-010	Com. Medicine LGIS Disability indicators Dr. Irfan		Anatomy LGIS F-A-022 Uteroplacental circulation Dr. Naem	Embryology LGIS F-A-023	Practical Batch B: Anatomy Histology F-A-053 Connective Tissue Batch C: Physiology: F-P- 011: TLC/DLC Interpretation

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	Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: F-B-002 Cell Membrane Batch D: Anatomy Practical -A- 053 Connective Tissue All Demo	Dr. Usama	Enzymes Classification + Mechanism of Action Dr. Gul e Raana				Primitive streak + gastrulation- sacrococcygeal teratoma Dr. M. Amin	Batch D: Biochemistry F-B-019 Chromatography Batch A: Clinical Skill Lab Donning and Doffing All Demo	
Wednesday	SGIS Batch B : Anatomy F-A 002+009 Fractures + Healing + imaging. Batch C: Physiology F-P-001 Cell organelles. Batch D: Biochemistry: F-B-002 Cell Membrane Batch A: Anatomy Practical -A- 053 Connective Tissue All Demo	Physiology LGIS F-P-005 Reticuloendothelial System Prof. Shireen	Biochemistry LGIS F-B-010 Enzymes with reference to other factors Dr. Gul e Raana	Behavioral Sciences LGIS		Anatomy/Physiology/ Biochemistry/Obgyn F-A-021 Case Based Learning Abnormal / Extrauterine implantation- Molar- Ectopic Dr. M. Amin	Embryology LGIS Ectopic Pregnancy Dr. Amin	Practical Batch C: Anatomy Histology F-A-053 Connective Tissue Batch D: Physiology: F-P- 011: TLC/DLC Interpretation Batch A: Biochemistry F-B-019 Chromatography Batch B: Clinical Skill Lab Donning and Doffing All Demo	
Thursday	SGIS Batch C: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch D: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: F-B-002 Cell Membrane Batch B: Anatomy Practical -A- 053 Connective Tissue All Demo	Physiology LGIS F-P-005 Basophils & Eosinophils Dr. Shaista	Biochemistry LGIS F-B-010 Effect of factors on enzyme activity Dr. Gul e Raana	Pharmacology LGIS Pharmacodynamics Dr. Meneza		Mentoring Session		Practical Batch D: Anatomy Histology F-A-053 Connective Tissue Batch A: Physiology: F-P- 011: TLC/DLC Interpretation Batch B: Biochemistry F-B-019 Chromatography Batch C: Clinical Skill Lab Donning and Doffing All Demo	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00-11:40	11:40-12:20	12:20-01:00	01:00– 1:30	1:30-2:30
	SGIS Batch D: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: F-B-002 Cell Membrane Batch C: Anatomy Practical -A- 053 Connective Tissue All Demo	Physiology LGIS F-P-006 Blood Groups Classification + Landsteiner Law Dr. Shaista	Biochemistry LGIS F-B-010 Regulation and inhibitors of enzyme activity Dr. Gul e Raana	Pathology LGIS F-Pa-002 Microbes Dr. Ambreen Nawaz	Break	Embryology / Paediatrics LGIS F-A-026 Mesodermal Derivatives + somite formation + Formation of Intra-embryonic coelom Dr. M. Amin		Jumma Prayer	Self-Directed Learning

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Week 7 Theme: Fetal period

	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15-11:45	11:45 – 12:30	12:30-1:45	1:45 – 3.00	
Monday	Test Physiology All Faculty	Physiology LGIS F-P-006 Basis of ABO Blood group + Basis of Rh Blood group Dr. Usma	Biochemistry LGIS Michelis Menten Equ Dr. Gul e Ranna	Physiology LGIS ABO incompatibility Dr. Usama	Break	Histology LGIS F-A-045 Adipose Tissue Lipid Storage + mobilization from /in adipocytes Dr. M. Yasooob	Anatomy/Obgy/Pead LGIS F-A-029 + 030+ 031 Derivatives of ecto/endo/mesoderm + Regulation of embryonic development+2 nd Month Dr. Naeem	Practical Batch A: Anatomy Histology Re A- 047: Embryonic/Fetal identif+Placenta+ USG report + Dates. Batch B: Physiology: F- P-011: WBCs - Slide Batch C: Biochemistry F-B-019 Solutions Batch D: Clinical Skill Lab SDL All Demo	
Tuesday	SGIS Batch A: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: F-B- 002 Cell Membrane Batch D: Anatomy Practical Re A-047: Embryonic/Fetal identif+Placenta+ USG report + Dates. All Demo	Embryology /Obgyn LGIS F-A-028 Cephalocaudal folding/lateral folding/folding of embryo Prof. M. Amin	Physiology LGIS Rs. Incompatibility Dr. Usama	Biochemistry LGIS Enzyme Inhibitors Dr. Gul e Raana		Com. Medicine LGIS Multi factorial causation Dr. Amber	Embryology LGIS F-A-034 Placenta, Placental membrane, circulation+ Hemolytic disease Dr. M. Amin	Practical Batch B: Anatomy Histology Re A- 047: Embryonic/Fetal identif+Placenta+ USG report + Dates. Batch C: Physiology: F- P-011: WBCs - Slide Batch D: Biochemistry F-B-019 Solutions Batch A: Clinical Skill Lab SDL All Demo	
Wednesday	SGIS Batch B : Anatomy F-A 002+009 Fractures + Healing + imaging. Batch C: Physiology F-P-001 Cell organelles. Batch D: Biochemistry: : F-B- 002 Cell Membrane Batch A: Anatomy Practical Re A-047: Embryonic/Fetal identif+Placenta+ USG report + Dates. All Demo	Physiology y LGIS F-P-007 Autonomic Nervous System – Components + Physiological anatomy: SN and PNS Prof. Tanzeela Waqar	Pathology LGIS Microbes Dr. Ambreen	Physiology LGIS Sympathetic Nervous System Dr. Tanzeela		Pharmacology LGIS Pharmacodynamics Dr. Meneza	Embryology/Obgyn LGIS F-A-032+033 Embryonic Period/fetal growth Dr. M. Amin	Practical Batch C: Anatomy Histology Re A- 047: Embryonic/Fetal identif+Placenta+ USG report + Dates. Batch D: Physiology: F- P-011: WBCs - Slide Batch A: Biochemistry F-B-019 Solutions Batch B: Clinical Skill Lab SDL All Demo	
Thursday	SGIS Batch C: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch D: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: F-B-002 Cell Membrane Batch B: Anatomy Practical Re A-047: Embryonic/Fetal identif+Placenta+ USG report + Dates. All Demo	Expository Writing To write expository essays using planning, prewriting, organizing, drafting, revising, editing, and proofreading strategies.	IT Word, Google Docs), internet search strategies, and using online libraries (e.g., PubMed, Google Scholar).	Quran Describe concept of Shirk (1) Ms. Ulfat		Anatomy LGIS F-A-008 Neurology: Neuron structure and classification Components of CNS and PNS Dr. Naeem	Embryology/Obgyn LGIS F-A-035+036+037 Amniotic fluid+ amniocentesis+ AF abnormalities Multiple pregnancies and Preterm Birth Dr. M. Amin	Practical Batch D: Anatomy Histology Re A- 047: Embryonic/Fetal identif+Placenta+ USG report + Dates. Batch A: Physiology: F- P-011: WBCs - Slide Batch B: Biochemistry F-B-019 Solutions Batch C: Clinical Skill Lab SDL All Demo	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00-11:40	11:40-12:20	12:20-01:00	01:00– 1:30	1:30-2:30

Queens Medical College, Kasur

Timetable 1st Year MBBS (Session-2024-25)

	SGIS Batch D: Anatomy F-A- 002+009 Fractures + Healing + imaging. Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: F-B-002 Cell Membrane Batch C: Anatomy Practical Re A-047: Embryonic/Fetal identifi+Placenta+ USG report + Dates. All Demo	Biochemistry LGIS F-B-013 Plasma Proteins Dr. Hasan	Biochemistry LGIS F-B-014 Immunoglobins + Interpret Multiple Myeloma Dr. Faheem	Pathology LGIS Bacterial Cell Vs viral Replication Dr. Sheama	Break	Embryology LGIS F-A-039 Teratology, genomic imprinting, genetic mutations, genetic factors, male-mediated defects Dr. M. Amin	Jumma Prayer	Self-Directed Learning
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Week 8 Fetal period

Days	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15-11:45	11:45 – 12:30	12:30-1:45	1:45 – 3.00
Monday	Test Anatomy All Faculty	Biochemistry LGIS F-B-011 Explain + Interpret single gene defect i.e. emphysema Dr. Hassan	Embryology /Cardiology LGIS F-A-027 Early development of CVS Prof. M. Amin	Histology Fibroblast and plasma cells Dr. Yaqub	Break	Physiology LGIS Para synthetic Nervous system Dr. Shaista	PERL LGIS Test Demo	Practical Batch A: Anatomy Histology Batch B: Pathology: Batch C: Biochemistry Batch D: Clinical Skill Lab SDL All Demo
Tuesday	SGIS Batch A: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch B: Physiology F-P-001 Cell organelles. Batch C: Biochemistry: F-B-002 Cell Membrane Batch D: Anatomy Practical All Demo	Biochemistry LGIS F-B-001 Aminoacids classification, importance, properties Dr. Faheem	PE RL LGI S F-PE RL-006 Scientific Method Prof. Sadia Shahzad	Histology LGIS Loose and dense connective tissue Dr. Neam		Pathology LGIS Growth curve of bacteria Dr. Iqbal	Physiology LGIS Para synthetic Nervous system Dr. Shaista	Practical Batch B: Anatomy Histology Batch C: Pathology: Batch D: Biochemistry Batch A: Clinical Skill Lab SDL All Demo
Wednesday	SGIS Batch B : Anatomy F-A 002+009 Fractures + Healing + imaging. Batch C: Physiology F-P-001 Cell organelles. Batch D: Biochemistry: : F-B-002 Cell Membrane Batch A: Anatomy Practical All Demo	Biochemistry LGIS F-B -012 Proteins classification, structural levels with role of chaperons Dr. Faheem	Embryology/Ob gyn LGIS F-A-035 Umbilical cord, abnormalities, absent cord/ Umbilical Vesicle + Physiological Umbilical Hernia Prof. M. Amin	Physiology LGIS Abnormality of autoimmune System Dr. Usama		Embryology/Obgyn Teratogenous Dr. Amin	Pharmacology LGIS Autonomic Systme Dr. Muneeza	Practical Batch C: Anatomy Histology Batch D: Pathology: Batch A: Biochemistry Batch B: Clinical Skill Lab SDL All Demo

Queens Medical College, Kasur

Timetable 1st Year MBBS (Session-2024-25)

Thursday	SGIS Batch C: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch D: Physiology F-P-001 Cell organelles. Batch A: Biochemistry: F-B-002 Cell Membrane Batch B: Anatomy Practical All Demo	Pathology LGIS Determinants of bacterial pathogenies Dr. Iqbal	Physiology LGIS Types of Receptors' Dr. Tanzeela	Behavioural Sciences LGIS			Physiology LGIS F-P-007 Types of receptors + functions Dr. Shaista	Biochemistry LGIS F-B-012 Proteins classification, structural levels Dr. Faheem	Practical Batch D: Anatomy Histology Batch A: Pathology: Batch B: Biochemistry Batch C: Clinical Skill Lab SDL All Demo
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00-11:40	11:40-12:20	12:20-01:00	01:00– 1:30	1:30-2:30
	SGIS Batch D: Anatomy F-A-002+009 Fractures + Healing + imaging. Batch A: Physiology F-P-001 Cell organelles. Batch B: Biochemistry: F-B-002 Cell Membrane Batch C: Anatomy Practical All Demo	Embryology/Obgy n Practical F-A-032+033+047 Abnormal fetal growth, fertilization, EDD calculations Prof. M. Amin	Test Biochemistry	Expositor y Writing Introduction to citation management tools (e.g., Zotero, Mendeley) for referencing sources in essays.	Quran Describe concept of Shirk (2) Ms. Ulfat	Break	Test Pharmacology, Pathology, Community Medicine, Behavioral Sciences All Faculty	Jumma Prayer	Self- Directed Learning

Queens Medical College, Kasur

Timetable 1st Year MBBS (Session-2024-25)

Date Sheet 1st Year MBBS (Session-2024-25) Foundation Module Exam

Monday	8:00- 9:15	9:15 - 10:00	10:00- 10:45	10:45-11:30	11:30-12:00	12:00-12:45	12:45-13:30	1:30 – 2:30
	Anatomy LGIS	Anatomy LGIS	Biochemistry LGIS	Biochemistry LGIS	-	Physiology LGIS	Physiology LGIS	CSF
Tuesday	Theory Paper 9:00 am - 12:00 pm Anatomy 25 MCQs and 5 SEQs							
Wednesday	Theory Paper 9:00 am - 12:00 pm Physiology 25 MCQs and 5 SEQs							
Thursday	Biochemistry 9:00 am - 12:00 pm Theory Paper Biochemistry 25 MCQs and 5 SEQs							
Friday	Theory Paper 9:00 am - 12:00 pm 40 MCQs							
	Pharmacology	Pathology	Community Medicine	Behavioral Sciences				

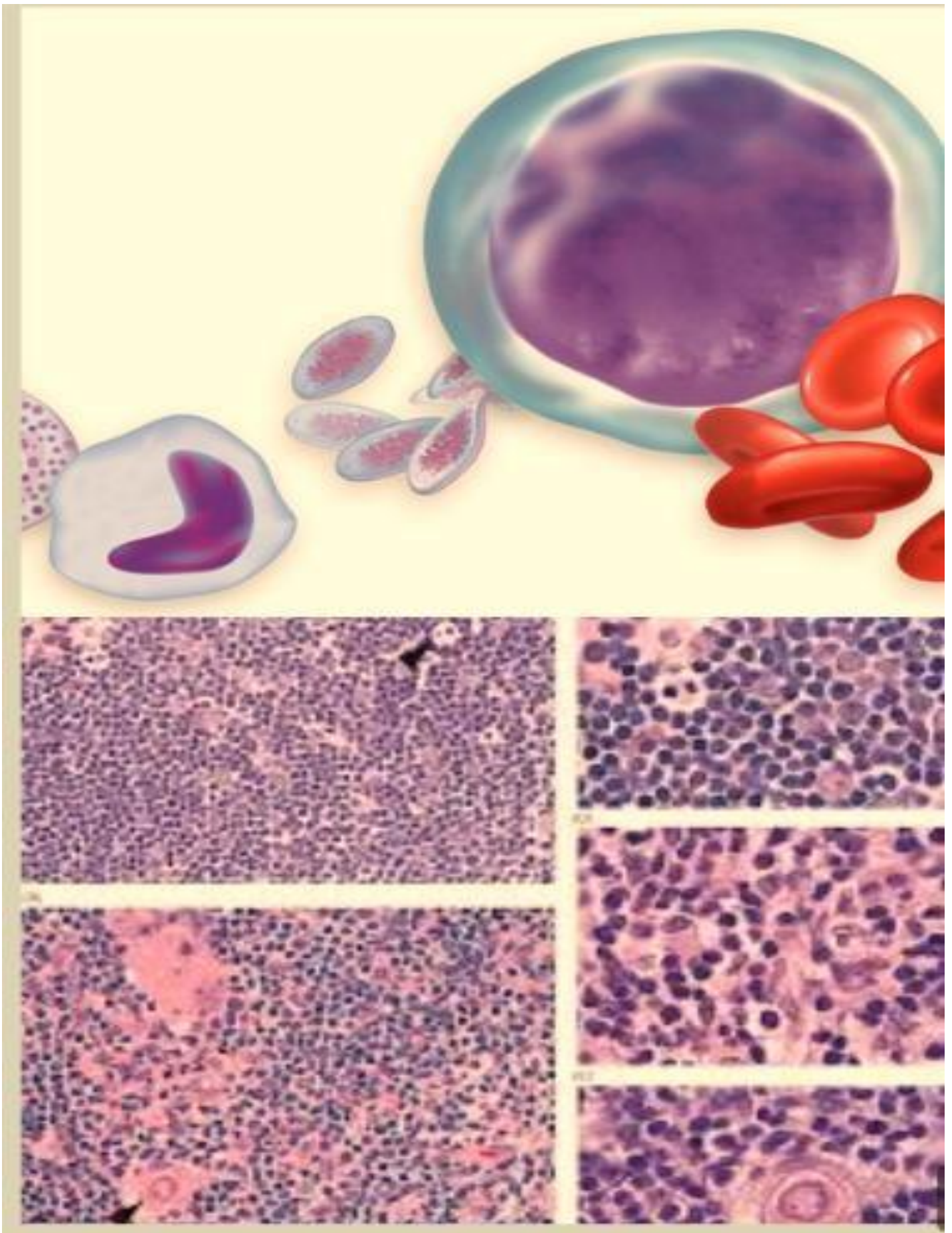
- Practical Exam Shall be taken in batches during Practical times in relevant departments (-----)
- Viva Shall be taken in SGIS Sessions in relevant departments (-----)

Queens Medical College, Kasur
Timetable 1st Year MBBS (Session-2024-25)

MBBS 1st Professional

Block-1

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	20	03	35	03	-	01	40
Normal Function	Physiology applied/clinical	22	02	32	02	-	01	32
	Biochemistry applied/clinical	22	02	32	02	-	01	32
Disease Burden & Prevention	Community Medicine & Public Health	05	-	05	-	-	-	-
	Behavioral Sciences	05	-	05	-	-	-	-
Pathophysiology & pharmacotherapeutics	Pathology	06	-	06	-	-	-	-
	Pharmacology	05	-	05	-	-	-	-
CFRC	CF-1-2	-	-	-	-	01	-	08
PERLs	PERLs-1-2	-	-	-	-	01	-	08
Total		85	7x5=35	120	07 stations x 08 = 56	02 stations x 08 = 16	03 stations x 16=48	120



MODULE NO. 02

**HEMATOPOIETIC
& LYMPHATIC**

MODULE RATIONALE
"Blood is Life". Unlike any other organ, components of blood and immunity reflect/reveal disease processes in other organs as well. Therefore, studying blood is like opening a book to all aspects of medicine. Hence, this module has been designed to enable students to have a basic understanding about the normal structure, function and biochemistry of blood, immune and Lymphatic systems. Not only that, but students would also learn, when normal physiology and composition of blood and immune system is disturbed, what disorders result in our community. Emphasis has been given to incorporate deranged laboratory findings into the clinical problem solving.
MODULE OUTCOMES
• Explain the function of all the organs / structures involved in this system and the mechanisms controlling them. (Spleen, lymph nodes, thymus, bone marrow, RBC's, WBCs and platelets) • Explain the etiology and pathogenesis of common blood & lymphatic diseases, particularly those of importance in Pakistan. • Explain the rationale for the use of common therapeutic agents for the diseases related to Blood and immunity. • Describe the role of immunity in the body • Discuss the working & uses of laboratory instruments in diagnostic lab visit • Relate red cell indices with health and disease • Recognize ABO/RH blood grouping system • Describe the role of Reticuloendothelial system in the body • Describe the events of hemostasis • Extrapolate the biochemical aspects of plasma proteins • Discuss the pharmacological treatment of iron deficiency anemia • Discuss Blood composition and function • Discuss the role of liver in hemolytic anemia • Practice history taking of a patient presented with blood disorders
THEMES
• Red blood cell • Platelets
• White blood cell
CLINICAL RELEVANCE

- Aplastic anemia
- Hemolytic anemia
- Blood loss anemia
- Nutritional anemia
- Polycythemia
- Hemoglobinopathies
- Jaundice
- Acute and chronic lymphocytic and myelogenous Leukemia
- Allergy (Type I, Type II & Type III)

**SYLLABUS OF
HEMATOPOIETIC &
LYMPHATIC
MODULE**

NORMAL STRUCTURE					
THEORY					
CODE	GROSS ANATOMY	TOTAL HOURS = 02		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC		
HL-A-001	Identify and describe the components of the Hematopoietic & Lymphoid Tissue and their function	Human Anatomy	Hematopoietic & Lymphoid Tissue	SGD	MCQ'S SEQ'S
	Location, coverings, relations of Spleen			SGD	OSPE
	Origin, course branches and distribution of Splenic artery			SGD	MCQ'S SEQ'S OSVE
	Venous drainage of Spleen, Portal vein formation, tributaries, and area of drainage.			SGD	MCQ'S SEQ'S OSPE OSVE
	Location and relations of Thymus. related changes in Thymus			SGD	MCQ'S SEQ'S OSPE OSVE
CODE	EMBRYOLOGY & POST-NATAL DEVELOPMENT	TOTAL HOURS = 01		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC		
HL-A-002	Intrauterine Development of spleen	Embryology	Developmental Anatomy of Spleen	Interactive lecture	MCQ'S SEQ'S OSVE
PRACTICAL					
CODE	HISTOLOGY	TOTAL HOURS = 02		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		
HL-A-003	Light microscopic structure of Spleen, thymus, Lymph nodes, tonsils and Mucosa Associated Lymphoid Tissue (MALT) including appendix.	Histology	Histological features of lymph node, spleen & thymus	Interactive lecture SGD	MCQ'S SEQ'S OSPE

NORMAL FUNCTION					
THEORY					
CODE	MEDICAL PHYSIOLOGY	TOTAL HOURS = 20		Teachingstrategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		Poster presentation in all
HL-P-001	Define, classify and explain anemia on the basis of morphology and cause	Medical Physiology	Anemia	Lecture SGD TBL	MCQ'S SEQ'S OSVE
	Discuss the effects of anemia on the body			SDL	OSPE
HL-P-002	Define polycythemia		Polycythemia	Lecture	MCQ'S SEQ'S
	Explain types of polycythemias			SGD	MCQ'S SEQ'S OSVE
	Discuss the effects of polycythemia on the body			SDL	MCQ'S SEQ'S OSVE
HL-P-003	Define hemostasis		Hemostasis	Lecture	MCQ'S SEQ'S OSVE OSPE
	Describe the mechanisms by which hemostasis is secured			SGD SDL	MCQ'S SEQ'S
HL-P-004	Discuss the characteristics and functions of platelets		Platelets	Lecture SGD	MCQ'S SEQ'S
	Explain the mechanism of formation of platelet plug			SDL	MCQ'S SEQ'S
HL-P-005	Enlist the clotting factors in blood		Coagulation factors	Lecture	MCQ'S SEQ'S OSPE
	Explain the conversion of Prothrombin to Thrombin & formation of Fibrin Fibers			SGD	MCQ'S SEQ'S OSPE
	Explain the Intrinsic & extrinsic clotting pathway.			SDL	MCQ'S SEQ'S OSPE OSVE
	Name & explain the mechanism of anticoagulants used in laboratory.			Lecture	MCQ'S SEQ'S OSPE

	Explain the factors that prevent intravascular coagulation			Lecture	MCQ'S SEQ'S
	Explain the role of Calcium ions in Intrinsic and Extrinsic pathways			Lecture SGD	MCQ'S SEQ'S OSVE
	Enlist the vitamin K dependent clotting factors			Lecture	MCQ'S SEQ'S OSVE
	Explain the prothrombin time, International Normalized Ratio (INR), and its clinical significance.			Lecture	MCQ'S SEQ'S OSPE TABLE VIVA
HL-P-006	Enlist and explain the conditions that cause excessive bleeding			Lecture	MCQ'S SEQ'S OSPE
	Define thrombocytopenia	Integrated with Medicine	Coagulation disorders	Lecture	MCQ'S SEQ'S
	Enlist the causes and consequences of Thrombocytopenia			Lecture	MCQ'S SEQ'S
HL-P-007	Define immunity	Medical Physiology	Immunity	Lecture SGD SDL	MCQ'S SEQ'S
	Classify immunity			Lecture	MCQ'S SEQ'S
	Explain humoral immunity			Lecture SGD	MCQ'S SEQ'S
	Explain Innate immunity.			Lecture SGD	MCQ'S SEQ'S
	Elaborate cell mediated immunity.			Lecture SGD	MCQ'S SEQ'S OSVE
	Describe the structure of antigen and immunoglobulin			Lecture SGD	MCQ'S SEQ'S OSVE
	Describe the role of Helper T-cells in cell mediated immunity			Lecture	MCQ'S SEQ'S
	Enlist the types of Immunoglobulins along with their functions			Lecture	MCQ'S SEQ'S OSVE
	Explain the role of memory cells in enhancing antibody response (secondary response)			Lecture	MCQ'S SEQ'S
	Describe the mechanism of action of antibodies			Lecture	MCQ'S SEQ'S OSVE

	Elaborate the complement system.			Lecture	MCQ'S SEQ'S OSVE
	Elaborate Immune tolerance			Lecture	MCQ'S SEQ'S
HL-P-008		Medical Physiology	Tolerance		
	Explain the process of clone selection during T cell processing			Lecture	MCQ'S SEQ'S
	Discuss the failure of tolerance mechanism			Lecture	MCQ'S SEQ'S
HL-P-009	Discuss immunization.	Medic Physiology Integrate with Pediatrics	Immunization	Lecture	MCQ'S SEQ'S
	Define passive Immunity		Immunization	Lecture	MCQ'S SEQ'S
	Explain features and physiological basis of delayed reaction allergy.			Lecture	MCQ'S SEQ'S
	Explain features and physiological basis of AtopicAllergy			Lecture	MCQ'S SEQ'S
	Explain features and physiological basis of Anaphylaxis, urticaria and Hay fever.			Lecture	MCQ'S SEQ'S
HL-P-010	Discuss the pathophysiology, features and treatment of ABO and RH incompatibility. Enlist the changes that take place in the stored Blood.	Medical Physiology	Blood group Incompati bility	Lecture	MCQ'S SEQ'S OSPE ROLE PLAY
HL-P-011	Discuss the features and complications of mismatched blood transfusion reaction Describe the Hazards of blood transfusion.	Integrate with Pathology	Blood mismatch Transfusion reactions	Lecture	MCQ'S SEQ'S
	Elaborate the Transplantation of Tissues and Organs			Lecture	MCQ'S SEQ'S
HL-P-012	Explain the process of tissue typing	Medical Physiology Integrate with Nephrolog y	Transpla ntati on of tissu es	Lecture	MCQ'S SEQ'S
	Explain the prevention of Graft Rejection by suppressing immune system			Lecture	MCQ'S SEQ'S
THEORY					
CODE	MEDICAL BIOCHEMISTRY	TOTAL HOURS = 19		Teaching strategy	Assessment strategy
	SPECIFIC LEARNING OBJECTIVES	DISCIPLINE	TOPIC		

HL-B-001	Explain the steps of synthesis of hemoglobin and interpret Porphyrins on basis of sign symptoms and data. Discuss the biochemical role and types of hemoglobin 1. Differentiate Hemoglobin and myoglobin 2. Explain oxygen dissociation curve of hemoglobin and myoglobin and factors regulating them 3. Interpret Carbon monoxide (CO) toxicity on the basis of sign and symptoms 4. Explain the role of 2,3 Bisphosphoglycerate (2,3 BPG) in fetal circulation	Medical Biochemistry	Hemoglobin and its types/RBCs	Lecture	SEQ'S MCQ'S
HL-B-002	Discuss haemoglobinopathies and their biochemical and genetic basis with special emphasis on sickle cell anemia, Thalassemia and methemoglobinemia a) Discuss the following types of anemia on the basis of signs and symptoms and laboratory data: 1. Hypochromic microcytic 2. Normochromic microcytic 3. Normochromic normocytic 4. Macrocytic (megaloblastic)	Medical Biochemistry Integrate with Pathology	Hemoglobinopathies/RBCs/Homeostasis	Interactive Lecture	SEQ'S MCQ'S

HL-B-003	Explain the iron metabolism with mechanism of absorption and factors affecting it. 1. Interpret Iron deficiency anemia on basis of given data and microscopic findings 2. Interpret folic acid and cobalamin in relation to anemias on given data and microscopic findings 3. Discuss biochemical role of pyridoxine and vitamin C in microcytic anemia	Medical Biochemistry Integrate with medicine	Iron Metabolism/RBCs	Lecture	SEQ'S MCQ'S
HL-B-004	Discuss the degradation of heme in macrophages of reticuloendothelial system 1. Describe the formation of bile pigments, their types and transport 2. Discuss the fate of bilirubin		Heme Degradation/RBCs	Interactive Lecture	SEQ'S MCQ'S

HL-B-005	Discuss hyperbilirubinemias and their biochemical basis 1. Differentiate types of jaundice on basis of sign/symptoms and data 2. Evaluate the genetic basis of jaundice on the basis of lab investigations	Medical Biochemistry	Hyperbilirubinemia anemias / RBCs/ Blood Groups	Lecture SGD	SEQ'S MCQ'S
HL-B-006	Classify and explain the biomedical importance of each class of plasma proteins		Plasma Proteins/ Homeostasis	Lecture	SEQ'S MCQ'S
HL-B-007	Explain the structure and biochemical role of immunoglobulins 1. Describe the production, structure and functions of B cells, plasma cells, and antibodies (IgA, IgD, IgE, IgG, and IgM). 2. Discuss the functions of the cytokines (ILs, TNFs, IFs, PDGF, and PAF). Interpret multiple myeloma on basis of given data		Immunoglobulins/ WBCs/ Immunity	Lecture SGD	SEQ'S MCQ'S
HL-B-008	Explain and interpret pedigree of single gene defect i.e. sickle cell anemia (Autosomal recessive) and Beta Thalassemia (X linked recessive)		Genetics	Lecture SGD ROLE PLAY	SEQ'S MCQ'S

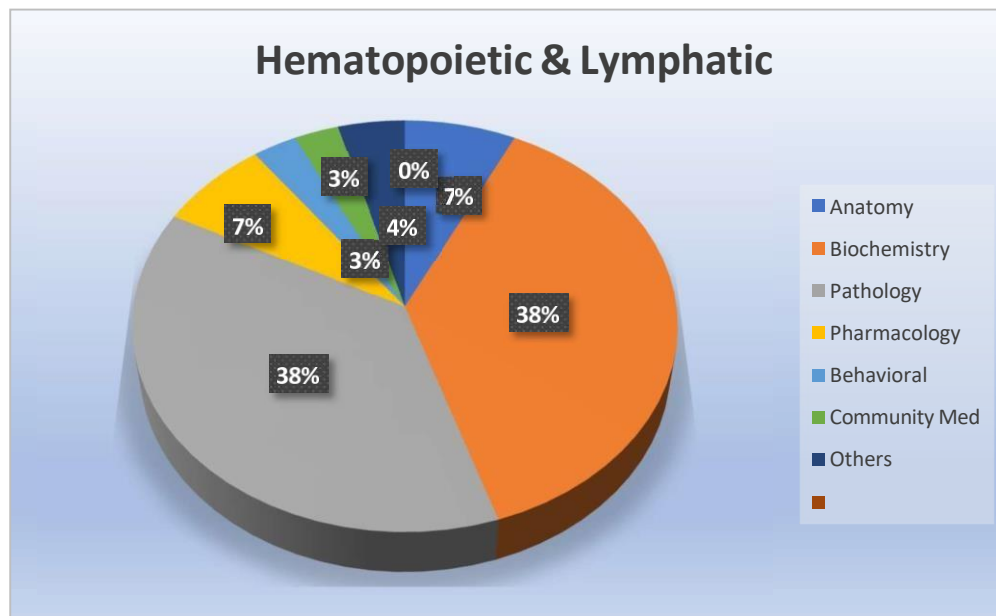
PRACTICAL

CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 6+6=12		Teaching strategy	Assessment strategy
		DISCIPLINE	TOPIC		
HL-P-013	Interpret the Red Blood Cell Count, Hemoglobin concentration, Hematocrit and RBC Indices by Automated Cell Counter	Medical Physiology	Bleeding/ Clotting time	Lecture	SEQ'S MCQ'S
	Interpret the Total Leucocyte Count Differential Leucocyte Count Platelet Count by Automated Cell Counter.				
HL-P-014	Determine Bleeding Time. Determine Clotting Time.		Jaundice & Anemias/ RBCs/ Homeostasis	Lecture	SEQ'S MCQ'S

HL-B-009	Interpret types of jaundice on the basis of data Perform estimation of bilirubin	Medical Biochemistry	Jaundice & Anemias/ RBCs/ Homeostasis	Demonstration+ Performance	OSPE
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PATHOPHYSIOLOGY AND PHARMACOTHERAPEUTICS					
THEORY					
CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 2+5=07		Teaching strategy	Assessment strategy
		DISCIPLINE	TOPIC		
HL-Ph-001	Describe the oral and parenteral iron preparations including their pharmacokinetics, uses, adverse effects	Pharmacology & Therapeutics	Anemia	Interactive lecture	MCQ'S
	Vitamin B12 preparations, Iron Antidotes			Interactive lecture	MCQ'S
HL-Pa-001	Should know the terms: Hematopoietic growth factors, their name, mechanism of actions, uses and adverse effects	Pathology	Blood Cells, Platelets and Blood Group	Interactive lecture	MCQ'S
	Define and classify anemias according to underlying mechanism and Mean Corpuscular Volume/ Mean Corpuscular Hemoglobin (MCV/MCH)			Interactive lecture	MCQ'S
	Discuss the causes and investigationsof iron deficiency anemia and megaloblastic anemia			Interactive lecture	MCQ'S
	Classify the benign and malignant disorders of WBCs			Interactive lecture	MCQ'S
	Discuss the causes leading to reactiveleukocytosis			Interactive lecture	MCQ'S
	Interpretation of anemias on the basis of peripheral blood smear and bone marrow findings			Interactive lecture	MCQ'S
	Classify bleeding disorders			Interactive lecture	MCQ'S
	Discuss first line laboratory investigations for bleeding disorders			Interactive lecture	MCQ'S
	Describe the basic concept of blood grouping and acute hemolytic transfusion reaction			Interactive lecture	MCQ'S

DISEASE PREVENTION AND IMPACT					
THEORY					
CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 05		Teaching strategy	Assessment strategy
		DISCIPLINE	TOPIC		
HL-CM-01	Describe the nutritional aspects of iron deficiency anemia and psychological aspects of diseases	Community Medicine and Public Health	Anemia	Interactive lecture	MCQ'S
HL-CM-02	Enlist most common blood borne diseases in Pakistan Describe the routes of spread of blood borne diseases		communicable diseases	Interactive lecture	MCQ'S
HL-CM-03	Genetic counseling of parents		Genetic diseases	Interactive lecture	MCQ'S
HL-BhS-01	Psychological Counselling of patients and their families	Behavioral Sciences	Counselling, informational care	Interactive lecture	MCQ'S
HL-BhS-02	Identify and deal with the various psychosocial aspects of Hematopoietic System disorders (such as Sickle Cell Disease, Hemophilia, and Conditions of the Blood) on Individual, Family and Society.		Personal, Psychosocial and vocational issues	Interactive lecture	MCQ'S
AGING					
THEORY					
CODE	SPECIFIC LEARNING OBJECTIVES	TOTAL HOURS = 01		Teaching strategy	Assessment strategy
		DISCIPLINE	TOPIC		
HL-Ag-01	Discuss the role of platelets in Platelet-Rich Plasma (PRP) treatment in old age (for skin, hairs and joints)	Biochemistry /Dermatology	Platelet Rich Plasma Therapy	Interactive lecture	MCQ'S
HL-Ag-02	Explain the role of glutathione in skin whitening		Glutathione	Interactive lecture	MCQ'S



Module Weeks	Recommended Minimum Hours
03	69





Time Table with Assessment Schedules

Queens Medical College, Kasur
Timetable 1st Year MBBS (Session-2024-25)

Block-1
Module-2 Hematopoietic & Lymphatic
(Theme: Red Cell)

Week 1

Days	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15-11:45	11:45 – 12:30	12:30-1:15	1:15 – 3:00	
Monday	OSPE (Combined) 9 am to 12 pm Venue Batch A: Anatomy Laboratory Batch B: Physiology Laboratory Batch C: Biochemistry Laboratory								
Tuesday	8:00 – 10: 00 AM		10: 00 – 12: 00 PM		12: 00 – 2: 00 PM				
	OSVE Batch A: Anatomy OSVE- Foundation Module Batch B: Physiology OSVE- Foundation Module Batch C: Biochemistry OSVE- Foundation Module		OSVE Batch C: Anatomy OSVE- Foundation Module Batch A: Physiology OSVE- Foundation Module Batch B: Biochemistry OSVE- Foundation Module		OSVE Batch B: Anatomy OSVE- Foundation Module Batch C: Physiology OSVE- Foundation Module Batch A: Biochemistry OSVE- Foundation Module				
Wednesday	Practical Batch A: Anatomy Histology Batch B: Physiology: Batch C: Biochemistry Batch D: Clinical Skill Lab General physical examination (Nail examination+ skin color changes) All Demo	Anatomy Dissection HL-A-001 Components of Hematopoietic and Lymphoid Tissue A:Dr.Mohsin B:Dr.Haris C:Dr. Saddam	Physiology LGIS HL-P-001 Anemias-define, classify, morphology+ cause Effect of anemia of Body Dr. Tanzeela	Biochemistry LGIS HL-B-001 Hemoglobin synthesis Oxygen dissociation curve Dr. Hassan	Break	Biochemistry LGIS HL-B-001 Carbon monoxide (CO) toxicity Dr. Anam	Quran Oneness of Allah (SWT) (Tawheed) Impact of Tawheed in human life	Practical Batch C: Anatomy Histology Batch D: Physiology: Batch A: Biochemistry Batch B: Clinical Skill Lab General physical examination (Nail examination+ skin color changes) All Demo	
Thursday	Practical Batch B: Anatomy Histology Batch C: Physiology: Batch D: Biochemistry Batch A: Clinical Skill Lab General physical examination (Nail examination+ skin color changes) All Demo	Com. Medicine LGIS HL-CM-001 Iron Def.Anemia-nutritional and Psychological effects Prof. Sadia	Embryology LGIS HL-A-002 Intrauterine development of Spleen Dr. Shaista	Biochemistry LGIS HL-B-001 2,3 BPG in fetal circulation Dr. Anam	Biochemistry LGIS HL-B-002 Hemoglobinopathies + biochemical and genetic basis ref to diseases into with Pathology Dr. Iqbal Javaid	Physiology LGIS HL-P-002 Polycythemias-Def + Types - Effect of polycythemia of Body Prof. M Amin	Pathology LGIS HL-Pa- 001 & 002 Anemia- classify+ MCV/MCHC Interpret Anemia via peripheral blood smear + BM Dr. Iqbal Javaid	Practical Batch D: Anatomy Histology Batch A: Physiology: Batch B: Biochemistry Batch C: Clinical Skill Lab General physical examination (Nail examination+ skin color changes) All Demo	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00-11:40	11:40-12:20	12:20-01:00	01:00-- 1:30	1:30-3:00
	PBL Session	SDL	PERL Identify various components of a given research manuscript using the IMRAD structure	Pak-Study Explain the basis for the creation of Pakistan	Break	Islamyat Explain the Quran as a guide for modern society and scientific development	Quran Oneness of Allah (SWT) (Tawheed) Impact of Tawheed in human life	Jumm a Prayer	Self-Directed Learning

(Theme: Platelet)
Week 2

Days	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15- 11:45	11:45 – 12:30	12:30-1:15	1:15 – 3.00	
Monday	Test Physiology All Faculty	Pharmacology LGIS HL-Ph-001 Oral Iron preparations Pharmacokinetics, adverse effects + uses Dr. Fozia	Biochemistry LGIS HL-B-003 Iron Metabolism- Role of pyridoxine & vitamin C in microcytic anemia into with medicine	Physiology LGIS HL-P-003 Hemostasis- definition + mechanisms Dr.Usama	Break	Islamiyat Explain the Quran as a guide for modern society and scientific development	Pak-Study Explain the basis for the creation of Pakistan	Practical Batch A: Anatomy Histology HL- A- 003 Spleen & thymus Batch B: Physiology: HL- P-013: CBC interpretation Batch C: Biochemistry Batch D: Clinical Skill Lab Venipuncture and blood collection All Demo	
Tuesday	SGIS Batch A: Anatomy - HL-A- 001: Portal Vein Formation Batch B: Physiology HL-P- 005 Clotting pathways Batch C: Biochemistry: F-B-004: Hyperbilirubinemias Batch D: PERLS: Leadership Discuss the role of non-verbal communication, including body language, facial expressions, and gestures, in effectively conveying messages and building rapport in healthcare settings All Demo	PERL PERLS1-04 Discuss the basic structure of a research manuscript using the IMRAD format (Introduction, Methods, Results,	Biochemistry LGIS HL-B-004 Heme degradation Dr. Hassan	Physiology LGIS HL-P-004 Platelets-Chara & Functions + platelet plug formation Dr. Tanzeela		Pathology LGIS HL-Pa-001 Anemia: Causes/Invest for (iron def + megaloblastic)	Behavioural Sciences LGIS HL-BhS-002 Psychosocial aspects of hematopoietic disorders	Practical Batch B: Anatomy Histology HL- A- 003 Spleen & thymus Batch C: Physiology: HL- P-013: CBC interpretation Batch D: Biochemistry HL- B-09 Interpret jaundice Batch A: Clinical Skill Lab Venipuncture and blood collection All Demo	
Wednesday	SGIS Batch B Anatomy HL-A- 001: Portal Vein Formation Batch C: Physiology HL-P- 005 Clotting pathways Batch D: Biochemistry: F-B-004: Hyperbilirubinemias Batch:A PERLS: Leadership Discuss the role of non-verbal communication, including body language, facial expressions, and gestures, in effectively conveying messages and building rapport in healthcare settings All Demo	SDL	Biochemistry LGIS HL-B-004 Formation of Bile Pigments, types and Transport Dr. Hassan	Aging Derma/ Biochemistry LGIS HL-Ag-001 Platelet-rich Plasma treatment in old age		Pathology LGIS HL-Pa-001 Hematopoietic Growth factors	Physiology LGIS F-P-005 Clotting factors inc, vitamin K dependent + Clotting pathways Dr. Shaista	Practical Batch C: Anatomy Histology HL- A- 003 Spleen & thymus Batch D: Physiology: HL- P-013: CBC interpretation Batch A: Biochemistry HL- B-09 Interpret jaundice Batch B: Clinical Skill Lab Venipuncture and blood collection All Demo	
Thursday	SGIS Batch C: Anatomy HL-A- 001: Portal Vein Formation Batch A: Physiology HL-P- 005 Clotting pathways Batch B Biochemistry: : F-B- 004: Hyperbilirubinemias Batch:B PERLS: Leadership Discuss the role of non-verbal communication, including body language, facial expressions, and gestures, in effectively conveying messages and building rapport in healthcare settings All Demo	Aging Derma/ Biochemistry LGIS HL-Ag-001 Glutathione in skin whitening	Biochemistry LGIS HL-B-004 Fate of Bilirubin Dr. Hassan	Physiology LGIS HL-P-005 Clotting factors _ fibrin formation Role of Ca Ions in Clotting Pathways Dr. usama		Histology LGIS HL-A-002 Intrauterine development of Spleen+ Thymus Dr. Naeem Shahzad	Pharmacology LGIS HL-Ph-001 Intravenous Iron preparations Pharmacokinetics, adverse effects + uses	Practical Batch D: Anatomy Histology HL- A- 003 Spleen & thymus Batch A: Physiology: HL- P-013: CBC interpretation Batch B: Biochemistry HL- B-09 Interpret jaundice Batch C: Clinical Skill Lab Venipuncture and blood collection All Demo	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00- 11:40	11:40-12:20	12:20-01:00	01:00– 1:30	1:30-2:30
	SGIS Batch D: Anatomy HL-A- 001: Portal Vein Formation Batch A: Physiology HL-P- 005 Clotting pathways Batch B Biochemistry: : F-B-004: Hyperbilirubinemias Batch:C PERLS: Leadership Discuss the role of non-verbal communication, including body language, facial expressions, and gestures, in effectively conveying messages and building rapport in healthcare settings All Demo	Histology LGIS HL-A-002 Intrauterine development of Lymph nodes. Tonsils Dr. Naeem Shahzad	Quran Prophethood (Risalat) i. Explain Significance of Risalat	Biochemistry LGIS HL-B-005 Hyperbilirubinemias Genetic basis of Jaundice Dr. Gule- Rana	Break	Pathology LGIS HL-Pa-003 WBC disorders + causes of reactive Leukocytosis Dr. Ahmad Latif	Physiology LGIS HL-P-006 Thrombocytopenia- PT, INR, and Clinical Sig Dr. Tanzeela	Jumma Prayer	Self-Directed Learning

(Theme. White Cell)
Week 3

	8:00- 9:00	9:00 – 9:45	9:45- 10:30	10:30 – 11:15	11:15-11:45	11:45 – 12:30	12:30-1:15	1:15 – 3.00	
Monday	Test Biochemistry All Faculty	SDL	Biochemistry LGIS HL-B-006 Plasma Proteins Dr. Faheem	Physiology LGIS HL-P-007 Immunity overview- Cell-Mediated Immunity Dr. Shaista	Break	Quran Prophethood (Risalat) i. Explain Significance of Risalat	Com. Medicine LGIS HL-CM-003 Genetic Counselling of parents- in Relation of Autosomal recessive+ X- Linked Dr. Rizwanullah	Practical Batch A: Anatomy Histology HL- A-003 Lymph node, Tonsil, MALT Batch B: Physiology: HL- P-013: Bleeding/Clotting Ti Batch C: Biochemistry HL- B-009 Bilirubin estimation Batch D: Clinical Skill Lab Pallor All Demo	
Tuesday	SGIS Batch A: Anatomy - HLA-A-001: Thymus+ Age related changes Batch B: Physiology HL-P-009 Anaphylaxis, urticaria, Hay fever Batch C: Biochemistry: HL-B-007: Multiple myeloma Batch D: Behavioural Sciences HL-BhS-001 Psychological Counseling All Demo	Pathology LGIS HL-Pa-001 Bleeding disorder classification + 1st line investigations Dr. Ahmad Latif	Biochemistry LGIS HL-B-007 Immunoglobulins- structure + Biochemical role Dr. Gule-Rana	Biochemistry LGIS HL-B-007 B cells – production, structure and Functions Dr. Anam		Physiology LGIS HL-P-007 MOA Antibodies+ role of memory cells Dr. Usama	Physiology LGIS HL-P-007 Immunoglobulins	Practical Batch B: Anatomy Histology HL-A-003 Lymph node, Tonsil, MALT Batch C: Physiology: HL- P-013: Bleeding/Clotting Ti Batch D: Biochemistry HL- B-009 Bilirubin estimation Batch A: Clinical Skill Lab Pallor All Demo	
Wednesday	SGIS Batch B Anatomy HLA-A-001: Thymus+ Age related changes Batch C: Physiology HL-P-009 Anaphylaxis, urticaria, Hay fever Batch D: Biochemistry HL-B-007: Multiple myeloma Batch A: Behavioural Sciences HL-BhS-001 Psychological Counseling All Demo	Biochemistry LGIS HL-B-007 Plasma cells – production, structure and functions	Physiology LGIS Complement System	Biochemistry LGIS HL-B-007 Antibodies- production, structure and functions		Physiology LGIS HL-P-008 Immune tolerance	SDL	Practical Batch C: Anatomy Histology HL-A-003 Lymph node, Tonsil, MALT Batch D: Physiology: HL- P-013: Bleeding/Clotting Ti Batch A: Biochemistry HL- B-009 Bilirubin estimation Batch B: Clinical Skill Lab Pallor All Demo	
Thursday	SGIS Batch C: Anatomy HLA-A-001: Thymus+ Age related changes Batch D: Physiology HL-P-009 Anaphylaxis, urticaria, Hay fever Batch A Biochemistry: HL-B-007: Multiple myeloma Batch B: Behavioural Sciences HL-BhS-001 Psychological Counseling All Demo	Anatomy LGIS HL-A-001-003 Clinical Aspects Prof. Yasoob	Biochemistry LGIS HL-B-007 Cytokines Dr. Faheem	Biochemistry LGIS HL-B-008 Single gene defect pedigree- Autosomal Recessive Dr. Anam		Physiology LGIS HL-P-008 Allergic Reactions- (delayed)	Physiology LGIS HL-P-008 Allergic Reactions- (atopic) Dr. Shaista	Practical Batch D: Anatomy Histology HL-A- 003 Lymph node, Tonsil, MALT Batch A: Physiology: HL- P-013: Bleeding/Clotting Ti Batch B: Biochemistry HL- B-009 Bilirubin estimation Batch C: Clinical Skill Lab Pallor All Demo	
Friday	8:00- 9:00	9:00-9:40	9:40- 10:20	10:20-11:00	11:00-11:40	11:40-12:20	12:20-01:00	01:00– 1:30	1:30-2:30
	SGIS Batch D: Anatomy HLA-A-001: Thymus+ Age related changes Batch A: Physiology HL-P-009 Anaphylaxis, urticaria, Hay fever Batch B Biochemistry: HL-B-007: Multiple myeloma Batch C: Behavioural Sciences HL-BhS-001 Psychological Counseling All Demo	Biochemistry LGIS HL-B-008 Single gene defect pedigree- X-linked Dr. Anam	Biochemistry LGIS HL-B-001-008 Revision Class Dr. Hassan	PBL Session	Break	Physiology LGIS HL-P-011 Tissue Transplantation+ Rejection Dr. Usama	Physiology LGIS HL-P-010 Blood Transfusion Reactions	Jumma Prayer	Self-Directed Learning

MBBS 1st Professional

Block-1

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	20	03	35	03	-	01	40
Normal Function	Physiology applied/clinical	22	02	32	02	-	01	32
	Biochemistry applied/clinical	22	02	32	02	-	01	32
Disease Burden & Prevention	Community Medicine & Public Health	05	-	05	-	-	-	-
	Behavioral Sciences	05	-	05	-	-	-	-
Pathophysiology & pharmacotherapeutics	Pathology	06	-	06	-	-	-	-
	Pharmacology	05	-	05	-	-	-	-
CFRC	CF-1-2	-	-	-	-	01	-	08
PERLs	PERLs-1-2	-	-	-	-	01	-	08
Total		85	7x5=35	120	07 stations x 08 = 56	02 stations x 08 = 16	03 stations x 16=48	120

C-FRC

LOGBOOK

C-FRC-1 (YEAR-1)



FOUNDATION MODULE

Objectives	Skill	Miller's Pyramid Level Reflected
Demonstrate steps of hand washing	Hand washing	Shows
Demonstrate the procedure of taking the pulse	Radial Pulse	Shows
Record the Respiratory Rate of patient	Respiratory Rate measurement	Shows
Demonstrate the procedure of taking the Blood Pressure	Blood Pressure	Shows
Demonstrate the process of wearing the gloves	Donning and Doffing	Shows

HEMATOPOEITC AND LYMPHATIC MODULE

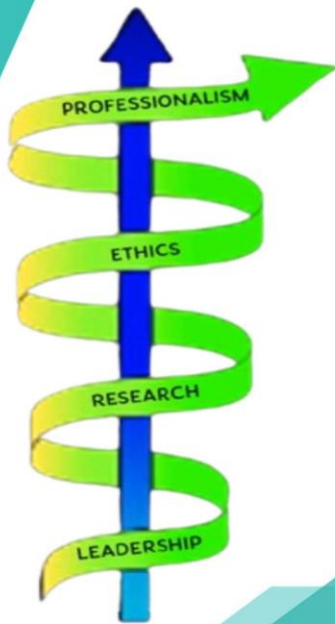
Objectives	Skill	Miller's Pyramid Level Reflected
Detail the steps of drawing blood from a vein.	*Venipuncture and blood collection	Knows how
Check for pallor in the conjunctiva, tongue, and palm of hands	Pallor	Shows

- ❖ 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, written and electronic communication skills with peers and teachers
		Develop an argument
	Caring & Empathic	Demonstrate respect of diversity in gender, age, culture, race, religion, disabilities, and sexual orientation for peers
	Responsible & Accountable	Follow the dress code and rules and regulation of the institution
		Demonstrate punctuality
		Discuss professional code of conduct
		Take responsibility of one's actions and be accountable to oneself
		Engage in orientation, co-curricular and extracurricular activities
	Team Player	Work respectfully and effectively with their peers and participate in different team roles
	Self-Aware	Identify personal strengths and areas of improvement
Ethics	Digital Citizen	Keep Personal & Professional data and information safe
		Understand cyberbullying, harassing, sexting.
		Design a professional digital footprint and use appropriate online etiquette and follow rules for every Internet resource
Research	Evidence Based Practitioner	Locate credible scientific data
Leadership	Resilient & Adaptable	Demonstrate healthy coping mechanisms to respond to stress
		Demonstrate patience and tolerance
	Self-directed Learner	Manage time effectively
		Identify the gap in own learning
		Set and track learning and improvement goals
		Identify and seek help as and when required to achieve the set goals



BLOCK-1

Code	Domain	Attribute	Specific Learning Outcome	Topic	Portfolio Entry
PERLs-1-01	PERLs	PERLs	Describe a Portfolio Describe types of portfolios Identify Portfolio entries Write reflection based on Gibbs reflective cycle	Reflective Writing	Reflective writing on portfolio outline development

PERLs-1-02	Professionalism	Communicator	Demonstrate non-verbal and verbal communication skills. Describe principles of Communication. Discuss types of Communication at professional level. Identify different Communication Styles. Explain the importance of nonverbal communication. Demonstrate active Listening. Describe assertive Communication techniques. Describe barriers to Effective	Verbal and nonverbal Communication Skills	Communication encounter with a peer or teacher
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			Communication.		
PERLs-1-03		Responsible & Accountable	Follow the dress code and rules and regulations of the institution. Demonstrate punctuality	Responsibility towards institution and the profession	Quiz on rules and regulations of the institution

PERLs-1-04		Team player	Describe characteristics of a team Describe types of teams Discuss stages of team development Identify various team roles Discuss barriers to effective teamwork	Teamwork	Self- evaluation through reflective writing
PERLs-1-05	Ethics	Digital Citizen	Maintain personal privacy while sharing information Identify cyberbullying, harassing, and sexting Describe cybersecurity laws Discuss digital rights and responsibilities	Digital Identity & footprint	Case discussion of cyberbullying
PERLs-1-06	Research	Evidence based practitioner	Discuss Science and scientific evidence	Difference between science, philosophy, art and Scientific method	Assignment on application of scientific method to a problem
PERLs-1-07	Leadership	Self-directed Learner	Identify gaps in learning through reflection	Strategic planning Personal development plans Goal Setting	Written gaps in being a learner with goals





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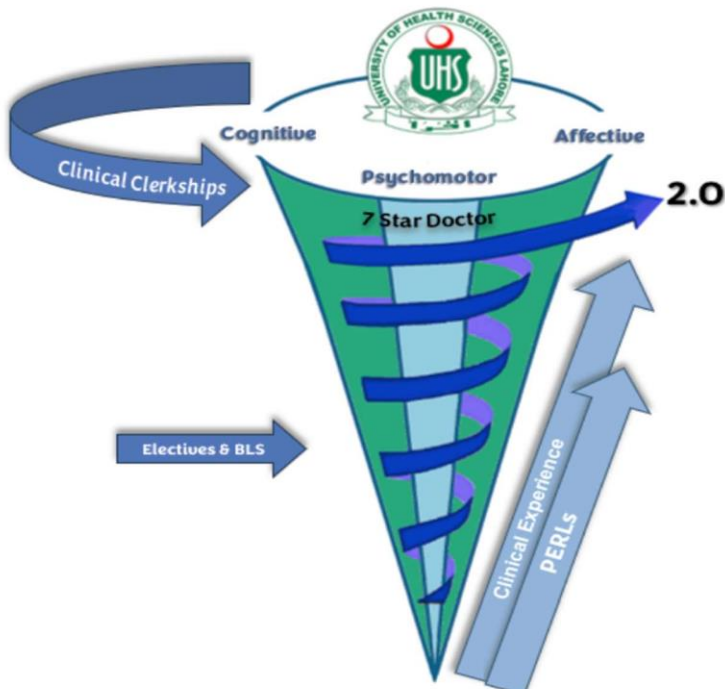
version 2.0

**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

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

2.2: 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.



SYLLABUS OF THE HOLY QUE



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. Hadd-e Allahee and taazeerat
6. Justice (Adal-o-insaf)
7. Business (Bay-o-tijarat)

8. Interest (Riba or Sudi karobar)

9. Nikah-o-talaq

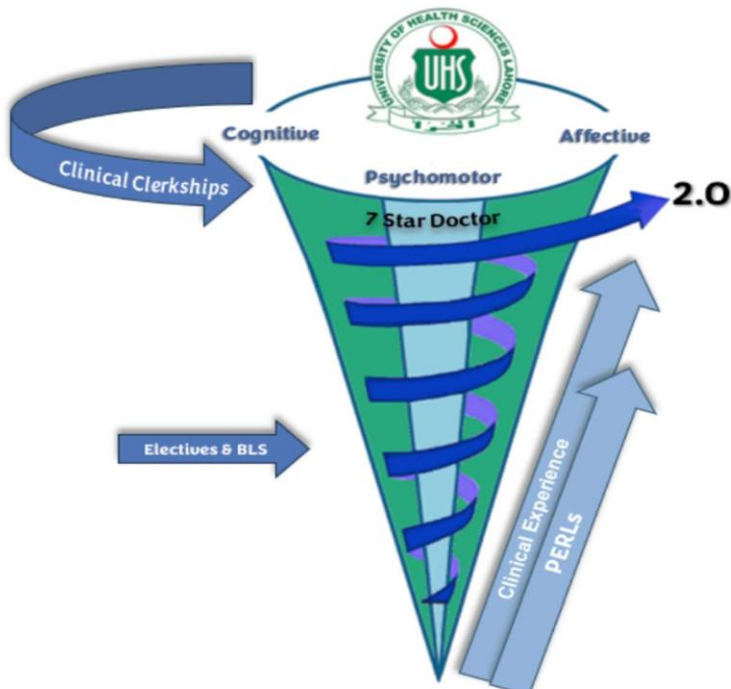


CURRICULUM

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.

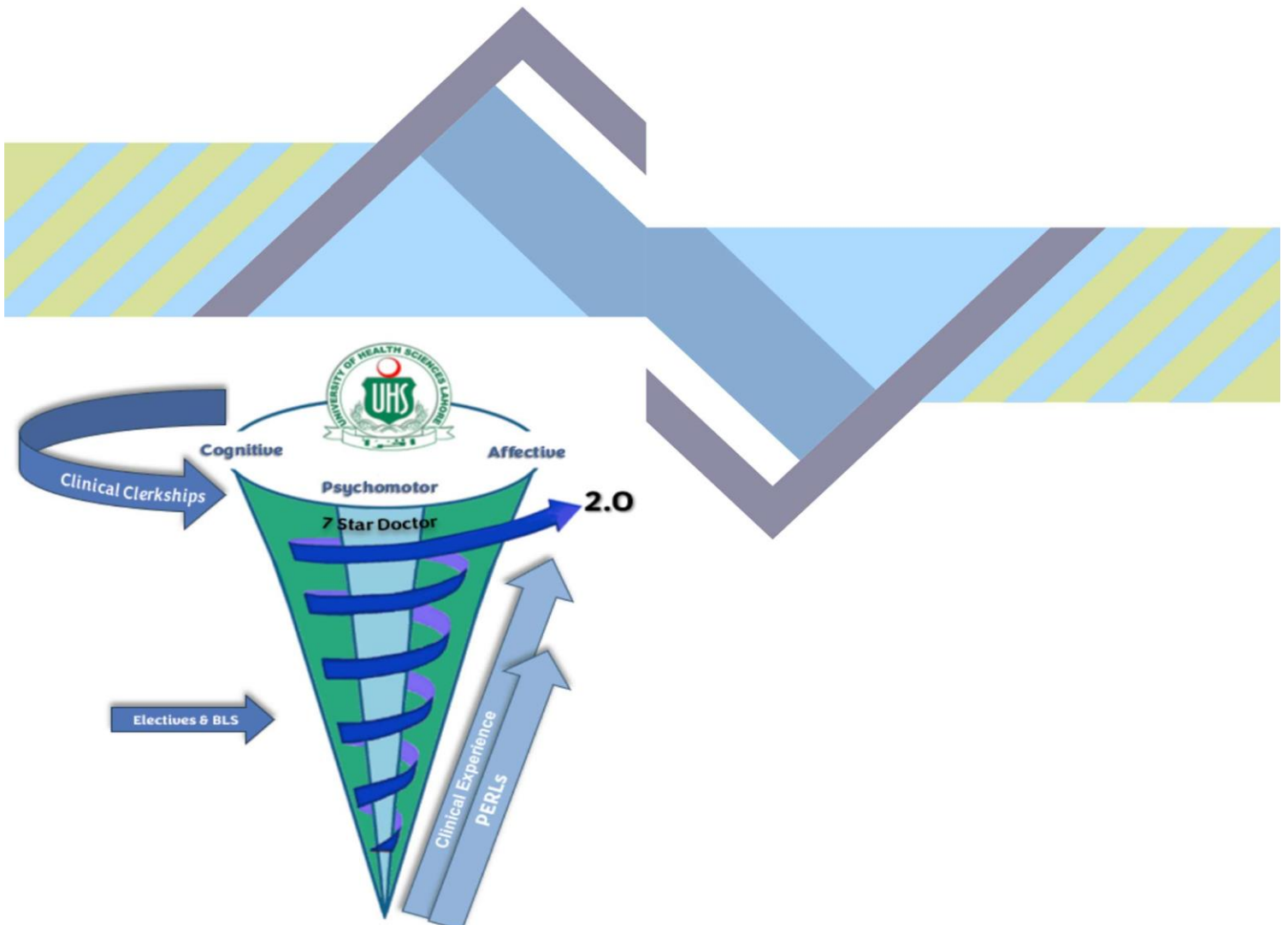
7. Describe the social, economic and health problems of the rural population of Pakistan.

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

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

2.2 : 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

3.1 : 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.

3.2 : 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 : 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.

3.7: 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.)

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

The page features several decorative blue geometric shapes. On the left, a large blue shape resembling a stylized 'K' or a chevron points towards the center. On the right, a blue triangle points towards the center. At the bottom right, there is a cluster of overlapping blue geometric shapes, including triangles and polygons, creating a layered effect.

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.
- Churchill Livingstone.

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)

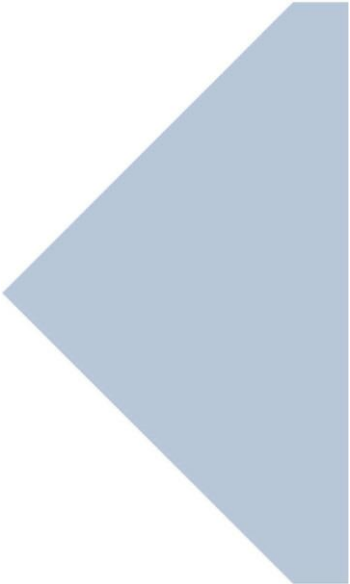
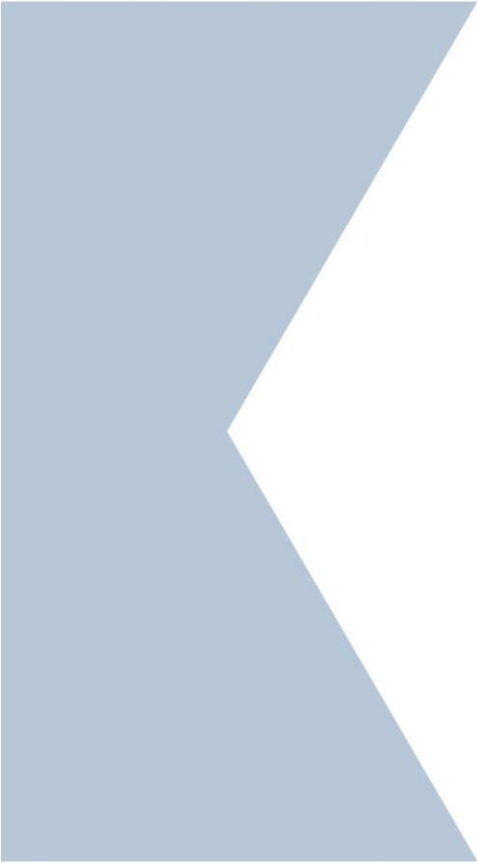
Surgery

- 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)	300
Marks	
B. Block 2 (Musculoskeletal & Locomotion-I)	300
Marks	
C. Block 3 (Cardiovascular-I+ Respiratory-I)	300
Marks	

Year 2

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

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 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 2 Modules (Musculoskeletal & Locomotion-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 3 Modules (Cardiovascular-I &	Part I MCQs (85)	85 Marks	Practical / Clinical Examination	07 OSPE 02 OSCE 03 OSVE	Marks 56 16 48	
	Part II SEQs (7)	35 Marks				

Table 1

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 1st Professional

Block-1

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	20	03	35	03	-	01	40
Normal Function	Physiology applied/clinical	22	02	32	02	-	01	32
	Biochemistry applied/clinical	22	02	32	02	-	01	32
Disease Burden & Prevention	Community Medicine & Public Health	05	-	05	-	-	-	-
	Behavioral Sciences	05	-	05	-	-	-	-
Pathophysiology & pharmacotherapeutics	Pathology	06	-	06	-	-	-	-
	Pharmacology	05	-	05	-	-	-	-
CFRC	CF-1-2	-	-	-	-	01	-	08
PERLS	PERLS-1-2	-	-	-	-	01	-	08
Total		85	7x5=35	120	07 stations x 08 = 56	02 stations x 08 = 16	03 stations x 16=48	120

