



# THE BLOOD MODULE

FIRST PROFESSIONAL M.B.B.S

STUDY GUIDE 2024-25







#### **LIST OF ABBREVIATIONS**

- BMC Baqai Medical College
- BMU Baqai Medical University





- CBL Case Based Learning
- LGIF Large Group Interactive Format
- LOs Learning Objectives
- MCQs Multiple Choice Questions
- **OSCE** Objective Structured Clinical Examination
- **OSPE Objective Structured Practical Examination**
- PEARLS Professionalism, Ethics, Research, Leadership, Communication Skills
- PW Practical Work
- SDL Self Directed Learning
- SGD / SGT Small Group Discussion / Small Group Teaching
- TS Teaching Strategy

Vision	Mission





Baqai Ma	edical University		
To evolve as a nucleus for higher learning with a resolution to be	The mission of Baqai Medical University is tobe recognized as a		
socially accountable, focused on producing accomplished health	center of excellence in education, research, patient care, and		
care professionals for services in all spheres of life at the national	community services by producing highlycapable and knowledgeable		
and global level".	professionals.		
Baqai M	edical College		
Our vision is to enhance access and excellence in medical	The mission of the Baqai Medical College is to produce medical		
education and research, with the aim of capacity building of	graduates, who are responsible and accomplished individuals and		
students and faculty through innovations, and science and	have skills for problem-solving, clinical judgment, research, and		
technology competencies, to achieve rapid and sustainable health.	leadership for a medical practice at the international level and are also		
The medical graduate thus produced, will be informed, and	aware of the health problems of the less privileged rural and urban		
trained enough to serve the community better, and to be an	population of Pakistan.		
advisor to the national and international health organizations.			











#### **CURRICULUM COMMITTEE**

<u>Chairman Curriculum Committee</u> **Prof. Dr Farrukh Naheed**, Head, Department. of Obstetrics and Gynaecology <u>Co-Chairman Curriculum Committee</u> **Dr Maeesa Sajeel**, Associate Professor, Department of Pathology <u>Secretary of the Curriculum Committee</u> **Dr Saadia Akram,** Assistant Professor, Department of Gynaecology and Obstetrics

MBBS SPIRAL 1 HEAD; PROF Dr Inayat Ali 1 <sup>ST</sup> YEAR MBBS (Coordinator)

DR TAYYABA KAZMI





#### TIMETABLE AND STUDY GUIDE TEAM

SUBJECT	TEAM MEMBERS
BIOCHEMISTRY	DR IFFAT Coordinator
ANATOMY	DR ANEELA
PHSIOLOGY	DR ALI
BICHEMISTRY	DR FARHAN
PHARMACOLOGY	DR HINA
PATHOLOGY	DR ROZEENA
FORENSIC MEDICINE	DR RAFEY
COMMUNITY MEDICINE	DR AMMARA
MEDICINE	DR MASOODA FATIMA/ DR SAIMA ASKARI
SURGERY	DR DANISH/ DR ABDULLAH
GYNAE/ OBS	DR NIKHAT ASHRAF
RESEARCH	DR MARIA





PEARLS	DR MARIUM IBRAHIM
BEHAVIOR SCIENCES	DR AZRA SHAHEEN
ORTHOPEADICS	DR DANISH/ DR ABDULLAH
RADIOLOGY	DR MEHWISH

#### ASSESSMENT AND TOS

SUBJECT	TEAM MEMBERS
PHSIOLOGY	DR ADNAN Coordinator
ANATOMY	DR SABA AKRAM
BIOCHEMISTRY	DR IFFAT
PHARMACOLOGY	DR HINA
PATHOLOGY	DR ROZEENA
FORENSIC MEDICINE	DR RAFEY
COMMUNITY MEDICINE	DR AMMARA
MEDICINE	DR ANEETA/ DR SAIMA ASKARI
SURGERY	DR DANISH/ DR ABDULLAH





GYNAE/ OBS	DR NIKI-IAT ASHRAF
RESEARCH	DR MARIA
PEARLS	DR MARIUM IBRAHIM
BEHAVIOR SCIENCES	DR AZRASHAHEEN
ENT	DR REHANA
RADIOLOGY	DR MEHWISH
EYE	DR M S FAHMI

#### CBL DEVELOPMENT TEAM

SUBJECT	TEAM MEMBERS			
BIOCHEMISTRY	DR KAHKASHAN Coordinator			
PHYSIOLOGY	DR SABA LEEZA/ DR SALEEM ULLAH			
ANATOMY	DR SHAHID PERVEZ			





**INTRODUCTION OF BLOOD MODULE:** This module serves as the foundation for understanding the Complications of hematology, which is crucial for your future medical practice.

Blood is a specialized bodily fluid that plays a pivotal role in maintaining homeostasis within the body. Comprising various cellular components and plasma, blood performs vital functions such as oxygen transport, waste removal, and immune defense.

In this module, we will explore the composition of blood, exploring its cellular elements, plasma constituents, and their respective functions. We will also discuss the physiology of blood, including its role in coagulation, immunity, and acid-base balance.





Understanding the fundamentals of blood is key to diagnosing and managing a wide array of medical conditions. By the end of this module, you will have a comprehensive understanding of blood anatomy, physiology, biochemical, and pathophysiology and pharmacology in a public health, regarding future studies in hematology and clinical practice.



The blood module outcomes ; IDENTIFY & DESCRIBE THE ANATOMICAL ,PHYSIOLOGICAL AND BIOCHEMICAL ASPECYS OF VARIOUS CELLULAR AND NON CELLULAR COMPONENTS OF BLOOD

DECODIDE THE CONTRIECT CONTRELAND DECOMPANY OF

![](_page_11_Picture_0.jpeg)

![](_page_11_Picture_1.jpeg)

Year to be taught: First Professional M.B.B.S. <u>Placement of Blood Module:</u> Third <u>Duration- the start and end of Blood</u> <u>Module:</u> 4 weeks + 1 day <u>Tentative Dates:</u> 28. 05. 24 – 19. 07. 2024. End of Module Assessment (EOA)

Tentative date: 22. 07. 2024

![](_page_12_Picture_0.jpeg)

![](_page_12_Picture_1.jpeg)

![](_page_13_Picture_0.jpeg)

![](_page_13_Picture_1.jpeg)

![](_page_13_Figure_3.jpeg)

![](_page_14_Picture_0.jpeg)

![](_page_14_Picture_1.jpeg)

![](_page_14_Figure_3.jpeg)

![](_page_15_Picture_0.jpeg)

![](_page_15_Picture_1.jpeg)

# INTEGRATED TEACHING

Topics with objectives	Department	Duration	Facilitator	Teaching	Venue
At the end of this lecture First Year M.B.B.S. student will be able to; DEVELOPMENT OF BLOOD CELLS:	Anatomy	60 minutes	Dr Tayyaba	Lecture	Lecture hall – 1, Ground floor, Block- A
-Define hematopoiesis. -Describe the sites of hematopoiesis before and after birth -Discuss the source of hematopoiesis					
At the end of this lecture First Year M.B.B.S. student will be able to; HEMATOGENESIS -Differentiate stem / pluripotent cells, progenitor and precursor (blasts) cells -Explain the development of various types of blood cells	Anatomy	60 minutes	Dr Tayyaba	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; ERYTHROPOIESIS -Discuss the site involved in Erythropoiesis -Describe the Importance of multipotent hematopoietic stem cells (MHSC) -Explain the stages of differentiation of erythropoiesis	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_16_Picture_0.jpeg)

![](_page_16_Picture_1.jpeg)

At the end of this lecture First Year M.B.B.S. student will be able to; INTRODUCTION OF RED BLOOD CELLS: -Describe the Shape, size and life span of Red Blood Cells and Red Blood Cell count	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1, Ground floor, Block- A
<ul> <li>-Recite the Quantity of Hemoglobin in Red Blood Cell.</li> <li>-Explain the importance of Hemoglobin transportation of Oxygen in tissues</li> </ul>					
At the end of this lecture First Year M.B.B.S. student will be able to; FACTORS REGULATING ERYTHROPOIESIS: -Enumerate the factors which regulate erythropoiesis -Define the role of erythropoietin -Explain the role of Hypoxia in erythropoiesis -Identify the role of erythropoietin in the production of pro-erythroblast from Pluripotent Haemopoetic Stem Cell	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; METABOLISM OF HAEMOPOETIC VITAMINS:	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_17_Picture_0.jpeg)

![](_page_17_Picture_1.jpeg)

-Discuss the active forms and sources of					
vitamin B12 and Folic acid-					
Discuss the function of vitamin B12 and folic					
acid with hemoglobin synthesis					
At the end of this lecture First Year	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
MATURATION OF RBC BY VITAMIN					А
<b>B12 AND FOLIC ACID</b>					
-Explain the importance of maturation failure					
in B12 deficiency.					
-Define pernicious anemia					
-Identify the maturation failure in folic acid					
deficiency.					
At the end of this lecture First Year	Physiology	120 minutes	Dr M.Ali	Practical	Physio lab, 1 <sup>st</sup> floor,
M.B.B.S. student will be able to;					Block-A
<b>RBC COUNT</b>					
-Discuss RBC functions					
-Explain the ruling area of chamber					
-Demonstrate the steps to measure RBCs in					
neubar's chamber					
-Practice the slide focus for Neubar's chamber					
-Calculate the number of RBC					
At the end of this lecture First Year	Biochemistry	60 minutes	Dr Farhan	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
<b>METABOLISM OF Copper:</b>					А

![](_page_18_Picture_0.jpeg)

![](_page_18_Picture_1.jpeg)

-Describe the absorption of Copper from the					
small intestine.					
-List the functions of Copper in the body					
-Identify the importance of Copper iron					
metabolism					
-List the functions of Copper in the body.					
-Identify the importance Copper in iron					
metabolism					
At the end of this lecture First Year	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
HEMOGLOBIN:					A
-Describe the structure of hemoglobin					
-Define methemoglobin and					
methemoglobinemia.					
-Explain the conversion of methemoglobin					
into Hemoglobin					
-Discuss Carbon Mono-Oxide poisoning					
At the end of this lecture First Year	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
FUNCTIONS OF HEMOGLOBIN:					A
-List the types of hemoglobin					
-Enumerate the functions of hemoglobin					
-Explain the transport of Oxygen by					
hemoglobin					

![](_page_19_Picture_0.jpeg)

![](_page_19_Picture_1.jpeg)

At the end of this lecture First Year M.B.B.S. student will be able to; METABOLISM OF IRON: -Describe the absorption and metabolism of Fe in the body. -Identify the importance of essential iron in the formation of hemoglobin. -Explain the role of ferritin in iron overload.	Biochemistry	120 minutes	Dr Farhan	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; BIOSYNTHESIS OF PORPHYRINS -Define porphyrins -Describe the sequence of reactions involved in heme synthesis -Identify the enzymes and co-enzymes involved in heme synthesis. -Describe the regulation of heme synthesis	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; PORPHYRIAS: -Define porphyrias -Classify the types of porphyrias -Identify the enzyme deficient in every porphyria	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_20_Picture_0.jpeg)

![](_page_20_Picture_1.jpeg)

-Explain the clinical manifestations of					
porphyria on the basis of sign & symptoms					
At the end of this lecture First Year	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
PLASMA:					A
-Define plasma					
-Define hematocrit					
-List the main functions of plasma					
-Explain the osmotic functions of plasma					
proteins					
*				4	
At the end of this lecture First Year	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1,
At the end of this lecture First Year M.B.B.S. student will be able to;	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block-
At the end of this lecture First Year M.B.B.S. student will be able to; PLASMA PROTEINS	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; PLASMA PROTEINS -Define plasma protein & state the normal	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; PLASMA PROTEINS -Define plasma protein & state the normal level in blood	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; PLASMA PROTEINS -Define plasma protein & state the normal level in blood -Discuss the functions of plasma proteins in	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; PLASMA PROTEINS -Define plasma protein & state the normal level in blood -Discuss the functions of plasma proteins in our bodies	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; PLASMA PROTEINS -Define plasma protein & state the normal level in blood -Discuss the functions of plasma proteins in our bodies -Discuss the Albumin and its biomedical	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; PLASMA PROTEINS -Define plasma protein & state the normal level in blood -Discuss the functions of plasma proteins in our bodies -Discuss the Albumin and its biomedical importance	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_21_Picture_0.jpeg)

![](_page_21_Picture_1.jpeg)

<ul> <li>At the end of this lecture First Year</li> <li>M.B.B.S. student will be able to;</li> <li>GLOBULINS-:</li> <li>-Classify Globulins: α, β, and γ-globulins</li> <li>-Identify the site of synthesis of globulins.</li> <li>-Explain the functions of different types of globulins.</li> <li>-Identify the site of synthesis of fibrinogen.</li> </ul>	Biochemistry	30 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; ISLAMIAT Describe the concepts of Quran Explain in detail the verses of Surah Hijrat(Verses of Surah Al-Hujurat Related to Adab Al-Nabi (Verse No. 1-18)).	Islamiat	60 minutes	Miss Uzma	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; DEGRADATION OF HEME -List the sources of bilirubin -Identify the principal sites of Hemoglobin breakdown -Describe the reactions involved in heme catabolism -Discuss the transport of bilirubin in the blood to the liver	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_22_Picture_0.jpeg)

![](_page_22_Picture_1.jpeg)

At the end of this lecture First Year	Biochemistry	30 minutes	Dr Iffat	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;	-				Ground floor, Block-
JAUNDICE AND CLASSIFICATION OF					А
JAUNDICE:					
-Define jaundice					
-Classify jaundice.					
-Describe the types of jaundice					
-Explain the clinical features and biochemical					
findings in all types of jaundice					
At the end of this lecture First Year	Biochemistry	60 minutes	Dr Farhan	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
LIVER FUNCTION TEST:					A
-Identify the liver function tests used for the					
diagnosis of jaundice.					
-Describe van den Bergh test for estimating					
bilirubin					
-Discuss the estimation of the enzymes :					
ALT, AST, ALP and GGT in the differential					
diagnosis of liver dysfunction					
At the end of this Practical First Year	Biochemistry	120 minutes	Dr Farhan	Practical	Biochem lab, 1 <sup>st</sup> floor,
M.B.B.S. student will be able to;					Block-A
BIURET TEST					
-Recall the structure of peptide bond					
-Detect the presence of protein in the given					
sample.					

![](_page_23_Picture_0.jpeg)

![](_page_23_Picture_1.jpeg)

Describe the principle of the reaction taking					
place in the equipment.					
-Record the observation off sample and					
control in the equipment					
At the end of this lecture First Year	Pathology	60 minutes	Dr. Rozina	Lecture	Lecture hall $-1$ ,
M.B.B.S. student will be able to;			Khan		Ground floor, Block-
<b>RBC DISORDERS I</b>					А
-Describe the Structure & Function of Normal					
Hemoglobin					
-Enumerate the Types of Abnormal					
Hemoglobin					
-Explain the Thalassemia and Sickle Cell					
Anemia					
At the and of this leature First Veen	Dethelegy	60 minutes	D.M	Lastana	Lastura hall 1
At the end of this fecture First Year	Pathology	60 minutes	Dr M.	Lecture	Lecture nan – 1,
M.B.B.S. student will be able to;	ratiology	oo minutes	Dr M. Rizwan	Lecture	Ground floor, Block-
M.B.B.S. student will be able to; RBC DISORDERS-II	ratiology	60 minutes	Dr M. Rizwan	Lecture	Ground floor, Block- A
<b>M.B.B.S. student will be able to;</b> <b>RBC DISORDERS-II</b> Describe the components of Blood and its	rathology	oo minutes	Dr M. Rizwan	Lecture	Ground floor, Block-A
At the end of this fecture First Year M.B.B.S. student will be able to; RBC DISORDERS-II Describe the components of Blood and its Functions	rathology	oo minutes	Dr M. Rizwan	Lecture	Ground floor, Block-A
At the end of this fecture First Year M.B.B.S. student will be able to; RBC DISORDERS-II Describe the components of Blood and its Functions -Define & Classify anemia	rathology	oo mnutes	Dr M. Rizwan	Lecture	Ground floor, Block-A
At the end of this fecture First Year M.B.B.S. student will be able to; RBC DISORDERS-II Describe the components of Blood and its Functions -Define & Classify anemia -Explain the pathogenesis of Iron Deficiency	rathology	oo mnutes	Dr M. Rizwan	Lecture	Ground floor, Block-A
At the end of this fecture First Year M.B.B.S. student will be able to; <b>RBC DISORDERS-II</b> Describe the components of Blood and its Functions -Define & Classify anemia -Explain the pathogenesis of Iron Deficiency Anemia, Macrocytic Anemia, G6PD	rathology	oo mnutes	Dr M. Rizwan	Lecture	Ground floor, Block-A
At the end of this fecture First Year M.B.B.S. student will be able to; RBC DISORDERS-II Describe the components of Blood and its Functions -Define & Classify anemia -Explain the pathogenesis of Iron Deficiency Anemia, Macrocytic Anemia, G6PD Deficiency	rathology	oo mnutes	Dr M. Rizwan	Lecture	Ground floor, Block-A
At the end of this fecture First Year M.B.B.S. student will be able to; RBC DISORDERS-II Describe the components of Blood and its Functions -Define & Classify anemia -Explain the pathogenesis of Iron Deficiency Anemia, Macrocytic Anemia, G6PD Deficiency At the end of this Practical First Year	Pathology	120 minutes	Dr M. Rizwan Dr M.Ali	Practical	Physio lab, 1 <sup>st</sup> floor,
At the end of this fecture First Year M.B.B.S. student will be able to; RBC DISORDERS-II Describe the components of Blood and its Functions -Define & Classify anemia -Explain the pathogenesis of Iron Deficiency Anemia, Macrocytic Anemia, G6PD Deficiency At the end of this Practical First Year M.B.B.S. student will be able to;	Pathology Physiology	120 minutes	Dr M.Ali	Practical	Physio lab, 1 <sup>st</sup> floor, Block-A
At the end of this fecture First Year M.B.B.S. student will be able to; RBC DISORDERS-II Describe the components of Blood and its Functions -Define & Classify anemia -Explain the pathogenesis of Iron Deficiency Anemia, Macrocytic Anemia, G6PD Deficiency At the end of this Practical First Year M.B.B.S. student will be able to; Hb ESTIMATION	Physiology	120 minutes	Dr M. Rizwan Dr M.Ali	Practical	Physio lab, 1 <sup>st</sup> floor, Block-A
At the end of this fecture First YearM.B.B.S. student will be able to;RBC DISORDERS-IIDescribe the components of Blood and itsFunctions-Define & Classify anemia-Explain the pathogenesis of Iron DeficiencyAnemia, Macrocytic Anemia, G6PDDeficiencyAt the end of this Practical First YearM.B.B.S. student will be able to;Hb ESTIMATION-Discus the functions of Hb	Pathology Physiology	120 minutes	Dr M. Rizwan	Practical	Physio lab, 1 <sup>st</sup> floor, Block-A

![](_page_24_Picture_0.jpeg)

![](_page_24_Picture_1.jpeg)

<ul> <li>-Identify the parts &amp; principle of Sahlis hemocytometer</li> <li>-Demonstrate the method of Hb estimation</li> <li>-Determine the value of H</li> </ul>					
At the end of this lecture First Year M.B.B.S. student will be able to; ANEMIAS:	Physiology	60 minutes	Dr Saba Leeza	Lecture	Lecture hall – 1, Ground floor, Block- A
-Define anemia -List the types of anemias -List the causes of each type -Explain the effects of anemias on circulatory system functions					
At the end of this lecture First Year M.B.B.S. student will be able to; ANEMIAS I -Define anemia and distinguish various different causes of anemia. -Review clinical signs to identify anemia in patient.	Medicine	60 minutes	Dr. Masooda Fatima	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; ANEMIAS II -Describe lab test to identify various types of anemia. -Recite Treatment options for various causes of Anemia.	Medicine	60 minutes	Dr. Masooda Fatima	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_25_Picture_0.jpeg)

![](_page_25_Picture_1.jpeg)

At the end of this lecture First Year	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1, Ground floor Block-
POLYCYTHEMIA:					A
-Define polycythemia					
-List the different types of polycythemia					
-Explain the effects of polycythemias on					
circulatory system functions					
At the end of this lecture First Year	Pharmacolog	60 minutes	Dr Hina	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;	y				Ground floor, Block-
OVERVIEW OF PHARMACOLOGY OF					A
ANEMIA					
-Describe the physiology of anemia.					
-Discuss the pathophysiology of anemia.					
-Explain and understand the mechanistic					
pharmacology of anemia.					
At the end of this lecture First Year	Anatomy	60 minutes	Dr Saba	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;			Akram		Ground floor, Block-
GROSS ANATOMY OF SPLEEN:					A
-Identify the location, structure and					
anatomical relation of the spleen					
-Discuss the blood supply and nerve supply of					
the spleen					
At the end of this lecture First Year	Anatomy	60 minutes	Dr Tayyaba	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
EMBRYOLOGY OF SPLEEN					A
-Describe the development of spleen.					

![](_page_26_Picture_0.jpeg)

![](_page_26_Picture_1.jpeg)

-Development of fore gut, mid gut and hind					
gut.					
At the end of this Practical First Year M.B.B.S. student will be able to; HISTOLOGY OF SPLEEN -Identify the location, structure and anatomical relation of the spleen -Discuss the histological features of the spleen.	Anatomy	120minutes	Dr Aneela	Practical	Histo lab, 1 <sup>st</sup> floor, Block-A
At the end of this lecture First Year M.B.B.S. student will be able to; HISTOLOGGY OF LYMPH NODES	Anatomy	60 minutes	Dr. Inayat	Lecture	Histo lab, 1 <sup>st</sup> floor, Block-A
<ul> <li>Identify the structure, function of lymph nodes.</li> <li>Identify the histological appearance &amp; features of lymph nodes</li> </ul>					
At the end of this lecture First Year M.B.B.S. student will be able to; WBCs: -Identify WBC count or total leucocyte count. -Describe the functions WBCs -List the different types of WBCs -List the concentration of different types of WBCs -List the life span of different types of WBCs -Explain the different stages of Leukopoesis.	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_27_Picture_0.jpeg)

![](_page_27_Picture_1.jpeg)

At the end of this lecture First Year M.B.B.S. student will be able to; EOSINOPHILS: -Explain the role of eosinophils against parasites -Explain the role of eosinophils in allergies.	Physiology	60 minutes	Dr Saba Leeza	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; BASOPHILS: -List the substances secreted by basophils -Explain the role of basophils in allergic reactions.	Physiology	60 minutes	Dr Saba Leeza	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; RETICULOENDOTHELIAL SYSTEM: -Define the reticuloendothelial system -List the types of macrophages -Identify the role of macrophages (histiocytes) in subcutaneous tissues lymph nodes -Explain the functions of macrophages in the lungs -Explain the functions of macrophages in the liver spleen and bone marrow	Physiology	120 minutes	Dr M.Ali	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; STEPS OF INFLAMMATION: -Explain margination	Physiology	60 minutes	Dr Qamer Aziz	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_28_Picture_0.jpeg)

![](_page_28_Picture_1.jpeg)

-Define diapedesis					
-Define the ameboid motion of neutrophils					
-Explain chemotaxis					
-Identify the Walling-off effect of					
inflammation					
-Define the characteristics of inflammation					
-Name the tissue factors of inflammation					
PHAGOCYTOSIS:	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1,
-Define phagocytosis					Ground floor, Block-
					•
-Explain phagocytosis by neutrophils					A
-Explain phagocytosis by neutrophils -Explain phagocytosis by macrophages					A
-Explain phagocytosis by neutrophils -Explain phagocytosis by macrophages -Explain the killing of bacteria by					A
-Explain phagocytosis by neutrophils -Explain phagocytosis by macrophages -Explain the killing of bacteria by macrophages and neutrophils					A

![](_page_29_Picture_0.jpeg)

![](_page_29_Picture_1.jpeg)

At the end of this lecture First Year	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;	• •				Ground floor, Block-
FUNCTION OF MACROPHAGES IN					А
INFLAMMATION					
-Explain histiocytes providing first-line					
defense against infection					
-Discuss the role of neutrophils as a second-					
line defense in inflammation					
-Define neutrophilia					
-Explain the role of macrophages in 3 <sup>rd</sup> line					
defense					
-Explain the increased production of					
granulocytes and monocytes helping provide					
4 <sup>th</sup> line of defense.					
-Explain pus formation.					
At the end of this lecture First Year	Anatomy	60 minutes	Dr Tayyaba	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
INTRODUCTION TO LYMPHOID					A
TISSUE AND IMMUNE SYSTEM					
-Describe the immune system and lymphoid					
tissue.					
-Differentiate between central lymphoid					
organs and peripheral lymphoid organs.					
-Identify the structure and function of lymph					
nodes.					
-Identify the histological appearance &					
features of lymph nodes					

![](_page_30_Picture_0.jpeg)

![](_page_30_Picture_1.jpeg)

At the end of this lecture First Year M.B.B.S. student will be able to; HISTOLOGY LYMPHOID TISSUE -Describe the immune system and lymphoid tissue. -Differentiate between central lymphoid organs and peripheral lymphoid organs. -Identify the structure and function of lymph nodes. -Identify the histological appearance & features of lymph nodes	Anatomy	60 minutes	Dr Inayat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; HISTOLOGGY OF LYMPH NODES -Identify the structure, function of lymph nodes. -Identify the histological appearance & features of lymph nodes	Anatomy	60 minutes	Dr. Inayat	Lecture	Histo lab, 1 <sup>st</sup> floor, Block-A
At the end of this lecture First Year M.B.B.S. student will be able to; THYMUS -Identify the structure, function of thymus. -Identify the histological appearance & features of thymus	Anatomy	60 minutes	Dr Tayyaba	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_31_Picture_0.jpeg)

![](_page_31_Picture_1.jpeg)

At the end of this lecture First Year M.B.B.S. student will be able to; TONSIL -Identify the structure, function of tonsil -Identify the histological appearance & features of tonsil	Anatomy	120 minutes	Dr Aneela	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; ISLAMIAT Describe the concepts of Quran Explain in detail the verses of Surah Hijrat(Verses of Surah Al-Hujurat Related to Adab Al-Nabi (Verse No. 1-18)).	Islamiat	60 minutes	Mr Amir	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; WBC DISORDERS -Describe Quantitative & Qualitative Disorders and their related Terminologies. Describe WBC Cancer Terminologies & Types	Pathology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; LEUKOPENIA & LEUKEMIAS: -Define leukopenia -Define leukemia -Explain brieflythe effect of leukemia on the body.	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_32_Picture_0.jpeg)

![](_page_32_Picture_1.jpeg)

At the end of this lecture First Year M.B.B.S. student will be able to; LEUKEMIAS 1 -Describe various types of Leukemia. -Associate various clinical presentations of leukemia	Medicine	90 minutes	Dr. Masooda Fatima	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; LEUKEMIAS II -Demonstrate possible treatment options advisable for leukemia. -Summarize multiple clinical signs and symptoms of Leukemia	Medicine	60 minutes	Dr. Masooda Fatima	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this Practical First Year M.B.B.S. student will be able to; HEAT COAGULATION TEST -Identify coagulable and non-coagulable proteins -Detect the presence of coagulable protein in the given sample by heat coagulation test - Describe the principle of the reaction taking place in the equipment	Biochemistry	120 minutes	Dr Farhan	Practical	Biohem Lab, 1 <sup>st</sup> floor, Block-A

![](_page_33_Picture_0.jpeg)

![](_page_33_Picture_1.jpeg)

At the end of this lecture First Year M.B.B.S. student will be able to; IMMUNOGLOBULINS-I -Define immunoglobulin -Classify immunoglobulin -Identify the site of synthesis of Igs -Define antigen -Differentiate between humoural immunity and cell-mediated immunity. -Enumerate the functions of each class of immunoglobulins	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; BLOOD AND PUBLIC HEALTH -Discuss the blood related disorders -Explain the preventive strategies to reduce the illness and disability related to blood disorders	Community Medicine	60 minutes	Dr. Muneer Ahmed	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this Practical First Year M.B.B.S. student will be able to; WBC COUNT -Discuss WBCs functions & types -Discuss specific ruling area for WBCs count -Demonstrate the method of WBCs estimation by hemocytometer	Physiology	120 minutes	Dr M.Ali	Practical	Physio lab, 1 <sup>st</sup> floor, Block A

![](_page_34_Picture_0.jpeg)

![](_page_34_Picture_1.jpeg)

-Demonstrate the steps to measure WBCs in					
neubar's chamber					
-					
Practice the slide focus for Neubar's chamber					
-Calculate the number of WBCs					
At the end of this lecture First Year	Biochemistry	60 minutes	Dr Iffat	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
IMMUNOGLOBULINS-II:					А
-Identify the difference between serum IgA					
and non-vascular IgA in secretions					
-Describe the function of the 'secretory					
component' T-piece in antibodies					
-Illustrate the structure of immunoglobulin					
At the end of this lecture First Year	Physiology	60 minutes	Prof Dr	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;			Qamer Aziz		Ground floor, Block-
IMMUNITY AND ITS TYPES:					А
-Define immunity					
-List the types of immunity					
-Define antigen					
-Define antibody					
-Identify the plasma cells					
-Explain the pre-processing of B-cell & T-cell					
-Explain innate immunity					

![](_page_35_Picture_0.jpeg)

![](_page_35_Picture_1.jpeg)

T-CELL / CELL-MEDIATED	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1,
IMMUNITY:					Ground floor, Block-
-Identify the different types of T-cells					A
-Explain the regulatory functions of					
lymphokines.					
-Describe Helper T-cell immunity					
-Explain Cytotoxic T-cell immunity					
-Define immune tolerance.					
Define autoimmunity.					
At the end of this Practical First Year	Anatomy	120 minutes	Dr Aneela	Practical	Hissto lab, 1 <sup>st</sup> floor,
M.B.B.S. student will be able to;					Block A
HISTOLOGY OF THYMUS					
-Identify the histological appearance &					
features of thymus					
At the end of this lecture First Year	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
HUMORAL / B-CELL IMMUNTY:					A
-Describe humoral immunity					
-List the different types of antibodies					
-Describe the formation of antibodies by					
plasma cells					
-Describe the role of antibodies in immunity					
-Explain the role of memory cells in					
enhancing antibody response-primary and					
secondary response.					
-Explain the direct action of antibodies.					

![](_page_36_Picture_0.jpeg)

![](_page_36_Picture_1.jpeg)

-Explain the complement system enhancing					
effect of antibodies.					
At the end of this lecture First Year	Physiology	60 minutes	Prof Dr	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;			Qamer Aziz		Ground floor, Block-
ALLERGIES AND					A
HYPERSENSITIVITY:					
-Discuss the delayed reaction allergy					
-Explain atopic allergies, i.e anaphylaxis,					
urticarial, hay fever, asthma					
At the end of this lecture First Year	Physiology	120 minutes	Dr Saba	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;			Abrar		Ground floor, Block-
IMMUNIZATION:					Α
-Explain the active and passive immunization.					
At the end of this lecture First Year	Research	60 minutes	Ms Maria	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;			Raheem		Ground floor, Block-
CATEGORIES AND TYPES OF					А
RESEARCH					
-Explain the categories of research					
- Define the types of research					

![](_page_37_Picture_0.jpeg)

![](_page_37_Picture_1.jpeg)

At the end of this lecture First Year M.B.B.S. student will be able to; ABO-B BLOOD TYPES-I -Define ABO blood group system -Tabulate Nature of OAB system antigens -Define the Terms "Agglutinogen", "Agglutinins" & "Agglutination". -Identify Titer of agglutinins at different age groups	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; OVERVIEW OF PHARMACOLOGY OF ANEMIA -Recall the physiology of anemia. -Discuss the pathophysiology of anemia. -Explain and understand the mechanistic pharmacology of anemia.	Pharma	60 minutes	Dr Hina	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; ABO-B BLOOD TYPES-II -Explain Allele or genotype & 4 blood groups & Concept of phenotype -Explain the features of mismatched blood grouping -Explain the importance of blood grouping -List the minor blood groups.	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1, Ground floor, Block- A

![](_page_38_Picture_0.jpeg)

![](_page_38_Picture_1.jpeg)

-List the frequencies of different blood					
groups. At the end of this lecture First Veer	Dhysiology	60 minutos	Dr Salaam	Locturo	Lecture hall _ 1
M.B.B.S. student will be able to; RH SYSTEM IN BLOOD GROUPING-I:	rnysiology	00 minutes	ullah	Lecture	Ground floor, Block- A
<ul> <li>-Identify the importance of D-Antigen.</li> <li>-List the types of Rh Antigen.</li> <li>-Explain the importance of Rh system in blood transfusion.</li> <li>-Discuss the transfusion reactions due to mismatch transfusion.</li> </ul>					
mismatch transfusions.	Dhysiology	60 minutos	Dr Salaam	Lastura	Lecture hall 1
At the end of this lecture First Year M.B.B.S. student will be able to; RH SYSTEM IN BLOOD GROUPING-II: -Explain erythroblastosisfetalis -Summarize the prevention and treatment of erthyroblastosisfetalis	Physiology	60 minutes	ullah	Lecture	Ground floor, Block-
At the end of this lecture First Year M.B.B.S. student will be able to; SKILL TEST -Discuss different test taking skills	Pearls	60 minutes	Dr Mariam Ibrahim	Lecture	Lecture hall – 1, Ground floor, Block- A
At the end of this lecture First Year M.B.B.S. student will be able to; HISTOLOGY OF TONSIL -Identify the structure, function of tonsil	Anatomy	60 minutes	Dr Inayat	Lecture	Histo Lab, 1 <sup>st</sup> floor, Block-A

![](_page_39_Picture_0.jpeg)

![](_page_39_Picture_1.jpeg)

-Identify the histological appearance &					
features of tonsil					
At the end of this Practical First Year	Biochemistry	120 minutes	Dr Farhan	Practical	Biohem Lab,
M.B.B.S. student will be able to;					1 <sup>st</sup> floor, Block-A
SATURATION TEST					
-Detect the presence of albumin and globulin					
in the given sample of experiment					
-Name the reagent to be used in the					
experiment.					
-Describe the principle of the reaction taking					
place in the experiment					
-Record the observation of the sample and					
control in the experiment.					
-Detect the presence of the globulin by full					
saturation test.					
At the end of this Practical First Year	Physiology	120 minutes	Dr M.Ali	Practical	Physio Lab,
M.B.B.S. student will be able to;					1 <sup>st</sup> floor, Block-A
BLOOD GROUPING & B.T&C. T					
-Describe the principle of respective practical					
-Identify the apparatus & reagents used					
-List the precautions					
-Prepare the tile for blood grouping					
-Detect the blood group					
-Demonstrate the Duke's method of the given					
practical					
-Define bleeding time					

![](_page_40_Picture_0.jpeg)

![](_page_40_Picture_1.jpeg)

-Estimate the time of bleeding of the given subject					
At the end of this lecture First Year	Biochemistry	60 minutes	Dr Farhan	Lecture	Lecture hall $-1$ ,
M.B.B.S. student will be able to; VITAMIN F AND K.					Ground floor, Block-
List the different forms of vitemin E that					
occur în nature.					
-Identify the antioxidant property of vitamin E					
-Outline the clinical features of vitamin E					
deficiency.					
-List the different forms of vitamin K					
-Identify the dietary sources and daily					
requirements of vitamin K					
-Explain the various functions of vitamin K					
specially in coagulation process and its					
deficiencies					

![](_page_41_Picture_0.jpeg)

![](_page_41_Picture_1.jpeg)

At the end of this lecture First Year	Physiology	60 minutes	Dr M.Ali	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to:	i di				Ground floor, Block-
HEMOSTASIS					А
-Define the Term "Hemostasis".					
-List & Define the Steps of Hemostasis.					
-Define thrombopoesis.					
-Explain the functions of platelets in					
hemostasis.					
-Name bleeding disorders.					
-Identify the life span and normal platelet					
count.					
-Categorize Clotting Pathways & Explain the					
Process of Blood Clotting.					
-Mention the Abnormalities of -Increasing or					
Decreasing Levels of Platelets.					
At the end of this lecture First Year	Physiology	60 minutes	Dr Sobia	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					Ground floor, Block-
COAGULATION:					A
-Enlist the clotting factors.					
-Identify clotting pathways					
-Explain extrinsic clotting mechanism-clotting					
cascade					
-Discuss intrinsic clotting mechanism-clotting					
cascade					
-Explain the role of calcium in clotting.					
At the end of this lecture First Year	Pharmacolog	60 minutes	Dr Hina	Lecture	Lecture hall $-1$ ,
M.B.B.S. student will be able to;	У				

![](_page_42_Picture_0.jpeg)

![](_page_42_Picture_1.jpeg)

<b>OVERVIEW OF PHARMACOLOGY OF</b>					Ground floor, Block-
<b>BLOOD COAGULATION DISEASE.</b>					А
-Recall the physiology of blood coagulation					
diseaseDiscuss the					
pathophysiology of blood coagulation disease.					
-Explain and understand the mechanistic					
pharmacology of blood coagulation disease					
HAEMATOLOGICAL CHANGES	Gynecology	60 minutes	Dr Nikhat	Lecture	Lecture hall – 1,
DURING PREGNANCY					Ground floor, Block-
-Discuss the haemodynamic changes during					A
pregnancy.					
-Explain the cause of physiological anemia in					
pregnancy.					
-Describe the cause of acute weight gain in					
pregnancy.					
At the end of this lecture First Year	Medicine	60 minutes	Dr. Masooda	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;			Fatima		Ground floor, Block-
CLOTTING DISORDER I					А
-Identify clotting factors and their various					
types.					
-Describe extrinsic and intrinsic pathology for					
clot formation					
-Recall signs and symptoms of clotting					
disorder					
-Memorize investigations required to diagnose					
the specific clotting disorder					

![](_page_43_Picture_0.jpeg)

![](_page_43_Picture_1.jpeg)

At the end of this lecture First Year	Physiology	60 minutes	Dr Saba	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;			Abrar		Ground floor, Block-
THROMBOEMBOLIC CONDITIONS:					А
-Define thrombosis.					
-List the causes of thromboembolic conditions					
-Identify disseminated intravascular condition.					
-Name anticoagulants in clinical use.					
PLATELET & COAGULATION	Pathology	60 minutes	Dr Rozina	Lecture	Lecture hall – 1,
FACTOR DISORDERS					Ground floor, Block-
-Classify Platelet Disorders					А
-Classify Coagulation Disorders					
-Describe Hemophilia					
LYSIS OF BLOOD CLOTS:	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1,
-Discuss the activation of plasminogen in clot					Ground floor, Block-
lysis.					А
-Describe hemophilia					
-Summarize the clotting disorders caused by					
vitamin-K deficiency.					
<b>CLOTTING DISORDER II</b>	Medicine	60 minutes	Dr. Masooda	Lecture	Lecture hall – 1,
-Identify clotting factors and their various			Fatima		Ground floor, Block-
types.					А
-Describe extrinsic and intrinsic pathology for					
clot formation					
-Recall signs and symptoms of clotting					
disorder					
-Memorize investigations required to diagnose					
the specific clotting disorder					

![](_page_44_Picture_0.jpeg)

![](_page_44_Picture_1.jpeg)

At the end of this lecture First Year	Physiology	60 minutes	Prof Dr	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;			Qamer Aziz		Ground floor, Block-
ANTI-COAGULANTS:					А
-Explain the role of intravascular					
anticoagulants.					
-Describe the antithrombin action of fibrin					
-Explain the actions of antithrombin-III					
-Discuss the role of heparin					
At the end of this lecture First Year	Physiology	60 minutes	Dr Adnan	Lecture	Lecture hall – 1,
M.B.B.S. student will be able to;					
O-A-B BLOOD TYPES-III					
-List the ABO blood groups					
-Name the antigens, which determine ABO					
blood groups.					
-Name the antibodies present in ABO groups.					
-Tabulate the respective antigens and					
antibodies in each group.					
THROMBOCYTOPENIA	Medicine	60 minutes	Dr Masooda	Lecture	Ground floor, Block-
-Identify definition of thrombocytopenia and					A
describe its various causes -Recognize clinical					
signs of severe thrombocytopenia.					
-Discuss multiple options required for					
treatment of severe thrombocytopenia.					

![](_page_45_Picture_0.jpeg)

![](_page_45_Picture_1.jpeg)

TENTATIVE

TIME TABLES

FOR

**BLOOD MODULE** 

1<sup>ST</sup> YEAR MBBS

**SESSION 2024-2025** 

![](_page_46_Picture_0.jpeg)

![](_page_46_Picture_1.jpeg)

\*PLEASE NOTE: THESE ARE TENTATIVE TIME TABLES, SUBJECTED TO MINOR CHANGES

Week 1 (28.5.2024 - 31.5.2024)

![](_page_47_Picture_0.jpeg)

![](_page_47_Picture_1.jpeg)

DAYS	8:30-9:30	9:30-10:30	10:30- 11:00	11:00-12:00	12:00-1:00	1:00- 1:30	1:30-2:00	2:00-4:00
MONDAY 27-05-2024	MSK MODU	LE EXAM		MSK MODULE EX	AM		MSK MO	DULE EXAM
TUESDAY 28-05-2024	EMBRYO development of blood cells DR TAYYABA	ISLAMIAT		EMBRYO Hematogenesis DR TAYYABA	PHYSIO Introduction of red blood cells Dr Adnan		SDL	PRACTICAL: BIO:PROTEIN SCHEME(DEMO)DR FARHAN HISTO :SPLEEN DR ANEELA PHYSIO:RBC COUNT DR M.ALI
WEDNESD AY 29-05-2024	EMBRYO SPLEEN DR TAYYABA	PHYSIO Erythropoiesis Dr M.ALI	TEA BREAK	ANATOMY Gross of spleen Dr SABA	PHYSIO Factors regulating erythropoiesis: DR M.ALI	LUNCH AND PR	SDL	PRACTICAL: BIO:PROTEIN SCHEME(DEMO)DR FARHAN HISTO :SPLEEN DR ANEELA PHYSIO:RBC COUNT DR M.ALI
THURSDA Y 30-05-2024	HISTO SPLEEN DR INAYAT	BIO-CHEM Metabolism of haemopoetic vitamins DR IFFAT		PRACTICAL: BIO:PROTEIN SCHEM DR FARHAN HISTO :SPLEEN DR A PHYSIO:RBC COUNT	E(DEMO) NEELA DR M.ALI	AYERS	SDL	ANATOMY SGT Spleen model DR ANEELA/DR AYESHA
FRIDAY 31-05-2024	PHYSIO Maturation of RBC by B12 and folic acid DR IFFAT	BIO CHEM Metabolism of copper DR FARHAN		BIO-CHEM Biosynthesis of porphyrins DR IFFAT	<b>PHYSIO</b> Plasma DR ADNAN		SDL	BIO-CHEM Metabolism of iron DR FARHAN

Week 2 (1.7.2024 - 5.7.2024)

![](_page_48_Picture_0.jpeg)

![](_page_48_Picture_1.jpeg)

DAYS	8:30-9:30	9:30-10:30	10:30-	11:00-12:00	12:00-1:00	1:00- 1:30	1:30-2:00	2:00-4:00
MONDAY 1-07-2024	BIO-CHEM Porphyrias DR IFFAT	BIO-CHEM Hemoglobin DR IFFAT	H	PHYSIO Functions of hemoglobin PROF DR QAMER AZIZ	PHYSIO Anemias DR SABA LEEZA		SDL	PRACTICAL: BIO: BIURET TEST DR FARHAN HISTO :Histology of lymph node DR ANEELA PHYSIO: Hb ESTIMATION DR M.ALI
TUESDAY 2-07-2024	BIO-CHEM Plasma proteins DR IFFAT	ISLAMIAT	EA BREAK	MEDICINE Anemias I	MEDICINE Anemias II	LU	BIOCHEM Globulins DR IFFAT	PRACTICAL: BIO: BIURET TEST DR FARHAN HISTO : Histology of lymph node DRANEELA PHYSIO: Hb ESTIMATION DR M.ALI
WEDNESDAY 3-07-2024	PHYSIO Polycythemia DR ADNAN	<b>PATHO</b> RBC disorders I Dr Munazza Rashid		PHARMA Overview of pharmacology of anemia	PATHO RBC disorders II Dr Maeesa Sajeel	NCH AND PR	SDL	PRACTICAL: BIO: BIURET TEST DR FARHAN HISTO:Histology of lymph node DRANEELA PHYSIO: Hb ESTIMATION DR M.ALI
THURSDAY 4-07-2024	BIOCHEM Degradation of Heme DR IFFAT	SDL		CBL		AYERS	BIOCHEM Jaundice and classification of jaundice DR IFFAT	PHYSIO Reticuloendothelial system DR M.ALI
FRIDAY 5-07-2024	BIO LIVER FUNCTION TEST DR FARHAN	ANATOMY DEVELOPMENT OF THYMUS DR TAYYABA		PHYSIO BASOPHILS DR SABA LEEZA	PHYSIO Steps of Inflammation PROF.DR QAMER AZIZ		SDL	ANATOMY Introduction to lymphoid tissue and immune system DR HINA

![](_page_49_Picture_0.jpeg)

![](_page_49_Picture_1.jpeg)

Week 3 (8.7.2024 - 12.7.2024)

![](_page_50_Picture_0.jpeg)

![](_page_50_Picture_1.jpeg)

DAYS	8:30-9:30	9:30-10:30	10:30 - 11:00	11:00-12:00	12:00-1:00	1:00- 1:30	1:30-2:00	2:00-4:00
MONDAY 8-07-2024	ANATOMY TONSIL DR ANEELA	HISTOLOGY OF THYMUS AND TONSIL DR INAYAT		PHYSIO Function of macrophages in inflammation DR ADNAN	HISTOLOGY LYMPHOID TISSUE DR INAYAT		SDL	PRACTICAL: BIO: HEAT COAGULATION TEST DR FARHAN HISTO : Histology of thymus DR ANEELA PHYSIO: WBC COUNT DR M.ALI
TUESDAY 9-07-2024	PHYSIO Phagocytosis DR M.ALI	ISLAMIAT		PATHO WBC disorders Dr M. Rizwan	PHYSIO LEUKOPENIA & LEUKEMIAS DR SABA LEEZA	L	SDL	PRACTICAL: BIO: HEAT COAGULATION TEST DR FARHAN HISTO : Histology of thymus DR ANEELA PHYSIO: WBC COUNT DR M.ALI
WEDNESD AY 10-07-2024	PHYSIO IMMUNITY AND ITS TYPES PROF DR QAMER AZIZ	MEDICINE LEUKEMIAS	TEA BREAK	RESEARCH	PHYSIO T-CELL / CELL- MEDIATED IMMUNITY DR M.ALI	JNCH AND PRAY	SDL	PRACTICAL: BIO: HEAT COAGULATION TEST DR FARHAN HISTO : Histology of thymus DR ANEELA PHYSIO: WBC COUNT DR M.ALI
THURSDA Y 11-07-2024	BIOCHEM IMMUNOGLOBULINS- I DR IFFAT	PHYSIO HUMORAL / B- CELL IMMUNTY DR ADNAN		BIOCHEM IMMUNOGLOBULINS-II DR IFFAT	PHYSIO ALLERGIES AND HYPERSENSITIVITY PROF DR QAMER AZIZ	TERS	SDL	PHYSIO IMMUNIZATION DR SABA ABRAR
FRIDAY 12-07-2024	PHYSIO O-A-B BLOOD TYPES-I DR M.ALI	PHYSIO O-A-B BLOOD TYPES-II DR ADNAN		ANATOMY LRC DR ANEELA/DR HINA/DR AYESHA	BIOCHEM VITAMIN E AND K Dr Farhan		SDL	PHYSIO RH SYSTEM IN BLOOD GROUPING-I &II DR SALEEMULLAH

![](_page_51_Picture_0.jpeg)

![](_page_51_Picture_1.jpeg)

Week 4 (15.7.2024 - 19.7.2024)

![](_page_52_Picture_0.jpeg)

![](_page_52_Picture_1.jpeg)

DAYS	8:30-9:30	9:30-10:30	10:30- 11:00	11:00-12:00	12:00-1:00	1:00- 1:30	1:30-2:00	2:00-4:00
MONDAY 15-07-2024	PHYSIO HEMOSTASIS DR M.ALI	PEARLS		PHARMA Overview of pharmacology of blood coagulation disease	GYNAE		SDL	PRACTICAL: BIO: SATURATION TEST DR FARHAN HISTO : Histology of tonsils DR ANEELA PHYSIO: B.T&C.T DR M.ALI
TUESDAY 16-07-2024	PHYSIO COAGULATION DR SOBIA	ISLAMIAT	TEA	MEDICINE Clotting disorder I	EMBRYO ANAMOLIES DR TAYYABA	LUNC	SDL	PRACTICAL: BIO: SATURATION TEST DR FARHAN HISTO : Histology of tonsils DR ANEELA PHYSIO: B.T&C.T DR M.ALI
WEDNESDAY 17-07-2024	PHYSIO THROMBOEMBOLIC CONDITIONS DR SABA ABRAR	SDL	BREAK	CI	BL	H AND PRAYEJ	SDL	PRACTICAL: BIO: SATURATION TEST DR FARHAN HISTO : Histology of tonsils DR ANEELA PHYSIO: B.T&C.T DR M.ALI
THURSDAY 18-07-2024	PATHO DISORDER OF PLATELETS Dr Rozina Khan	PHYSIO LYSIS OF BLOOD CLOTS DR ADNAN		MEDICINE Clotting disorder II	PHYSIO ANTI-COAGULANTS PROF DR QAMER AZIZ	8	SDL	FORMATIVE ASSESSMENT
FRIDAY 19-07-2024	BIOCH REVIEW DR IFF	EM CLASS 'AT		ANAT REVIEV DR ANEELA/DR H	TOMY V CLASS HINA/DR AYESHA		SDL	PHYSIOLOGY REVIEW CLASS
MONDAY 22.7.2024	BLOOD MOD	JLE EXAM		BLOOD MO	DULE EXAM			BLOOD MODULE EXAM

![](_page_53_Picture_0.jpeg)

![](_page_53_Picture_1.jpeg)

#### **REFERENCE BOOKS AND OTHER READING RESOURCES:**

Gross Anatomy	<ul> <li>BD Chaurasia's Handbook of GENERAL ANATOMY</li> <li>NetterAtlas of Human Anatomy</li> </ul>
Embryology	Langman's Embryology
Histology	Laiq Hussain Histology
Physiology	<ul> <li>Guyton and Hall. Textbook of Medical Physiology, 13<sup>th</sup> Edition.</li> <li>Ganong's Review of Medical Physiology, 24th Edition.</li> </ul>
Biochemistry	<ul> <li>Lippincott's Illustrated Reviews: Biochemistry</li> <li>Text book of Medical Biochemistry M.N.Chatterjee and Rana shinde</li> </ul>
Pathology	• <b>Robin`sBasicPathology</b> -10 <sup>th</sup> Edition
Pharmacology	<ul> <li>Essential</li> <li>Bertram G. Katzung. Basic and Clinical Pharmacology, 14<sup>th</sup> Edition. 2017.</li> <li>Katzung and Trevor's pharmacology Examination and Board Review 11<sup>th</sup> Edition 2015.</li> <li>Recommended</li> <li>Linnincott's illustrated review of Pharmacology 6<sup>th</sup> Edition. 2015.</li> </ul>
Islamiat	<ul> <li>Hameed ullah Muhammad, "Emergence of Islam", IRI, Islamabad, "Muslim Conduct of State" and "Introduction to Islam".</li> <li>Hussain Hamid Hassan, "An Introduction to the Study of Islamic Law" leaf Publication Islamabad, Pakistan.</li> </ul>

![](_page_54_Picture_0.jpeg)

![](_page_54_Picture_1.jpeg)

	Abdul QayyumNatiq, "Sirat-E-Mustaqim.
	Farkhanda Noor Muhammad, "Islamiat".
	Dr. Muhammad Zia-ul-Haq, "Introduction to Al Sharia Al Islamia" Allama Iqbal Open University, Islamabad (2001).
Community Medicine	<ul> <li>Ilyas M, Public Health and Community Medicine, 7<sup>th</sup> Edition, Karachi, Pakistan, Time Publisher, 2007.</li> </ul>
	• Maxcy-Rosenau-Last, public Health and Preventive Medicine, 13 <sup>th</sup> Edition, USA, Prentice-Hall International Inc, 1992.
	• K.Park, Preventive and Social Medicine, 20 <sup>th</sup> Edition, Jabalpur (India), M/s Banarsidas Bhanot, Publisher, 2009.
Medicine	Davidson's Principles and Practice of Medicine-22 <sup>nd</sup> Edition
Clinical Examination	Talley and O'Connor's Clinical Examination-6 <sup>th</sup> Edition
Surgery	Bailey and Love Short Practice Of Surgery, 27 <sup>th</sup> Edition
	• Last's anatomy 12 <sup>th</sup> edition
	• Snell's anatomy by regions 10 <sup>th</sup> edition
Research	• Introduction to Research in Health Sciences- Stephen Polgar, Shane A. Thomas.
	• Biomedical Research Proposal Writing- Syed Sharaf Ali Shah, Zarfshan Tahir, RozinaKarmaliani.
	• Epidemiology - Leon Gordis; Fifth Edition.
PEARLs	<u>https://www.mededportal.org/publication/10610/</u>
PAEDS	• Nelson Textbook of Pediatric 21 <sup>st</sup> edition.

![](_page_55_Picture_0.jpeg)

![](_page_55_Picture_1.jpeg)

٠	Textbook of Paediatrics (PPA) Fifth edition.
	Basis of Pediatrics (Pervez Akbar Khan) 10 <sup>th</sup> edition

#### **ASSESSMENT METHODS:**

#### **THEORY:**

**EssayQuestions- Short Essay Questions (SEQs)** are used to assess objectives covered in each module.

- 6 SEQs are given (no choice).
- Time duration 90 minutes.
- Students write their answer in an answer sheet.

\* Multiple Choice Questions (MCQs) are used to assess objectives covered in each module.

- A MCQ has a statement or clinical scenario followed by four options (
- Students after reading the statement/scenario select ONE, the most appropriate response from the given list of options.
- Correct answer carries one mark, and incorrect 'zero mark'. There is no negative marking.
- Students mark their responses on specified computer-based/OMR sheet designed for BMC, BMU.

#### **\***OSPE/OSCE: Objective Structured Practical/Clinical Examination:

- Each student will be assessed on the same content and have same time to complete the task.
- Comprise of 12-25 stations.
- Each station may assess a variety of clinical tasks; these tasks may include history taking, physical examination, skills and application of skills and knowledge.
- Stations are observed, unobserved, interactive and rest stations.
- Observed and interactive stations will be assessed by internal or external examiners.

![](_page_56_Picture_0.jpeg)

![](_page_56_Picture_1.jpeg)

- Un observed will be static stations in which there may be an X-ray, Labs reports, pictures, clinical scenarios, with related questions for students to answer.
- Rest station is a station where there is no task given and in this time student can organize his/her thoughts.

#### **INTERNAL EVALUATION:**

- Students will be assessed to determine achievement of module objectives through the following:
- Module Examination: will be scheduled on completion of each module. The method of examination comprises theory exam which includes MCQs and OSPE (Objective Structured Practical Examination)
- Formative Assessment of Students: Quiz,viva,practical,assignment,small group activites such as CBL,online assessment and practical journal work.
- Marks of both modular examination and graded assessment will constitute 20% weightage which will be added to Annual Examination.

#### FORMATIVE ASSESSMENT:

- Individual department may hold quiz or short answer questions to help students assess their own learning.
- The marks obtained are not included in the internal evaluation.

![](_page_56_Picture_13.jpeg)