BAHAWALPUR MEDICAL COLLEGE
(BMC) BAHAWALPUR

STUDY GUIDE
FIRST YEAR MBBS
CURRICULUM 2K23
BLOCK-1
CELL
HEAMOPOITIC & LYMPHATICS
2023-2027

BAHAWALPUR MEDICAL COLLEGE

TABLE OF CONTENTS

LIST OF ABBREVIATIONS	
A	Anatomy
Ag	Aging
B	Biochemistry
BhS	Behavioral Science
C	Civics
CM	Community Medicine
C-FRC	Clinical-Foundation, Rotation, Clerkship
CVS	Cardio Vascular System
CBL	Case Based Learning
ENT	Ear Nose & Throat
F	Foundation
FM	Forensic Medicine
GO	Gynecology & Obstetrics
HL	Hemopoitic & Lymphatics
LGIS	Large Group Interactive Session
M	Medicine
MS	Musculoskeletal
O	Opthamology
P	Physiology
Pa	Pathology
Pe	Pediatrics
PBL	Problem Based Learning
PERLs	Professionalism, Ethics, Research and Leadership skills.
Ph	Pharmacology
Psy	Psychology
QI	Quran & Islamiat
R	Radiology
Re	Respiratory
SDL	Self-Directed Learning
TBL	Team Based Learning
S	Surgery
UHS	University of Health Sciences

VISION STATEMENT

"UHS is a leading University aiming to keep its graduates apt with ever emerging global health challenges, evolving educational methodologies and emerging technological advancement to maintain its distinguishable position as Medical University."

MISSION STATEMENT

"BMC is committed to produce humane healthcare professionals having empathy, high ethical values, technological standards and core competencies in patient management and research to cater the healthcare need of community."

1. OUTCOME OF MBBS PROGRAM

By the end of the five year the MBBS programs **BAHAWALPUR MEDICAL COLLEGE** (aims to produce medical graduates who are able to):

1. Demonstrate an appropriate Basics knowledge of medical sciences.
2. Elicit professional skills while providing patient centered care by relevant and comprehensive physical examination.
3. Exhibit ethical and moral values in health promotion and disease prevention at population level to the care of individual patients.
4. Evaluate the use of laboratory tests and imaging studies and interpret the results to arrive at clinical decision making.
5. Commit to lifelong learning to keep up to date with developments in medical practice and trends in disease at population level by strong leadership and management skills.
6. Perform the common medical and surgical techniques in clinical settings including the 'basic life support.
7. Engage in research activity aimed at improvement of quality of health care including behavior modification of individual and community for quality life.

2. CURRICULUM FRAMEWORK

- The University of Health Sciences Lahore has designed a five-year modular framework for Integrated Curriculum based on Specific Systems, Clinical Clerkships, Quran and Professionalism.
- The time calculation for completion of modules and blocks is based on 35 hours per week.
- Total hours of teaching, learning and formative/summative internal assessment to be completed in a year are 1200.
- Modular framework 2K23 has 44 modules spanning of five years. The horizontal Integration is evident in the modular configuration.

Year	Block	Modular Configuration
Year-I	1	Foundation-1
		Hematopoietic & Lymphatic
	2	Musculoskeletal & Locomotion-1
	3	Cardiovascular-1
		Respiratory-1
		PERLs 1
		Quran-1
		Islamiat & Pak Studies
		Clinical Skills Foundation C-FRC-1 (Clinical-Foundation, Rotation, Clerkship)
Year-2		GIT & Nutrition-I
		Renal-I
		Endocrinology & Reproduction-I
		Neurosciences-I
		Head & Neck Special Senses
		Inflammation
		PERLs-2
		Quran-2
		Islamiat & Pak Studies
		Clinical Skills Foundation C-FRC-2 (Clinical-Foundation, Rotation, Clerkship)
Year-3		Foundation-2
		Infectious Diseases
		Neoplasia
		Musculoskeletal & Locomotion-2
		Hemopoitic, Immunity & Transplant-2
		Cardiovascular -2
		Respiratory-2
		Forensic Medicine
		Community Medicine & Family Health-1

		PERLs-3
		Quran-3
		Clinical Skills Foundation C-FRC-3 (Clinical-Foundation, Rotation, Clerkship)
Year-4		GIT & Nutrition-2
		Renal-2
		Endocrinology & Reproduction-2
		Neurosciences-2
		Maternal & Child Health
		Ophthalmology
		Otorhinolaryngology
		Community Medicine & Family Medicine-2
		Psychiatry & Behavioral Sciences
		PERLs-4
		Quran-4
		Clinical Skills Foundation C-FRC-4 (Clinical-Foundation, Rotation, Clerkship)
Year-5		Gynecology & Obstetrics
		Pediatrics
		Medicine
		Surgery
		Clinical Clerkships
		Clinical Skills Foundation C-FRC-5 (Clinical-Foundation, Rotation, Clerkship)

A few salient features that have been incorporated in Curriculum 2K23 for all the three domains of training after deliberations and through an iterative process by subject experts, medical educationists and the university lead as follows.

1. **Horizontal Integration- COGNITIVE:**

   The framework of Curriculum 2K23 has 44 modules spanning 05 years. The horizontal integration is evident in the modular configuration where different basic disciplines approach the themes simultaneously. Modules have been structured where all the basic disciplines are represented based on their respective weightage of content. Assessment framework ensures that the applied/clinical aspect also is inculcated in the concept development of the learner keeping the clinical relevance and context at the core.

2. **Clinical Relevance & Theme-COGNITIVE:**

   All module objectives are preceded by the recommended themes and clinical relevance. These are grounded in the rationale of the module so that pattern of learningcould be steered for a practical professional approach. However institutional discretiondoes not prohibit adopting any other thematic approach provided that the program outcomes are adequately achieved.

3. **Vertical Integration- COGNITIVE:**

   Spiral placement of the modules within the frameworkensures a revisit of the basic sciences. In the first step theapplied / clinical learning objectives orientate the learner and the repetitive module horizontally rhymes with the clinical rotations with a backdrop of basic sciences. The final year of clerkship is the

final revisit, which is primarily workplace based and principally involves the perfect integrated blend of tri-domain learning.

4. **C-FRC-PSYCHOMOTOR:**

Clinical Skills follow a spiral which is entirely skills dominant. This spiral is the core of psychomotor training. The first two years will be of **Clinical Skills- Foundation** whichwill represent clinical orientation. The clinical orientation will be conducted in wards, skills lab and simulation centers (depending on the available resources). The clinical orientation along with the applied/clinical component of the knowledge base willchannelize the learner for the practical and professional aspect of learning.

The subsequent two years the spiral will move on to **Clinical Skills Rotations**. The rotations in different wards will be based on foundational developmental already commenced in pre-clinical years. The year 3 and year 4 which have the rotations will also have the second visitof the modules which would now be more clinically inclined with a stronger base of Pharmacology andPathology. Community oriented practices and family medicine will also be broadening the element of systems thinking and diversity of practice for ahealthcare leader of tomorrow.

5. **Clinical Clerkship:** Finally, **Clinical Clerkships** are aimed to be entirely facilitated in workplace environments. The clerkship model will involve the delegation of duties thus adding to the acquisition of professional accountability as a competency.The psychomotor training and skills acquisition will be the maximum in the year of clerkship. The entire process of C-FRC will be endorsed in a logbook which would be the training base of the learner for future references and exam evaluations.

6. **PERLs-AFFECTIVE:**

Affective training has been formally inculcated in the curricular framework. The model of PERLs has been introduced so that the yield of doctors has a strong, resilient, ethically driven character. PERLs stand for Professionalism, Ethics, Research and Leadership skills. PERLs rounds up professional development for the effective application of the knowledge and skills base achieved. For a professional to be social accountable and to be able to play the healthcare leadership role for societal elementslike advocacy, equity or resources and healthcare access, a formal training is a must.

The categorical approach for this training has been achieved by rolling in the assessment of the competencies acquired along with development of portfolios. PERLs will run throughout the year via portfolio development. The portfolio development itself is a methodology which ensures student centered learning. The method of self-reflection which is integral for portfolio development places the learner in the right spot to steer his/her own learning needs.

The spiral of PERLs will be monitored directly by the respective department of Medical Education. However, the teaching sessions, and mentoring process, can and will be assigned to other disciplines. For example, communication skills can have an input from the faculty of Family Medicine and research can be facilitated by the Community Medicine & Public Health faculty. Ethics can be jointly covered by the Forensic department and Behavioral sciences. Leadership is an ambit where the students will be motivated if the institutional leads themselves get involved and can also have the input of the successful alumni. The Faculty of Medical Education will look after the entire process and will also engage in the teaching sessions, when and wherever required.

Type of evidence, activities to be performed, learning situation for the acquirement of the competencies, for the portfolio should be defined and enlisted by the academic council along with the help of the department of medical education. A 'mentoring platform' can flaunt the spirit of affective learning through the PERLS spiral. So it is recommended that a mentorship program should be developed at the respective institutes.

7. **Other Curricular Elements:**

The framework of Curriculum 2K23 has certain other newer elements. These elementsdefine our local context, our existing educational practices and conformity to evidencerelating best international practices. Some will be commencing from the first year, however, rest will be a part of the following years. A few of these are:

- Quran
- Clinical
- Entrepreneur ship
- Family Medicine
- Minimal Service Delivery StandardsElectives
- Basic Life Support

Note: All subjects, topics, laboratory, practical and clinical work to be examined regularly and credit to be accounted in internal evaluation.

3. INTRODUCTION TO STUDY GUIDE

The purpose of this study guide is the logical integration of curriculum outlines includes learning objectives, learning strategies and assessment pattern.

The target audiences of this study guide are **The First Year MBBS Student**. The highly proficient teaching faculty will provide necessary guidance related to achieve intended learning objectives, effective use of teaching tools and integrated teaching methods. The curriculum includes teaching strategies such as Large Group Interactive Session (LGIS), small group interactive methods like Team Based Learning (TBL), Case Based Learning (CBL), Problem Based Learning (PBL), Tutorials, Reflective Writing, Bedside Teaching, Simulation, Skills Lab, Demonstrations, Laboratory Practical, Ward Rounds and Case Presentations. These are the modern and scientific teaching strategy. The study programs support social and moral development of a medical student besides achieving academic excellence. A team of highly trained and professional teachers act as mentors to guide students on social and academics related affairs.

The mandate of medical education is to equip medical professionals with requisite knowledge, skills and attitude. As a medical student it is expected of you to keep an exemplary character and honest morality. Plan and strive hard with full sincerity and devotion. This marks the beginning of your professional career where attitude defines your altitude and acts as a panacea in practical life.

4. INTRODUCTION OF FOUNDATION MODULE

FOUNDATION MODULE	
Introduction	Tomorrow's doctor is required to acquire competencies, which could align his knowledge base & skill set for his professional practice.
Rationale of Foundation Module	✚ The foundation knowledge commences from **Cell**. The Cell is a structural & functional unit of life & 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.
Target Students	First Year MBBS Students
Module Outcome	1. Describe the microscopic features of nerve cells, muscle cells, general features of epithelia of the body. 2. Appraise the functional characteristics of various components of cell membrane and organelles of cell. 3. Differentiate between the dynamics of various transport mechanisms along the cell membrane. 4. Compare the functional differences between RBCs, WBCs and blood groups. 5. Explain the significance of homeostatic mechanisms in keeping body's internal environment nearly constant. 6. Appraise the formation and functions of autonomic nervous system 7. Correlate the structural design of each organ to its function. 8. Acquire information about the different fascial planes in the different regions of the body & their surgical importance 9. Use descriptive anatomical terms of position to describe the different body structures in relation to each other. 10. Describe the movements of body using proper anatomical terms of movement. 11. Describe and demonstrate the various bony landmarks. 12. Describe the types of joints and correlate them to the mechanisms of movement. 13. Classify the bone, joints and muscles based on the structure, function, and phylogenetic origin. 14. Describe the structures associated with muscles and explain their functional correlations. 15. Classify and describe the cardiovascular system and correlate it functionally. 16. Amplify the anatomical basis for radiological, cross-sectional, and surface anatomy. 17. Correlate clinic pathologically the apoptosis in health & diseases.
Theme	✚ Cell structure ✚ Cell transport and signaling ✚ Cell chemistry ✚ Homeostasis and blood ✚ Autonomic nervous system ✚ Body movement ✚ Muscles ✚ Growth and development
Duration	Eight Weeks
Hours	205 Hours

4A. INTRODUCTION OF HEMOPOITIC AND LYMPHATIC MODULE

	HEMOPOITIC AND LYMPHATIC MODULE
Introduction	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.
Rationale of Blood & Lymphatic Module	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.
Target Students	First Year MBBS Students
Module Outcome	1. Explain the function of all the organs / structures involved in this system andthe mechanisms controlling them. (Spleen, lymph nodes, thymus, bone marrow RBC's, WBCs, and platelets. 2. Explain the etiology and pathogenesis of common blood & lymphaticdiseases, particularly those of importance in Pakistan. 3. Explain the rationale for the use of common therapeutic agents for thediseases related to Blood and immunity. 4. Describe the role of immunity in the body 5. Discuss the working & uses of laboratory instruments in diagnostic lab visit. 6. Relate red cell indices with health and disease. 7. Recognize ABO/RH blood grouping system. 8. Describe the role of Reticuloendothelial system in the body. 9. Describe the events of hemostasis. 10. Extrapolate the biochemical aspects of plasma proteins. 11. Discuss the pharmacological treatment of iron deficiency anemia. 12. Discuss Blood composition and function. 13. Discuss the role of liver in hemolytic anemia. 14. Practice history taking of a patient presented with blood disorders
Theme	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)
Duration	Three weeks
Hours	071 Hours

5. CURRICULUM MAP

PROPOSED YEAR WISE CURRICULUM OUTCOMES OF MBBS PROGRAM

COMPETENCIES	FIRST YEAR MBBS	SECOND YEAR MBBS	THIRD YEAR MBBS	FOURTH YEAR MBBS	FINAL YEAR MBBS
KNOWLEDGEABLE	Correlate between gross Anatomy, Human Physiology & Pathology		Relate the effects & interactions of physical, emotional & social environments to health & disease of human being.	Apply Evidence Based Medicine Concept to provide best Possible Cost Effective Care.	Relate the effects and Interaction of Physical, Emotional & Social Environment to Health & Disease of Humanities.
	Differentiate between Normal & Abnormal Structure & Functions of the Body.		Relate the Natural History of the acute & chronic communicable, non-communicable diseases with respective etiologic agents and effects of appropriate intervention on the progress of the disease.	Ensure compliance with the Legal System as it Impacts on Healthcare and the PM&DC Regulations.	Relate the natural history of the acute & chronic communicable, non-communicable diseases with respective etiologic agents and effects of appropriate intervention on the progress of the disease.
	Differentiate between Normal & Abnormal Molecular, Cellular, Biochemical, Physiological & Pathophysiological Mechanisms		Apply Evidence Based Medicine Concept to provide best Possible Cost Effective Care.	Ensure Patient Safety & Infection Control in their Clinical Practice.	Apply Evidence Based Medicine Concept to provide best Possible Cost Effective Care.
	Differentiate between Normal & Abnormal Human Behavior.		Ensure compliance with the Legal System as it Impacts on Healthcare and the PM&DC Regulations.		Ensure compliance with the legal system as it impacts on healthcare and the PM&DC regulations.
	Differentiate between Biological & Social Determinants and Risk factors of Disease, Various Etiological Causes and Causative Agents for Specific Inquiries, Illnesses & Diseases.		Ensure Patient Safety & Infection Control in their Clinical Practice.		Ensure Patient Safety & Infection Control in their Clinical Practice.

SKILLFUL	**Perform basic radiological procedures related to normal & abnormal functions of the body.**	• **Take a focused history and identify the patient's risk factors with appreciation of the bio-psychosocial model.**	**Take a focused history and identify the patient's risk factors with appreciation of the bio-psychosocial model.**	**Perform Procedure with the Consent of Patient, ensuring Infection Control when giving Injections (I/V, I/M, S/C. I/D) , Managing Infusion Lines and Blood Transfusions, providing first Aid, Basic Life Support, Including CPR, Nebulizers, NG Intubation, Wound Care and dressings. Catheterization**
	Perform practical procedures for handling instruments.	• **Perform Physical & Mental state examination in order to identify Specific Problems & Differentiate from others.** • **Identify Non Conformity to Anatomical & Physiological configuration.**	• **Perform Physical & Mental state examination in order to identify Specific Problems & Differentiate from others.** • **Identify Non Conformity to Anatomical & Physiological configuration.**	**Critique the advantages & disadvantages, indications, contraindications, limitations, complications of the current treatment modalities, justify the use of each with best available scientific evidence**
	Manage time and prioritize tasks & uses of resources.	• **Formulate a Provisional Diagnosis with Justification and two to three likely differential diagnosis.**	• **Formulate a Provisional Diagnosis with Justification and two to three likely differential diagnosis.**	**Formulate management plan in partnership with patients ensuring their safety.**
	Ensure Patient Safety always including Strict Infection Control Practices.	• **Order appropriate investigations with the Consent of the Patient.**	• **Order appropriate investigations with the Consent of the Patient.**	**Advice and counsel the patient & their family**

		Order appropriate investigations with the consent of the patient, ensuring infection control in giving injections (IV, IM, SC, ID), managing infection lines & blood transfusions, providing first aid, basic life support (including cardiopulmonary resuscitation, nebulizers, wound care, Monitoring Oxygen saturation/therapy, taking swabs and pap-smear, performing ECG and peak flow spirometry, blood sugar testing, catheterization, dipstick urine analysis and simple skin suturing	**Educate the patient regarding their health problems, available options, management plan, self-care & use of prescribed drugs & equipment such as Inhalers.**
		Critique the advantages & disadvantages, indications, contraindications, limitations, complications of the current treatment modalities, justify the use of each with best available scientific evidence	**Recognize & take into consideration issues of euity, equality & that opportunities are missed if not perceived to be useful by others.**
		Formulate management plan in partnership with patients ensuring their safety.	**Describe & debate the reasons of success or failure of various approaches to increase prevention & to decrease social inequities.**
		Advice and counsel the patient & their family	
		Educate the patient regarding their health problems, available options, management plan, self-care & use of prescribed drugs & equipment such as Inhalers.	

			Recognize & take into consideration issues of equity, equality & that opportunities are missed if not perceived to be useful by others.	
			Describe & debate the reasons of success or failure of various approaches to increase prevention & to decrease social inequities.	
			Manage time & prioritize the task & use of resources.	
			Ensure patient safety always including strict Infection Control Policies.	
CRITICAL THINKER	Adapt a Problem solving Approach in Discussing Problems/ Issues	Use of Information Obtained from & Correlated from different sources. Critical data evaluation (Interpret, Analyze, Synthesize and evaluate to form decisions).	Use of Information Obtained from & Correlated from different sources. Critical data evaluation (Interpret, Analyze, Synthesize and evaluate to form decisions).	Use of Information Obtained from & Correlated from different sources. Critical data evaluation (Interpret, Analyze, Synthesize and evaluate to form decisions).
	Use of Information & correlate them from different sources. Critical data evaluation (Interpret, Analyze, Synthesize and evaluate to form decisions).	Dealing Effectively with Complexity, Uncertainty & Probability in Medical Decision Making, Reflecting on the latest Evidence & Application to the Health Problem	Dealing Effectively with Complexity, Uncertainty & Probability in Medical Decision Making, Reflecting on the latest Evidence & Application to the Health Problem	Dealing Effectively with Complexity, uncertainty & probability in medical decision making, reflecting on the latest evidence & application to the health problem
	Regular Reflection on their own practice & on standards of medical practice.		Raising Concerns about Public Risks & Patient Safety.	Regular reflection on their own practice & on standards of medical practice

				Initiating Participating in or Adapting to Change as required, ensuring that the Profession and the Patient both Benefit.
				Flexibility and a Problem Solving Approach
				Commitment to Quality Assurance and Monitoring by Participating in Audits and Reporting critical Incidence to improve Medical Practice and Decrease Risk to Self, Patient and Public.
RESEARCHER	**Demonstrate Practices of Effective Academic Writing**	**Critically Review Literature**	**Identify a Researchable problem & Critically review the literature.**	**Identify the Measurable Problem and Critically review the Literature.**
	Discuss Importance of Research Process in Academic Medicine.	**Identify Research Problem**	**Phrase Succinct Research Question**	**Phrase Succinct Research Question**
	Identify Components of an Original Article	**Formulate Research Question.**	**Formulate Hypothesis**	**Formulate Hypothesis**
	Critique on selected Original Article in Journal Club Meeting	**Formulate Research Hypothesis**	**Identify the Appropriate Research Design(s) in Epidemiology and Analytical Test in Biostatistics to answer the Research Questions.**	**Identify the Appropriate Research Design(s) in Epidemiology and Analytical Test in Biostatistics to answer the Research Questions.**
		Identify the Appropriate Research Design(s) in Epidemiology and Analytical Test in Biostatistics to answer the Research Questions.	**Collect Analyze & Evaluate Data & Present Results where Possible**	**Collect Analyze & Evaluate Data & Present Results where Possible**

				Demonstrate Ethics in Conducting Research and in Ownership of Intellectual Property.	**Demonstrate Ethics in Conducting Research and in Ownership of Intellectual Property.**
Professionalism & Ethics	**Discuss the Role of Ethics in Medical Practice**	**Demonstrate principles of patient Autonomy, beneficence, nonmaleficence, distributive justice, confidentiality, informed consent and ethics.**	**Respect the views & interests of the Patient & the Patient's Family**	**Demonstrate Professional Values of Self & Professional Accountability, Honesty, Probity & Ethics without discrimination on the basis of Age, Gender, Religion or Beliefs , Color, Race, Ethnic or National origin, Cultural , Disability, Disease, Lifestyle, Marital and Parental status, Sexual Orientation and Social or Economic Status**	**Demonstrate professional values of Self & Professional Accountability, Honesty, Probity & Ethics without discrimination on the basis of Age, Gender, Religion or Beliefs , Color, Race, Ethnic or National origin, Cultural , Disability, Disease, Lifestyle, Marital and Parental status, Sexual Orientation and Social or Economic Status**

6. TIME TABLE

BAHAWALPUR MEDICAL COLLEGE
FIRST PROFESSIONAL MBBS-2023-BATCH-2
FOUNDATION MODULE-I
22ND –FEB –24TH- FEB 2023 (IST WEEK SCHEDULE)

DAY VENUE	08:30-09:30 LECTURE HALL I	09:30-10:30 LECTURE HALL I	10:30: 10:40	10:40-11:40 LECTURE HALL I	11:40-13:20 PRACTICAL LAB	13:20-13:40	13:40-15:30 DISECTION HALL	15:30-16:00 SELF-DIRECTED LEARNING
Wednesday 22-02-2023	ORIENTATION Dr Kiran	PHYSIOLOGY Intro-Homeostasis FP-001 Prof Qaiser M	BREAK	BHIOCHEMISTRY Introduction Prof K Fayyaz	A=Anatomy= Microscope B=Physiology= Microscope C=Biochemistry =Lab Protocol FB-015	NAMAZ & LUNCH BREAK	Terms & Planes of Anatomy A=DH B=Museum C=Lecture Hall-II	SDL
Thursday 23-02-2023	ANATOMY Introduction FA-001 Dr Jameel AS	PHYSIOLOGY Cell Physiology-I FP-001 Dr Nimra		BHIOCHEMISTRY Cell Introduction FB-001 Dr Ghazala P	B=Anatomy= Microscope C=Physiology= Microscope A=Biochemistry =Lab Protocol FB-015		B=DH C=Museum B=Lecture Hall-II	SDL
Friday 24-02-2023	ANATOMY Terms of Anatomy FA-001 Prof Tazeen	PHYSIOLOGY Cell Physiology-II FP-001 Dr Nimra		BHIOCHEMISTRY Structure of Cell Membrane-I FB-002 Dr Ghazala P	C=Anatomy= Microscope A=Physiology= Microscope B=Biochemistry= Lab Protocol FB-015	13:20-14:00 JUMMA BREAK	14:00-15:30 C=DH A=Museum B=Lecture Hall-II	15:30-16:00 SDL

FIRST PROFESSIONAL MBBS-2023-BATCH-2
FOUNDATION MODULE-I
27TH –FEB –3RD-MARCH- 2023 (2ND WEEK SCHEDULE)

DAY VENUE	08:30-09:30 LECTURE HALL I	09:30-10:30 LECTURE HALL I	10:30: 10:40	10:40-11:40 LECTURE HALL I	11:40-13:20 PRACTICAL LAB		13:20-13:40	13:40-15:30 DISECTION HALL	15:30-16:00 SELF-DIRECTED LEARNING
Monday 27-02-2023	EMBRYOLOGY FA-010 Prof Tazeen	PHYSIOLOGY Blood-I FP-002 Prof Qaiser M	BREAK	BHIOCHEMISTRY Structure of Cell Membrane-II FB-002 Prof K Fayyaz	A=Anatomy B=Physiology C=Biochemistry=Laboratory Hazards-FB-015-Dr Iqra		NAMAZ & LUNCH BREAK	ANATOMICAL MOVEMENTS A=DH B=Museum C=Lecture Hall-II	SDL
Tuesday 28-02-2023	ANATOMY BONE-I FA-002 Dr Sundus	PHYSIOLOGY Blood-II FP-002 Prof Qaiser M		BIOCHEMISTRY Subcellular Organelles-I FB-004 Prof K Fayyaz	B=Anatomy C=Physiology C=Biochemistry=Laboratory Hazards-FB-015-Dr Iqra			B=DH C=Museum A=Lecture Hall-II	SDL
Wednesday 01-03-2023	ANATOMY Mitosis Prof Tazeen	PHYSIOLOGY Blood-III FP-002 Prof Qaiser M		BHIOCHEMISTRY Subcellular Organelles-II FB-004 Prof K Fayyaz	C=Anatomy A=Physiology C=Biochemistry=Laboratory Hazards-FB-015-Dr Iqra			C=DH A=Museum B=Lecture Hall-II	SDL
Thursday 02-03-2023	ANATOMY BONE-I FA-002 Dr Sundus	PHYSIOLOGY RBCS FP-003 Dr Nimra		BHIOCHEMISTRY Signal Transduction-I FB-003 Dr Ghazala R	11:40-12:30 LECT-HALL-II PATHOLOGY CELL INJURY FPa-001 Prof Suleman	12:30-13:20 LECT-HALL-II BEHAVIORAL SCIENCES Biological Basis of Behavior FBS-001 Ms Faseeha		13:40-15:40 CSIM/SKILLS LAB HAND WASHING CSIM-005 Dr Iqra & Dr Bazla & Dr Nimra	15:40-16:00 SDL
Friday 03-03-2023	HISTOLOGY Chromosomes FA-010 Dr Jameel AS	PHYSIOLOGY Hb FP-005 Dr Nimra		Dr Ghazala R Signal Transduction-II FB-003 Dr Ghazala R	PERLs GIBB'S Reflective Cycle PERLs-001 Prof Muneer Azhar	CM Concept of Health FCM-001 Prof Anwar Ali	13:20-14:00 JUMMA BREAK	14:00-15:30 MENTORING	15:30-16:00 SDL

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

FOUNDATION MODULE-I

6TH – 10TH MARCH- 2023 (3RD WEEK SCHEDULE)

DAY VENUE	08:30-09:30 LECTURE HALL I	09:30-10:30 LECTURE HALL I	10:30: 10:50	10:50-11:50 LECTURE HALL I	11:50-13:20 PRACTICAL LAB		13:20-13:50	13:50-15:30 DISECTION HALL	15:30-16:00 SELF-DIRECTED LEARNING
Monday 06-03-2023	EMBRYOLOGY Meiosis FA-010 Prof Tazeen	PHYSIOLOGY Membrane Transport FP-001 Prof Qaiser M	BREAK	BHIOCHEMISTRY Structure of Cell Membrane-III FB-002 Prof K Fayyaz	A=Anatomy=Epithelium-2 B=Physiology=Cell C=Biochemistry=Shapes of Cell		NAMAZ & LUNCH BREAK	SCAPULA A=DH B=Museum C=Lecture Hall-I	SDL
Tuesday 07-03-2023	ANATOMY JOINTS-I FA-004 Dr Sundus	PHYSIOLOGY Na+ K+ Pump FP-001 Prof Qaiser M		BIOCHEMISTRY Subcellular Organelles-II FB-002 Prof K Fayyaz	B=Anatomy=Epithelium-2 C=Physiology= Cell A=Biochemistry=Shapes of Cell			HUMEROUS B=DH C=Museum A=Lecture Hall-I	SDL
Wednesday 08-03-2023	ANATOMY Spermatogenesis FA-010 Prof Tazeen	PHYSIOLOGY Cell Organelles-I FP-001 Dr Nimra		BHIOCHEMISTRY Purine FB-005 Prof K Fayyaz	C=Anatomy=Epithelium-2 A=Physiology=Cell B=Biochemistry= Shapes of Cell			HUMEROUS C=DH A=Museum B=Lecture Hall-I	SDL
Thursday 09-03-2023	ANATOMY JOINTS-I FA-004 Dr Sundus	PHYSIOLOGY Cell Organelles-II FP-001 Dr Nimra		BMDH A=Medicine=Hx Taking B=Pediatrics= Hx Taking C=Emergency= Hx Taking D=Radiology= Hx Taking E=Ophthalmology= Hx Taking	11:50-12:40 LECT-HALL-II CM Health Determinants FCM-002 Prof Anwar Ali	12:40-13:20 LECT-HALL-II BEHAVIORAL SCIENCES Burden of Mental Illness FBS-002 Ms Faseeha		13:40-15:30 CSIM/SKILLS LAB WEARING THE GLOVES CSIM-004 A=Dr Faryal & Dr Gul B=Dr Bushra & Dr Uzma C= Dr Hadia & Dr Iqra Tahir	15:30-16:00 SDL
Friday 10-03-2023	HISTOLOGY Stratified Epithelium FA-048 Dr Jameel AS	PHYSIOLOGY Cell Organelles-III FP-001 Dr Nimra		BIOCHEMISTY DNA FB-006 Dr Ghazala R	PHARMACOLOGY Terminologies of Pharmacology FPh-002 Dr Zafar Iqbal	PATHOLOGY Causes of Cell Injury FPa-001 Prof Suleman	13:20-14:00 JUMMA BREAK	14:00-15:30 TUTORING A=Dr Faryal B=Dr Kiran C=Dr Iqra Arshad D=Gul Zeba E=Dr Hibba	15:30-16:00 SDL

Note: At BMDH (Hx Taking=History Taking)

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

FOUNDATION MODULE-I

13TH-17TH- MARCH- 2023 (4TH WEEK SCHEDULE)

DAY VENUE	08:30-09:30 LECTURE HALL I	09:30-10:30 LECTURE HALL I	10:30 - 10:50	10:50-11:50 LECTURE HALL I	11:50-13:30 PRACTICAL LAB		13:30-13:50	13:50-14:20 SELF-DIRECTED LEARNING	14:20-16:00 DISECTION HALL
Monday 13-03-2023	EMBRYOLOGY OOGENESIS FA-013 Prof Tazeen	PHYSIOLOGY GENETICS-I FP-001 Prof Qaiser M	BREAK	BHIOCHEMISTRY RNA FB-006 Prof K Fayyaz	A=Anatomy=Connective Tissue-I B=Physiology=ESR C=Biochemistry= Centrifuge		NAMAZ & LUNCH BREAK	SDL	SHOULDER JOINT A=DH B=Museum C=Lecture Hall-II
Tuesday 14-03-2023	ANATOMY MUSCLE-I FA-006 Dr Sundus	PHYSIOLOGY GENETICS-II FP-001 Prof Qaiser M		BIOCHEMISTRY Biomedical Importance of Nucleotide FB-008 Prof K Fayyaz	B=Anatomy=Connective Tissue-I C=Physiology=ESR A=Biochemistry= Centrifuge			SDL	RADIUS B=DH C=Museum A=Lecture Hall-II
Wednesday 15-03-2023	ANATOMY Female Reproductive Organ Prof Tazeen	PHYSIOLOGY GENETICS-II FP-001 Prof Qaiser M		BHIOCHEMISTRY Purine Synthesis FB-007 Dr Ghazala	C=Anatomy=Connective Tissue-I A=Physiology=ESR B=Biochemistry= Centrifuge			SDL	RADIUS C=DH A=Museum B=Lecture Hall-II
Thursday 16-03-2023	ANATOMY MUSCLE-II FA-006 Dr Sundus	PHYSIOLOGY GENETICS-II FP-001 Dr Nimra		BMDH B=Medicine=Assessment C=Pediatrics=Assessment D=Emergency=Triage/Assessment E=Radiology=Surface marking A=Ophthalmology=Assessment	11:50-12:50 LECT-HALL-II CM Health Indicators FCM-003 Prof Allahyar	12:50-13:30 LECT-HALL-II BEHAVIORAL SCIENCES Personality Disorders FBS-002 Ms Faseeha		13:50-14:20 SDL	14:20-16:00 CSIM/SKILLS LAB ECE RADIAL PULSE CSIM-001 A=Dr Faryal & Dr Gul B=Dr Bushra & Dr Uzma C= Dr Maheen & Dr Iqra Tahir
Friday 17-03-2023	HISTOLOGY Glandular Epithelium FA-048 Dr Jameel AS	PHYSIOLOGY TEST Dr Nimra		BHIOCHEMISTRY Pathway of Purine FB-007 Dr Meshal	PERLs Responsibility Towards Profession PERLs-003 Prof Muneer	PATHOLOGY Types of Cell Injury FPa-001 Prof Suleman	13:30-14:00 JUMMA BREAK	14:00-14:30 SDL	14:30-16:00 BMDH CD: Medicine=Assessment DE=Pediatrics=Assessment A=Emergency=Triage/Assessment

Note: At BMDH (Assessment)

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

FOUNDATION MODULE-I

20TH-14TH MARCH- 2023 (5TH WEEK SCHEDULE)

DAY VENUE	08:30-09:30 LECTURE HALL I	09:30-10:30 LECTURE HALL I	10:30 - 10:50	10:50-11:50 LECTURE HALL I	11:50-13:30 PRACTICAL LAB	13:30- 13:50	13:50-14:20 SELF-DIRECTED LEARNING	14:20-16:00 DISECTION HALL
Monday 20-03-2023	EMBRYOLOGY 2ND Week of Development-I FA-026 Prof Tazeen	PHYSIOLOGY Function of Plasma Proteins FP-002 Prof Qaiser M	BREAK	BHIOCHEMISTRY Degradation of Nucleotides FB-010 Dr Ghazala	A=Anatomy=Connective Tissue B=Physiology=Estimation of Hb C=Biochemistry= Chromatography Electrophoresis (Dr Sumaya/Dr Gul)	NAMAZ & LUNCH BREAK	SDL	HUMERUS A=DH B=Museum C=Lecture Hall-I
Tuesday 21-03-2023	ANATOMY SKIN-I FA-005 Dr Sadia	PHYSIOLOGY Pathophysiology of Edema FP-002 Prof Qaiser M		BIOCHEMISTRY GOUT-I FB-010 Prof K Fayyaz	B=Anatomy= Connective Tissue C=Physiology= Estimation of Hb A=Biochemistry= Chromatography Electrophoresis (Dr Sumaya/Dr Gul)		SDL	RADIUS-I B=DH C=Museum A=Lecture Hall-I
Wednesday 22-03-2023	ANATOMY SKIN-II FA-005 Dr Sadia Sundus	PHYSIOLOGY Introduction to RBCs FP-003 Dr Nimrah		BIOCHEMISTRY GOUT-II FB-010 Prof K Fayyaz	C=Anatomy= Connective Tissue A=Physiology= Estimation of Hb B=Biochemistry= Chromatography Electrophoresis (Dr Sumaya/Dr Gul)		SDL	RADIUS-I C=DH A=Museum B=Lecture Hall-I
Thursday 23-03-2023	HOLIDAY			ON ACCOUNT OF			RESOLUTION DAY	
Friday 24-03-2023	08:00-09:00 EMBRYOLOGY 2ND Week of Development-II FA-026 Prof Tazeen	09:00-09:50 PHYSIOLOGY Genesis of Blood Cells FP-003 Dr Nimrah	9:50- 10:0 0 BREAK	10:00-11:00 BIOCHEMISTRY Leschnyhan Syndrome FB-010 Dr Ghazala	11:00-12:00 LECT-HALL-I Community Health Sciences Health & Well Being FCM-002		12:00-13:00 PATHOLOGY ATROPHY-II FPa-003 Prof Arshad Gardezi	

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

FOUNDATION MODULE-I

27TH- 31ST MARCH- 2023 (6TH WEEK SCHEDULE)

DAY VENUE	08:00-09:00 LECTURE HALL I	09:00-09:50 LECTURE HALL I	09:50 - 10:00	10:00-10:50 LECTURE HALL I	10::50-11:40 PRACTICAL LAB	11:40-13:00 DISECTION HALL
Monday 27-03-2023	EMBRYOLOGY Neural Tube-I FA-027 Prof Tazeen	PHYSIOLOGY Types of Hb FP-004 Prof Qaiser M	BREAK	BHIOCHEMISTRY Tertiary Structure of DNA-I FB-009 Prof K Fayyaz	A=Anatomy= Connective Tissue B=Physiology= C=Biochemistry= ELISA +PCR (Dr Iqra/Dr Sumaya)	ULNA A=DH B=Museum C=Lecture Hall-I
Tuesday 28-03-2023	ANATOMY Vascular System FA-007 Dr Sundus	PHYSIOLOGY Role of Iron in HB Synthesis FP-004 Prof Qaiser M		BHIOCHEMISTRY Tertiary Structure of DNA-II FB-009 Prof K Fayyaz	B=Anatomy= Connective Tissue C=Physiology= A=Biochemistry= = ELISA +PCR (Dr Iqra/Dr Sumaya)	ULNA B=DH C=Museum A=Lecture Hall-I
Wednesday 29-03-2023	EMBRYOLOGY Neural Tube-II FA-027 Prof Tazeen	PHYSIOLOGY Erythropoiesis FP-003 Dr Nimra		BHIOCHEMISTRY Replication FB-011 Prof K Fayyaz	C=Anatomy= Connective Tissue A=Physiology= B=Biochemistry= = ELISA +PCR (Dr Iqra/Dr Sumaya)	BMDH A: Medicine=Assessment B=Pediatrics=Assessment C=Emergency=Assessment D=Radiology= Assessment E=Ophthalmology=Assessment
Thursday 30-03-2023	ANATOMY Vascular Tissue FA-007 Dr Sundus	PHYSIOLOGY Erythropoietin, B12 & Folic Acid FP-003 Dr Nimra		BHIOCHEMISTRY DNA-Repair FB-012 Prof K Fayyaz	10::50-11:40 LECT-HALL-I PHARMACOLOGY Terminologies-Revision Fph-003 Dr Zafar Iqbal	11:40-12:20 LECT-HALL-I Community Health Sciences History of Disease FCM-004 12:20-13:00 LECT-HALL-I GENERAL MEDICINE Iron deficiency Anemia Dr Alamgir
Friday 31-03-2023	HISTOLOGY Epithelium FA-048 Dr Jameel AS	PHYSIOLOGY Monocytes, Macrophage System FP-005 Dr Nimra		BHIOCHEMISTRY TEST (FB-001-004) Dr Iqra	10::50-11:40 PATHOLOGY ATROPHY-II FPa-003 Prof Suleman	11:40-12:30 ULNA B=DH C=Museum A=Lecture Hall-I

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

FOUNDATION MODULE-I

3RD -7TH-APRIL- 2023 (7TH WEEK SCHEDULE)

DAY VENUE	08:00-09:00 LECTURE HALL I	09:00-09:50 LECTURE HALL I	09:50 - 10:00	10:00-10:50 LECTURE HALL I	10::50-11:40 PRACTICAL LAB	11:40-13:00 DISECTION HALL
Monday 03-04-2023	EMBRYOLOGY Gastrulation-I FA-026 Prof Tazeen	PHYSIOLOGY Types of Hb FP-004 Prof Qaiser M	BREAK	BHIOCHEMISTRY TEST FB-001-FB-004 Prof K Fayyaz	A=Anatomy= Connective Tissue-I B=Physiology=Hematocrit FP-009 C=Biochemistry=Spectrophotometry (Dr Gul/Dr Sumaya)	ULNA (Osteology) A=DH B=Museum C=Lecture Hall-I
Tuesday 04-04-2023	ANATOMY Vascular System-I FA-007 Dr Sundus	PHYSIOLOGY Role of Iron in HB Formation FP-004 Prof Qaiser M		BHIOCHEMISTRY Tertiary Structure of DNA-I FB-009 Prof KMF	B=Anatomy= Connective Tissue-I C= Physiology=Hematocrit FP-009 A=Biochemistry= = Spectrophotometry (Dr Gul/Dr Sumaya)	ULNA (Muscular Attachment) B=DH C=Museum A=Lecture Hall-I
Wednesday 05-04-2023	EMBRYOLOGY Neurulation-I FA-027 Prof Tazeen	PHYSIOLOGY LEUCOCYTES FP-005 Dr Nimra		BHIOCHEMISTRY Tertiary Structure of DNA-II FB-009 Prof KMF	C=Anatomy= Connective Tissue-I A= Physiology=Hematocrit FP-009 B=Biochemistry=Spectrophotometry (Dr Gul/Dr Sumaya)	CSIM/SKILLS LAB-ECE RADIAL PULSE A=Dr Faryal, Dr Gul B= Dr Bushra Dr Uzma C=Dr Maheen & Dr Hibba
Thursday 06-04-2023	ANATOMY Vascular System-I FA-007 Dr Sundus	PHYSIOLOGY Line of Defence FP-005 Dr Nimra		BHIOCHEMISTRY Translation-II FB-012 Prof K Fayyaz	LECT-HALL-I PHARMACOLOGY Absorption, distribution of Drug Fph-001 Dr Zafar Iqbal	11:40-12:20 LECT-HALL-I Community Health Sciences Disease Causation FCM-004 Prof Anwer Ali 12:20-13:00 LECT-HALL-I IMPACT Psychosocial Factors in Health Care FBs-003 Ms Faseeha I
Friday 07-04-2023	HISTOLOGY C.T-I FA-049 Dr Jameel AS	PHYSIOLOGY Monocytes, Macrophage System-i FP-005 Dr Nimra		BHIOCHEMISTRY TEST-2 (FB-013-014) Dr Iqra	PATHOLOGY Metaplasia-I FPa-003 Prof A Gardezi	11:40-12:30 ISLAMIAT Oneness of ALLAH TAUHEED Mr Nabeel

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

FOUNDATION MODULE-I

10TH-14TH-APRIL- 2023 (8TH WEEK SCHEDULE)

DAY VENUE	08:00-09:00 LECTURE HALL I	09:00-09:50 LECTURE HALL I	09:50 - 10:00	10:00-10:50 PRACTICAL LAB	10::50-11:40 LECTURE-HALL-I	11:40-13:00 DISECTION HALL
Monday 10-04-2023	BHIOCHEMISTRY GOUT-II FB-001-FB-004 Prof K Fayyaz	PHYSIOLOGY Blood Indices FP-004 Prof Qaiser M	BREAK	A=Anatomy= Dense-CT B=Physiology=Hematocrit FP-009 C=Biochemistry=Micro Lab (Dr Faryal)	**ANATOMY TEST** (MCQS/SEQS)	
Tuesday 11-04-2023	ANATOMY Nervous System-I FA-008 Dr Sundus	PHYSIOLOGY Abnormal Hb FP-004 Prof Qaiser M		BHIOCHEMISTRY Replication-I FB-009 Prof KMF	PRACTICAL LAB B=Anatomy= Dense-CT C= Physiology=Hematocrit FP-009 A=Biochemistry= Micro Lab (Dr Faryal)	DISECTION HALL BONES OF HAND A=DH B=Museum C=Lecture Hall-I
Wednesday 12-04-2023	EMBRYOLOGY CT-II FA-049 Prof Tazeen	BHIOCHEMISTRY Replication-II FB-009 Prof KMF		**PHYSIOLOGY TEST** (MCQS/SEQS) Dr Nimrah		CSIM/SKILLS LAB-ECE BLOOD PRESSURE A=Dr Faryal, Dr Gul B= Dr Bushra Dr Uzma C=Dr Maheen & Dr Hibba
Thursday 13-04-2023	ANATOMY Nervous System-II FA-008 Dr Sundus	PHYSIOLOGY Blood Group Types FP-006 Prof Qaiser M		BHIOCHEMISTRY REVISION Prof KMF	11:40-12:20 LECT-HALL-I Community Health Sciences Gradient of Infection & Disease Surveillance & Control of Disease REVISION FCM-004-005 Prof Anwer Ali	12:20-13:00 LECT-HALL-I IMPACT Psychosocial Factors in Health Care FBs-003 Ms Faseeha l
Friday 14-04-2023	HISTOLOGY REVISION Dr Jameel AS	PHYSIOLOGY Basis of AB & RH System FP-005 Dr Nimra		BHIOCHEMISTRY KMF	PATHOLOGY Metaplasia-I FPa-003 Prof A Gardezi	11:40-12:30 PRACTICAL LAB C=Anatomy= Dense-CT A= Physiology=Hematocrit FP-009 B=Biochemistry= Micro Lab (Dr Faryal)

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

HAEM & LYMPHATICS MODULE-II

17TH-21ST- APRIL- 2023 (9TH WEEK SCHEDULE)

DAY VENUE	08:00-09:00 LECTURE HALL I	09:00-09:50 LECTURE HALL I	09:50-10:00	10:00-10:50 LECTURE HALL I	10::50-11:40 PRACTICAL LAB	11:40-13:00 DISECTION HALL	
Monday 17-04-2023	EMBRYOLOGY Development of Spleen-I HL-002 Prof Tazeen	PHYSIOLOGY Intro of ANS FP-007 Prof Qaiser M	BREAK	BHIOCHEMISTRY Heam Synthesis HL-016 KMF	A=Anatomy= Loose-CT B=Physiology= C=Biochemistry= Micro lab (Dr Faryal)	PECTORAL REGION-I A=DH B=Museum C=Lecture Hall-I	
Tuesday 18-04-2023	ANATOMY Blood & Bone Marrow-I HL-002 Dr Sundus	PHYSIOLOGY ANS & CNS-I FP-007 Prof Qaiser M		BHIOCHEMISTRY Factors Affecting Functions of Hemoglobin HL-016 KMF	B=Anatomy= Loose-CT C=Physiology= A=Biochemistry= Micro lab (Dr Faryal)	11:40-12:20 ISLAMIAT FAITH Mr Nabeel	12:20-13:00 PERLS COMMUNICATION Prof Muneer Azhar
Wednesday 19-04-2023	EMBRYOLOGY Development of Spleen-II HL-002 Prof Tazeen	PHYSIOLOGY ANS & CNS-II FP-007 Prof Qaiser M		CHS Prevention & Levels of Intervention FCM-005 Dr Allahyar	C=Anatomy= Loose-CT A=Physiology= B=Biochemistry= Micro lab (Dr Faryal)	PHARMACOLOGY Drug Metabolism Dr Zafar Iqbal	IMPACT Ms Faseeha
Thursday 20-04-2023	EMBRYOLOGY Revision Prof Tazeen	PHYSIOLOGY ANS & CNS-III FP-007 Prof Qaiser M		BHIOCHEMISTRY KMF	CHS Prevention & Levels of Intervention FCM-005 Dr Allahyar	PATHOLOGY Revision Dr Shahjehan Zafar	SDL
Friday 21-04-2023	JUMATUL-WIDA			JUMATUL-WIDA			

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

HAEM & LYMPHATICS MODULE-II

24TH-28TH- APRIL- 2023 (10TH WEEK SCHEDULE)

DAY VENUE	08:30-09:30 LECTURE HALL I	09:30-10:30 LECTURE HALL I	10:30 - 10:50	10:50-11:50 LECTURE HALL I	11:50-13:30 PRACTICAL LAB	13:30- 13:50	13:50-14:40 LECTURE HALL I	14:40-16:00 DISECTION HALL
Monday 24-04-2023	EID-UL-FITAR			EID-UL-FITAR			EID-UL-FITAR	
Tuesday 25-04-2023	EID-UL-FITAR			EID-UL-FITAR			EID-UL-FITAR	
Wednesday 26-04-2023	ANATOMY THYMUS-I HL-003 Dr Sundus	PHYSIOLOGY ABO System FP-006 Dr Nimrah	BREAK	BHIOCHEMISTRY Dr Ghazala	A=Anatomy=BONE B=Physiology= C=Biochemistry=	NAMAZ & LUNCH	IMPACT Ms Fasseha	AXILLA-I A=DH B=Museum C=Lecture Hall-I
Thursday 27-04-2023	ANATOMY THYMUS-II HL-003 Dr Sundus	PHYSIOLOGY Rh-System FP-006 Dr Nimrah		BIOCHEMISTRY Prof K Fayyaz	B=Anatomy= BONE C=Physiology= A=Biochemistry=		PHARMACOLOGY Drug Excretion Dr Zafar Iqbal	AXILLA-II B=DH C=Museum A=Lecture Hall-I
Friday 28-04-2023	PHYSIOLOGY Introduction to RBCs FP-003 Dr Nimrah	PHARMACOLOGY Concept of Receptor & Types Dr Zafar Iqbal		BIOCHEMISTRY Prof K Fayyaz	C=Anatomy= BONE A=Physiology= B=Biochemistry=	13:30- 14:00	14:00-15:00	15:00-16:00
							PATHOLOGY Revision Dr Shahjehan Zafar	AXILLA-III C=DH A=Museum B=Lecture Hall-I

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

HAEM & LYMPHATICS MODULE-II

1ST-5TH-MAY- 2023 (11TH WEEK SCHEDULE)

DAY VENUE	08:30-09:30 LECTURE HALL I	09:30-10:30 LECTURE HALL I	10:30 - 10:50	10:50-11:50 LECTURE HALL I	11:50-13:30 PRACTICAL LAB	13:30-13:50	13:50-14:40 LECTURE HALL I	14:40-16:00 DISECTION HALL
Monday 01-05-2023	LABOUR DAY		BREAK	HOLIDAY		NAMAZ & LUNCH BREAK	LABOUR DAY	
Tuesday 02-05-2023	ISLA Dr Sundus	PHYSIOLOGY Prof AMQ		BHIOCHEMISTRY Dr Ghazala	A=Anatomy= B=Physiology= C=Biochemistry=		ISLAMIAT Mr Nabeel	AXILLA/PECTORAL REGION REVISION A=DH B=Museum C=Lecture Hall-I
Wednesday 03-05-2023	ANATOMY Intro of Hemopoisis HL-001 Prof Tazeen	PHYSIOLOGY Dr Nimrah		BHIOCHEMISTRY Dr Ghazala	B=Anatomy= C=Physiology= A=Biochemistry=		PHARMACOLOGY	
Thursday 04-05-2023	EMBRYOLOGY Lymph Organ HL-001 Prof Tazeen	PHYSIOLOGY Dr Nimrah		BIOCHEMISTRY Prof KMF	11:50-12:40: IMPACT Ms Fasseha 12:40-13:30: PERLS Dr Kiran Fatima		CHS Nutritional aspect of Iron Deficiency Anemia HL-026 Dr Allayar	ANTERIOR COMPARTMENT OF ARM-I B=DH C=Museum A=Lecture Hall-I
Friday 05-05-2023	BIOCHEMISTRY Microscopic Pic of Anemia-2 Prof KMF	PHYSIOLOGY Dr Nimrah		BIOCHEMISTRY Prof KMF	PRACTICAL LAB 11:50-13:30 C=Anatomy= A=Physiology= B=Biochemistry=	13:30-14:00	14:00-15:00 PATHOLOGY	15:00-16:00 ANTERIOR COMPARTMENT OF ARM-II C=DH A=Museum B=Lecture Hall-I

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

HAEM & LYMPHATICS MODULE-II

15TH-MAY-19TH MAY- 2023 (12TH WEEK SCHEDULE)

DAY VENUE	08:30-09:30 LECTURE HALL I	09:30-10:30 LECTURE HALL I	10:30-10:50 BREAK	10:50-11:50 LECTURE HALL I	11:50-13:10 PRACTICAL LAB	13:10-13:30- BREAK	13:30-14:30 LECTURE HALL I	14:30-15:20 TUTORIALS	15:20-16:00
Monday 15-05-2023	BHIOCHEMISTRY TEST-016-018 HL-017 Dr Meshal	PHYSIOLOGY HL-010 Prof AMQ		GYNAECOLOGY Embryological Basis of Spontaneous Abortion FA-021 Prof Bushra Sheruz Zaman	A=Anatomy==HLA-003 B=Physiology= C=Biochemistry= HLP-09		ANATOMY THYMUS HL-001 Prof Tazeen	A=Anatomy= HL-001 B=Physiology C=Biochemistry=Jaundice	IMPACT STRESS/REVISION HL-BhS-001 Ms Faseeha
Tuesday 16-05-2023	ANATOMY Portal Vein HL-001 Prof Tazeen	PHYSIOLOGY HL-010 Prof AMQ		MEDICINE PRP HL-Ag--001 Dr Alamgir	B=Anatomy==HLA-003 C=Physiology= A=Biochemistry=HLP-09		PHARMACOLOGY Iron/Oral Preparation Hl-Ph-001 Dr Zafar Iqbal	B=Anatomy= HL-001 C=Physiology A=Biochemistry=Jaundice	BHIOCHEMISTRY/ AGING Glutationine HL-017 Dr Ghazala
Wednesday 17-05-2023	ANATOMY Splenic Artey HL-001 Prof Tazeen	PHYSIOLOGY Hl-010 Dr Nimrah		GYNAECOLOGY Amniocentesis & causes FA-039 Prof Bushra Sheruz Zaman	C=Anatomy==HLA-003 A=Physiology= B=Biochemistry= HLP-09		PERLS PORTFOLIO Prof Muneer Azhar	C=Anatomy= HL-001 A=Physiology B=Biochemistry=Jaundic e	BIOCHEMISTRY Gene Defect HL-21 Dr Faryal
Thursday 18-05-2023	RADIOLOGY JOINT DISLOCATION FA-050 Dr Sundus	PHYSIOLOGY HL-010 Dr Nimrah		PEDIATRICS Immunization FA-054 Prof Dr Abdul Rehman	11:50-12:40 PERLS Communication Skills Prof Muneer Azhar	12:40-13:30 DISEASE PREVENTION Contraception HL-CM-002 Dr Iqra Zulfiqar	13:30-13:50 BREAK	13:50-14:50 BIOCHEMISTRY HL-022-23 Dr Gul	14:50-16:00 CSIM/SKILLS LAB VENIPUNCTURE & BLOOD COLLECTION PALLOR A=Dr Faryal, Dr Gul B= Dr Bushra Dr Uzma C=Dr Maheen & Dr Hibba
Friday 19-05-2023	IMPACT Counselling/ Informational HL-BhS-001 Ms Faseeha	PHYSIOLOGY REVISION HL-010 Dr Nimrah		GYNAECOLOGY Male/Female Infertility FA-011-13 Prof Bushra Sheruz Zaman	11:50-12:40 PATHOLOGY Transfusion Reaction HL-Pa-001 Dr Shahjehan Zafar	12:40-13:30 DISEASE PREVENTION Genetic Counselling HL-CM-003 Dr Iqra Zulfiqar	13:30-14:00 NAMAZ BREAK	14:00-15:00 PHARMACOLOGY VIT- B12 Preparation/Iron Antidote Hl-Ph-001 Dr Zafar Iqbal	15:00-16:00 BIOCHEMISTRY REVISION HL-017 Dr Maria

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

HAEM & LYMPHATICS MODULE-II

22ND-26TH-MAY- 2023 (13TH WEEK SCHEDULE)

DAY VENUE	08:30-09:30	09:30-10:30	10:30= 10:50	10:50-11:50	11:50-13:10	13:10- 13:30	13:30-14:30	14:30-15:30 TUTORIALS	15:30-16:00
	LECTURE HALL I	LECTURE HALL I		LECTURE HALL I	PRACTICAL LAB		LECTURE HALL I		
Monday 22-05-2023	BHIOCHEMISTRY REVISION Dr Meshal	PHYSIOLOGY REVISION Prof AMQ		PATHOLOGY REVISION Dr Shahjehan Zafar	OSCE PREPARATION A=Anatomy B=Physiology C=Biochemistry		ANATOMY REVISION Prof Tazeen	REVISION A=Anatomy B=Physiology C=Biochemistry Jaundice	SDL
Tuesday 23-05-2023	HISTOLOGY Dr Jameel AS	PHYSIOLOGY Prof AMQ	BREAK	PERLS Communication Skills Prof Muneer Azhar	OSCE PREPARATION B=Anatomy C=Physiology A=Biochemistry	BREAK	IMPACT Counseling/ Informational HL-BhS-001 Ms Faseeha	REVISION B=Anatomy C=Physiology A=Biochemistry Jaundice	SDL
Wednesday 24-05-2023	PATHOLOGY REVISION Dr Shahjehan Zafar	PHYSIOLOGY Prof AMQ		GYNAECOLOGY Amniocentesis & causes FA-039 Prof Bushra Sheruz Zaman	OSCE PREPARATION C=Anatomy A=Physiology B=Biochemistry		PHARMACOLOGY VIT- B12 Preparation/Iron Antidote-REVISION Hl-Ph-001 Dr Zafar Iqbal	REVISION C=Anatomy A=Physiology B=Biochemistry Jaundice	SDL
Thursday 25-05-2023	9:30 AM -12:30 PM GROUP-A			9:30 AM -12:30 PM GROUP-B			9:30 AM -12:30 PM GROUP-C		
	EOB (THEORY) LECTURE HALL I			END OF BLOCK-I EXAM (THEORY) LECTURE HALL 5-IT HALL			END OF BLOCK-I EXAM (THEORY) LECTURE HALL 2		
Friday 26-05-2023	08:30-09:30	09:30-10:30	10:30- 10:50	10:50-11:50	11:50-13:10	13:10- 14:00	14:00-15:00	15:00-16:00	
	BHIOCHEMISTRY REVISION Dr Meshal	PHYSIOLOGY REVISION Prof AMQ	BREAK	PATHOLOGY REVISION Dr Shahjehan Zafar	PERLS Gibb's Cycle REVISION Hl-Ph-001 Dr Kiran Fatima	JUMA NAMAZ	ANATOMY REVISION Prof Tazeen	SDL	

BAHAWALPUR MEDICAL COLLEGE

FIRST PROFESSIONAL MBBS-2023-BATCH-2

MUSCULOSKELETAL & LOCOMOTOR MODULE-III-

29TH-MAY-TILL 2ND-JUNE- 2023 (14TH WEEK SCHEDULE) (THEME: MUSCLE-I)

Monday 29-05-2023	**9:30 AM -12:30 PM**								
	EOB (OSPE/OSCE/VIVA (INTERNAL & EXTERNAL) GROUP-A								
Tuesday 30-05-2023	**EOB (OSPE/OSCE/VIVA (INTERNAL & EXTERNAL) GROUP-B**								
Wednesday 31-05-2023	**EOB (OSPE/OSCE/VIVA (INTERNAL & EXTERNAL) GROUP-C**								
Thursday 01-06-2023	**08:30-09:30**	**09:30-10:30**	**10:30-10:50**	**10:50-11:50**	**11:50-12:50**	**12:50-13:30**	**13:30-13:50**	**13:30-14:30**	**14:30-16:00**
	LECTURE HALL I	**LECTURE HALL I**		**LECTURE HALL I**	**LECTURE HALL I**	**LECTURE HALL I**		**LECTURE HALL I**	**DISECTION HALL**
	GROSS ANATOMY **Introduction of Upper Limb** **MA-A-001** **Prof Tazeen**	**PHYSIOLOGY** **Membrane Potential & nernest Potential** **MS-P-001** **Prof AMQ**	**BREAK**	**BIOCHEMISTRY** **Classification of Protein & Its Biomedical Importance** **MS-B-001** **Prof KMF**	**IMPACT** Psychosocial factors Influencing chronic illnesses **MS-BhS-001** **Ms Faseeha**	**AGING** **Muscle strength** **MS-Ag-003** **Dr Alamgir**	**BREAK**	**PAK STUDIES** **Pakistan Movement 1857-1919** **Mr Adnan Zahoor**	**A=DH** (Pectoral Region) MS-A-001,003 **B=Museum** Pectoral Region) MS-A-001,003 **C=Lecture Hall-I** Pectoral Region) MS-A-001,003
Friday 02-06-2023	**EMBRYOLOGY** **Development of Muscles** **MA-A-072** **Prof Tazeen**	**PHYSIOLOGY** **Action potential &RMP** **MS-P-002,003,006,007,008** **Prof Qaiser M**		**CHS** **Causes & Prevention of MSD due to Child Labor** **MS-CM-001** **Dr Iqra Zulfiqar**	**11:50-13:30**		**13:30-14:00**	**14:00-15:00**	**15:00-16:00**
					DISCECTION HALL **B=DH** (Scapular region &muscles of back) MS-A-003 **C=Museum** (Scapular region & muscles of back) MS-A-003 **A=Lecture Hall-I** (scapular region &muscles of back) MS-A-003		**JUMA**	**BIOCHEMISTRY** **Classification of Amino acids** **MS-B-002** **Prof K Fayyaz**	TUTORING **A=Dr Faryal** **B=Dr Kiran** **C=Dr Iqra Arshad** **D=Gul Zeba** **E=Dr Hibba**

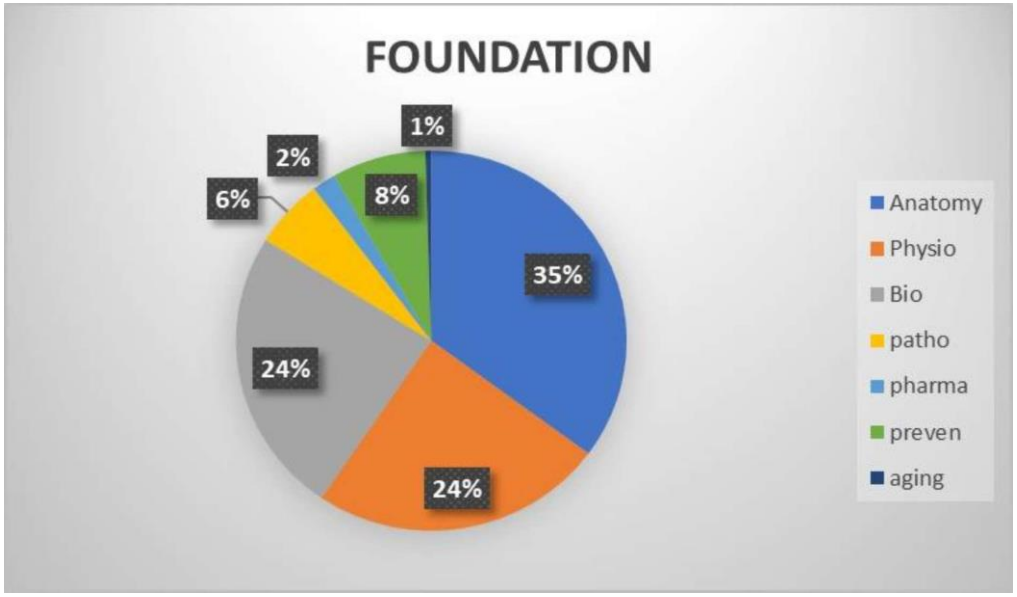
7.RECOMMENDED MINIMUM HOURS FOR 2K23			
Foundation Module Block-1 (Module-1)			
Disciplines	**Theory**	**Practical**	**Total Hours=200**
Anatomy (Gross Anatomy, Embryology & Post Natal Development), Microscopic Anatomy (Histology And Pathology	12+20+08=40	05+05+22=32	72
Medical Physiology	40	10	50
Medical Biochemistry	40	10	50
Pathology	12		12
Pharmacology And Therapeutics	04		04
Impact (Epidemiology, Sociology/Society, Community Medicine & Public Health, Behavioral Science	08		08
Aging	04		04
Heam & Lymphatics Block-1 (Module-2)			
Disciplines	**Theory**	**Practical**	**Total Hours=071**
Anatomy (Gross Anatomy, Embryology & Post Natal Development), Microscopic Anatomy (Histology And Pathology	02+01=03	02	05
Medical Physiology	20	06	26
Medical Biochemistry	21	06	27
Pathophysiology & Pharmacotherapeutics	02+05=07		07
Impact (Epidemiology, Sociology/Society, Community Medicine & Public	05		05

Health,Behavioral Science			
Aging	01		01
Musculoskeletal Module Block-2 (Module-3)			
Disciplines	**Theory**	**Practical**	**Total Hours=237**
Anatomy (Gross Anatomy, Embryology & Post Natal Development), Microscopic Anatomy (Histology And Pathology	116+06+06=03	10	138
Medical Physiology	34		35
Medical Biochemistry	24	06	30
Pathophysiology & Pharmacotherapeutics	04+07=11		11
Impact (Epidemiology, Sociology/Society, Community Medicine & Public Health, Behavioral Science	16+03=19		19
Aging	04		04
CVS Module Block-3 (Module-4)			
Disciplines	**Theory**	**Practical**	**Total Hours= 192**
Anatomy (Gross Anatomy, Embryology & Post Natal Development), Microscopic Anatomy (Histology And Pathology	14+14+04=32	03	35
Medical Physiology	75	10	85
Medical Biochemistry	30	08	38
Pathophysiology & Pharmacotherapeutics	04+07=11		11
Impact (Epidemiology, Sociology/Society, Community Medicine & Public Health, Behavioral Science	13+05=15		19
Aging	05		04

Respiration Module Block-3 (Module-5)			
Disciplines	**Theory**	**Practical**	**Total Hours=136**
Anatomy (Gross Anatomy, Embryology & Post Natal Development), Microscopic Anatomy (Histology And Pathology	30+06+04=40	05	45
Medical Physiology	45	08	53
Medical Biochemistry	15	02	17
Pathophysiology & Pharmacotherapeutics	05+03=08		08
Impact (Epidemiology, Sociology/Society, Community Medicine & Public Health) Behavioral Science	07+03=10		10
Aging	03		03

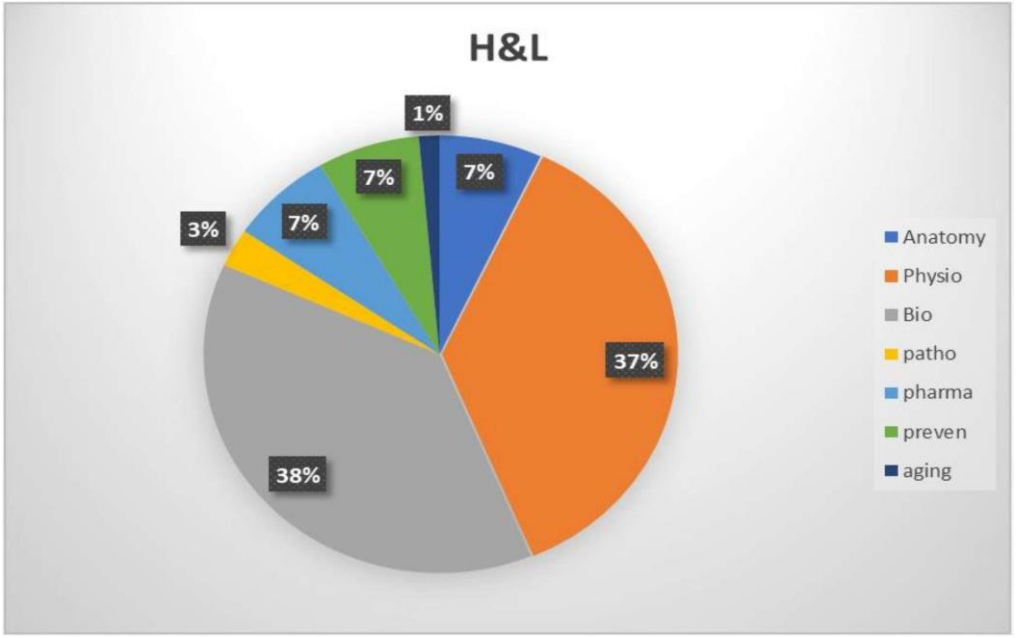
8. DISTRIBUTION & DURATION OF TEACHING ACTIVITIES AMONGST DIFFERENT DISCIPLINE IN FOUNDATION MODULE

Content Distribution Of Foundation Module With Various Teaching Strategies						
Disciplines	**LGIS**	**Demonstration**	**Practical**	**CBL**	**CFRC**	**Poster Presentation**
Anatomy	✓	✓	✓	✓		✓
Physiology	✓	✓	✓	✓	✓	✓
Biochemistry	✓	✓	✓	✓		✓
Pathology	✓			✓		✓
Pharmacology	✓			✓		✓
CHS	✓			✓		✓
Aging	✓			✓		✓



8A. DISTRIBUTION & DURATION OF TEACHING ACTIVITIES AMONGST DIFFERENT DISCIPLINE IN BLOOD & LYMPH MODULE

Content Distribution Of Blood & Lymph Module With Various Teaching Strategies						
Disciplines	**LGIS**	**Demonstration**	**Practical**	**CBL**	**CFRC**	**Poster Presentation**
Anatomy	✓	✓	✓	✓		✓
Physiology	✓	✓	✓	✓	✓	✓
Biochemistry	✓	✓	✓	✓		✓
Pathology	✓			✓		✓
Pharmacology	✓			✓		✓
CHS	✓			✓		✓
Aging	✓			✓		✓



9. LEARNING OBJECTIVES OF FOUNDATION MODULE

LEARNING OBJECTIVES OF FOUNDATION MODULE			
THEORY			
Weeks	**8 Weeks**	**Recommended Minimum Hours**	**205**
CODE	**SPECIFIC LEARNING OUTCOMES**	**DISCIPLINE**	**TOPIC**
	GROSS ANATOMY	**TOTAL HOURS = 12**	
FA-001	• Briefly describe the applied branches ofanatomy. • 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
FA-002	• Describe, identify, and exemplify thegeneral morphological features of bones.Describe the developmental classificationof bones. • Describe the regional classification of bones. • Describe the structural classification ofbones. • Describe the morphological classification of bones. • Describe and exemplify Sesamoid, Pneumatic, Wormian and Heterotopicbones. • Describe the classification of bones on thebasis of osteogenesis. • Describe the relationship of growing end of bones with the direction of nutrient foramen. • Describe the blood supply, innervation and lymphatic drainage of various types ofbones. • Describe the use of bone tissue for bonemarrow biopsy and bone grafting. • Describe the salient features of common types of fractures	General Anatomy	Bones (Osteology)
FA-003	• Describe the general features of cartilage And its importance in gross anatomy.	General Anatomy	Cartilage (Chondrology)
FA-004	• Describe the subtypes and gross featuresof Hyaline Cartilage • Describe the gross features of ElasticCartilage. • Describe the gross features of Fibrocartilage. • Differentiate the three types of cartilages • Describe and exemplify the structural classification of Joints (synovial, cartilaginous & fibrous) along with their sub-classification. • Describe the components andcharacteristic features of a Synovial Joint. • Describe the blood supply, innervation and lymphatic drainage of Synovial Joints,cartilaginous joints, and fibrous joints.	General Anatomy	Joints (Arthrology)

	• List the factors stabilizing a synovial joint. • Describe the mechanism of movements		
FA-005	• Describe the structure and function of Skin on the basis of its two layers; Epidermis and Dermis • Describe the surface irregularities of the skin. • 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, andmodifications of Deep Fascia • Describe and classify the burns and • anatomical basis of manifestations of integumentary system	General Anatomy	Integumentary System
FA-006	• Define Muscle • Classify and describe Muscle Tissue based on Structure, Function andDevelopment • Describe Somatic and Visceral Muscles Describe and differentiate the Red and • White Variety of Skeletal Muscles • Describe Type A, B and C of SkeletalMuscles Classify and describe the skeletalmuscles based on architecture. • Classify skeletal muscle based on action.Describe the parts of a skeletal muscle. Describe the methods of studying skeletalmuscle activity. • Describe and differentiate the basic organization of innervation to skeletal, smooth, and cardiac muscle. • Describe the structure of Tendons. Describe the structure of Synovial Bursa describethe structure of Raphe. • Comprehend the meaning of Paralysis, Spasm, Atrophy, Hypertrophy, Hyperplasia and Regeneration in relationto muscle tissue. • Define Myasthenia Gravis and Polymyositis • Define Angina pectoris and Fibrillation of • Cardiac Muscle	General Anatomy	Muscle Tissue (Myology)
FA-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 • Define the terms: Arteriosclerosis,Atherosclerosis and Varicose Veins • Describe the general organization of Lymphatic Circulation • Define the terms: Lymphoid Tissue, Tissue Fluid,	General Anatomy	Vascular System (Angiology)

	Lymphatic Capillaries,Lymph and Lymphatic Vessels • Define the terms; Lymphangitis, • Lymphadenitis, Lymphadenopathy and Lymphography		
FA-008	• Define neuron. • Describe the anatomical structure of aneuron. • Classify neurons based on morphology with examples. • Classify neurons based on function. Describe the components of the centralnervous system. • Describe the components of theperipheral nervous system. • Name the supporting cells (neuroglia) ofthe 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. • Describe the gross and/or microscopicanatomy of the following structures:Nerve, Nerve fiber, Ganglion, Tract, Fasciculus, Funiculars and Lemniscuses Enlist the cranial nerves I to XII • Describe the types of nerve fibers carriedby and distribution of the cranial nerves. Describe the formation, types ofmodalities carried by, and distribution ofthe spinal nerves. • Define and explain Dermatome (s) Define and explain My tome (s) Describe the formation of Plexuses. Differentiate between Somatic and Visceral nervous system. • Define Receptors Describe the functions of receptors. Classify sensory receptors based on modality (with location) • Define Effectors • Describe the functions of effectors. Describe ANS and differentiate betweensympathetic and parasympathetic nervous system	General Anatomy	Nervous Tissue (Neurology)
FA-009	• Identify displacement of fracture segments of the bone • Identify dislocation of joints	Integrate with Radiology	Imaging in Anatomy
	• Describe the basic concept behind taking A biopsy of a tissue.	Integrate with Surgery	
	EMBRYOLOGY & POST-NATAL DEVELOPMENT	**TOTAL HOURS = 20**	
	• Describe the cell cycle • Enlist different stages of Mitosis andMeiosis • Compare and contrast mitosis and Meiosis • Enlist the numerical chromosomalanomalies		

FA-010	• Describe the anatomical basis fornumerical chromosomal abnormalities Describe the clinical presentation ofnumerical chromosomal abnormalitiesand justify them Embryo logically • Describe the clinical presentation ofstructural chromosomal abnormalitiesand justify them Embryo logically list the structural chromosomal anomalies • Describe the anatomical basis forstructural chromosomal abnormalities • Describe the anatomical basis for thestructural and numerical chromosomalanomalies • Describe the embryological basis for mosaics • Describe the embryological basis fortetratomic • Describe the clinical presentation of • Common numerical chromosomal abnormalities	Embryology	Cell cycle and Gametogenesis
FA-011	• Describe the Process of spermatogenesisand spermatogenesis • Describe the embryological basis forAbnormal gametes • Discuss the embryological basis of male infertility	Embryology	Spermatogenesis
FA-012	• Describe the Prenatal and postnatal maturation of oocyte	Integrate with Gynecology	Oogenesis
FA-013	• Describe the significance of arrested development of oocyte	Embryology	Oogenesis
	• Describe the hormonal control of oocyte maturation • Discuss the embryological basis of female infertility		
FA-014	• Compare and contrast oogenesis and spermatogenesis		Gametogenesis
FA-015	• Enlist and briefly describe the female reproductive organs		Female Reproductive organs
FA-016	• Describe the hormonal control of female reproductive cycles • Enumerate and describe the steps of theovarian cycle • Describe the process of ovulation Describe the formation, function and fateof corpus luteum • Describe the anatomicalandphysiological basis of the following:Mattel schemers, Anovulation, Menopause Define menstrual cycle • Describe the phases of menstrual cycle Describe the anatomical andphysiological basis of an-ovulatory menstrual cycle	Integrate with Gynecology	Female Reproductive Cycle
FA-017	• Describe the transportation of male and female gametes • Describe viability of gametes • Explain the anatomical basis of diaspermy, triploidy		Transportation of gametes

FA-018	• Define fertilization • Describe the phases of fertilization • Draw and label a diagram illustrating thephases of fertilization • Enumerate and describe the results offertilization • Describe the anatomicaland • physiological basis of sex determinationof the embryo	Embryology	Fertilization
FA-019	• Define contraception • Explain the mechanisms of followingcontraceptive techniques: 1. Barrier methods 2. Hormonal methods 3. Intrauterine device (IUD) 4. Emergency contraceptive pills (ECPs) 5. Male and female sterilization	Integrate with Physiology	Contraception
FA-020	• Describe the anatomical and physiological basis of male and female infertility • Describe the role of clomiphene citrate in inducing ovulation • Define assisted reproductive techniques Describe the mechanisms of followingreproductive techniques: 1. In vitro fertilization (IVF) and embryotransfer 2. Cryopreservation of embryo 3. Intra-cytoplasmic sperm injection (ICSI) 4. Assisted in vivo fertilization 5. Surrogacy • Explain the correlation of multiple birthswith assisted reproductive techniques	Integrate with Gynecology	Infertility & assisted reproductive techniques
FA-021	• Describe the process of cleavage ofembryo and blastocyst formation Describe the differentiation of embryoblast into edibles and hypoblast Describe the establishment of cranial-caudal embryonic axis • Describe pre-implantation geneticdiagnosis • Describe the origin and uses of embryonicstem cells and the techniques of obtainingthese cells from the embryo (reproductivecloning & therapeutic cloning) • Explain the embryological basis of spontaneous abortion • Describe the events and factors • influencing the cleavage of zygote	Embryology	Cleavage, blastocyst formation
	• Describe the sequence of events pertaining to formation of blastocystCompare 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	
	• Describe the anatomical basis for the preimplantation genetic diagnosis		

	• Describe the formation of amniotic cavity, embryonic disc, and umbilical vesicle • Describe the formation of chorionicsac		
FA-022	• Describe the Uterus at the time of implantation (decidua reaction) • Illustrate the concept of Implantation Describe the differentiation of inner andouter cell mass • Describe the Abnormal implantation/ extrauterine implantations • Enumerate the factors responsible for • inhibition of implantation	Embryology	Implantation
FA-023	• Describe the Molar pregnancy		Molar pregnancy
FA-024	• Describe the Establishment of utero- • placental circulation		Utero-placental circulation
FA-025	• Describe the embryological basis of • abortions and its types	Integrate with Gynecology	Abortion
FA-026	• Describe the Formation & fate of primitivestreak • Draw a concept map highlighting the sequence of events responsible for transformation of bilaminar germ disc intotrilaminar germ disc • Describe the embryology behind sacrococcygeal tetratomic and justify itsclinical picture • Describe the molecular factors responsible for gastrulation	Embryology Integrate with Gynecology	Gastrulation
FA-027	• Describe the Invagination and movementof prenotochordal cells • Describe the Notochordal plate formationDescribe the Neuroenteric canal formation • Describe the fate of the notochord • Describe the Establishment of body axis • Draw and label the fate mapestablishment • Describe the Fate map establishment • Describe the molecular basis fornotochord formation	Embryology	Formation of notochord
	• Describe the role of notochord as an inducer • Describe the embryological basis for situs • inverses		
FA-028	• Describe the Formation of neural tube from neural plate. • Justify embryo logically 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	Embryology	Derivatives of ectoderm
	• Describe the Differentiation of mesoderminto its constituting components		

FA-029	• 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	Mesodermal derivatives
FA-030	• Describe the processes of vasculogenesis & angiogenesis • Explain the features of primordialcardiovascular system • Describe the anatomical justification for Capillary hemangiomas	Integrate with Cardiology	Early development of CVS
FA-031	• Enlist the derivatives of germ layers	Embryology	Germ layer derivatives
FA-032	• Describe the formation and functions of • chorionic villi		Chorionic Villi
FA-033	• Describe the Cephalic-caudal foldingDescribe the Lateral folding	Integrate with Gynecology	Folding of embryo
FA-034	• Enlist and Describe the Derivatives ofintermediate and lateral plate mesoderm Enlist & Describe the Derivatives of endoderm	Embryology	Germ layer derivatives
	• Enlist & describe the derivatives ofectoderm	Integrate with Gynecology/ pediatrics	
FA-035	• Describe the factors influencing th e embryonic development	Embryology	
FA-036	• Enlist the characteristic features of the embryo during 4th 8th weeks. • Describe the criteria for estimating the developmental staging in human embryos Explain the estimation of gestational & embryonic age		
FA-037	• Explain the trimesters of Pregnancy. Explain the estimation of fetal age Explain the measurement and characteristics of fetus. • Describe the Overview of the monthly changes in External appearance of fetus (9th-38th weeks) • 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 and post maturity		
FA-038	• List the fetal membranes • Describe the macroscopic & microscopicfeatures of Decidua • Enlist the various parts of decidua Functionally correlate the parts of thedecidua with its structure • Describe the Changes in the trophoblasticleading to the development of placenta Describe the Structure (macroscopic & • microscopic) of placenta	Integrate with Gynecology	Placenta

FA-039	• Describe the Formation & fate of Umbilicalcord • Describe the Cord abnormalities • Justify embryologically the clinical features observed in Absence of umbilicalartery • Describe the formation and circulation of Amniotic fluid • Enlist the components of amniotic fluid • Describe the Procedure of diagnosticamniocentesis • Explain the significance of amniotic fluid • Describe the factors responsible for Polyhydramniosn and oligohydramnios • Describe the characteristic signs andsymptoms of oligohydramnios andpolyhydramnios and justify embryo logically • Explain the clinical picture of umbilical band syndrome and justify it embryo logically • Explain the formation and fate of umbilical vesicle (yolk sac) • Explain the formation and fate of Allantois	Integrate with Gynecology	Fetal membranes
FA-040	• Describe the development of Dizygotictwins • Describe the development of Monozygotictwins • Describe the fetal membranes in twinpregnancy • Describe the twin transfusion syndrome Explain the zygosity of the twins • Describe the characteristics of various types of conjoined monozygotic twins	Embryology	Multiple pregnancies
FA-041	• Describe the Various methods of pre-natal diagnosis • Describe the Fetal therapy		Prenatal diagnosis and fetal therapy
FA-042	• Define morphogens, protein kinases, notch delta pathway, transcription factors,epigenetics • Define stem cells and pluripotency • Define the human disorders associated • with genetic mutations		Molecular regulations and signaling pathways
FA-043	• Define teratology: classification andcauses of birth defects • Define genomic imprinting • 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: ➢ Drugs ➢ Environmental agent ➢ Chemicals & heavy metals ➢ Infectious agents Radiation ➢ Hormones ➢ Maternal diseases • Describe the basis for male-mediatedteratogens		Teratogenicity

CODE	MICROSCOPIC ANATOMY (HISTOLOGY PATHOLOGY)	TOTAL HOURS=8	
FA-044	• Describe different types of microscopies • Describe Staining methods and theirsignificance • Describe the basis ofenzyme histochemistry	Basic techniques in histology	Introduction to microscopy & staining techniques
FA-045	• Describe the electron microscopicstructure and fluid mosaic model ofplasma membrane • Draw the fluid mosaic model of plasma membrane • Draw and label the structure and functionof glycocalyx coat and lipid raft • Describe the structure of glycocalyx coat and lipid raft and correlate it with function • Describe different types of membrane proteins and their functions	Basic Histology	Cell membrane
	• Explaindifferent modes of transport across the cell membrane • Describe the signal reception and transduction through different routes • Tabulate the mechanisms of transportacross the cell membrane • Explain the following disorders related to cell membrane: Pseudonym poparathyroidis and Dwarfism	Integrate with pathology	
FA-046	• List the membranous and non- membranous cellular organelles • Draw and label the light and electron microscopic structure and functions of thecellular organelles • Describe the structure of the followingcellular organelles and correlate with their function: • Ribosomes Endoplasmic reticulum (rough &smooth) ➢ Golgi apparatus ➢ Lysosomes ➢ Proteasomes ➢ Mitochondria ➢ Peroxisomes		Cell Organelles
FA-46a	• Describe the histological feature of cytoplasmic inclusions	Integrate with pathology	
FA-46b	• Describe the structure of nuclear envelope and nuclear pores	Integrate with Physiology	
FA-047	• Describe the structure of chromatin • Describe the structure of chromosome • Draw and label the structure of nucleolus • Describe the structure of nucleolus • Describe the structure and types of DNAand RNA	Histology	Cell Nucleus
	• Describe the histological basis for • apoptosis and necrosis		
	• Describe the correlation of cell cycle withthe following diseases.	Integrate with	

	• Retinoblastoma • Malignancy	Pathology	
FA-048	• Describe the histological structure and function of basement membrane (light and electron) • Describe the mechanism of ciliary • movements • Draw and label a diagram illustrating the electron microscopic structure of basement membrane • Describe the basal surface modifications of epithelia • Describe the electron microscopicstructure and functions of intercellular junctions (lateral surface modifications) and give their locations. • Describe the Biochemical composition of the baso lateral modifications • Explain the correlation of intercellularjunctions with the following diseases: ➢ Gastric ulcer ➢ Food poisoning ➢ Pemphigus vulgaris	Histology	Epithelium
FA-048a	• Describe the electron microscopicstructure of the following apical cellsurface specializations: 1. Microvilli 2. Sterocilia 3. Cilia	Integrate with biochemistry	
FA-48b	• Explain the correlation between the structure of microvilli and celiac disease • Classify and exemplify the epithelia withtheir histological structure, locations and • functions	Integrate with pathology	
FA-48c	• Describe the structure of exocrine glandsExplain the mechanism of transport across the epithelia • Describe the classification of exocrineglands on the basis of: ➢ Shape of secretory portions andducts ➢ Mode of secretion ➢ Type of secretion	Histology	
	Explain the histological basis of acne vulgaris	Integrate with Pathology	
FA-049	• 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 • Describe the composition, distribution,and function of glycosaminoglycan's inconnective tissue • Explain the role of GAGs in formation ofbarrier against bacteria and the role of hyaluronidase in the breakdown of this • barrier	Histology	Connective tissue

	• Describe the structure, distribution, andfunctions of the cells of macrophage- • mononuclear phagocytic system		
	• Describe the role of macrophages in innate immunity		
	• Describe the types of adipose tissue (white & brown), their histogenesis, locations and function		
	• Explain the etiology of Marfan s syndrome		
	• Describe lipid storage and mobilization inand from adipocytes and compare the • brown and white adipose tissue		
	• Explain the histological basis and clinical presentation of the following diseases in relation to adipocytes: ➢ Lipoma ➢ Obesity (with special emphasis ofthe role of leptin)		
PRACTICAL			
CODE	**SPECIFIC LEARNING OBJECTIVES**	**DISCIPLINE**	**TOPIC**
	GENERAL ANATOMY	**TOTAL HOURS = 05**	
FA-050	• Demonstrate the anatomical terms of position and movement, in particular on limbs. • 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 radio graphically.	Anatomy	OsteologyImaging and cross-sectional anatomy Arthrology
	EMBRYOLOGY	**TOTAL HOURS = 05**	
FA-051	• Calculate fertilization age, gestational age, Embryonic/fetal age and expected date of delivery. 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 gastrulation (notochord & primitive streak, three germ layers and their parts/derivatives), angiogenesis, neurulation, somite's and embryonic age determination based on it, chorionic villi (primary, secondary & tertiary),developmental defects (sacrococcygeal teratoma, neural tube defects) • Fetal features during fetal period. • Determine age of fetus based on these features.	Anatomy	Embryology
FA-052	• Describe the USG report for the: fetal features, fetal age estimation, placental variations and fetal membranes. multiple pregnancies	Integratedwith Radiology	

FA-053	• On gross examination of human placenta and umbilical cord, identify: normal complete placenta and cordplacental structural variations umbilical cord, and anomalies of itsattachment to placenta contents of umbilical cord (umbilical vessels anomalies)	Integrated with Gynecology	
FA-054	• Identify the features of hemolytic disease of newborn, dizygotic and monozygotic twins and correlate them embryo logically	Integratedwith Pediatrics	
FA-055	• Identify the protocols and procedural steps for amniocentesis and chorionic villus sampling (CVS) and correlate their significance in developmental defects. • Correlate the role of alpha feta-protein • Assays in neural tube defects.	Integrated with Gynecology	
	Histology	**Total Hours=22**	
FA-056	• Describe different types of staining techniques and their significance with special emphasis on H&E staining	MicroscopicAnatomy	Staining techniques
FA-057	• Identify and draw different parts of light microscope		Microscope
FA-058	• Identify and demonstrate different cell shapes under the microscope		Cell Shape
FA-059	• Identify and demonstrate under light microscope 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 & non keratinized) 6. Stratified cuboidal 7. Stratified columnar 8. Transitional		Epithelium
FA-060	• Identify and demonstrate serous & mucous secreting glands under light microscope		Epithelium
FA-061	• Identify and demonstrate the various types of connective tissue		Connective tissue
MEDICAL PHYSIOLOGY			
THEORY		**TOTAL HOURS=40**	
	• 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		
FP-001	• Explain the significance of feed forward/adaptive control/delayed negative feedback mechanisms	Medical Physiology	Cell Biology
	• 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		
	• Enlist membranous and non-membranous organelles • Enlist the self-replicative organelles • Differentiate between the functions of smoothand 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, K and Cl in extracellular and intracellular fluid • Define and enlist different types of diffusion • Explain the process of facilitated diffusion withthe 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/KATPase pump.		
FP-002	• Enumerate the functions of Blood. • Explain the composition of blood. • Enumerate the plasma proteins • Discuss functions of plasma proteins. • Describe the pathophysiology of edema	Medical Physiology	Blood
FP-003	• Discuss the characteristics of red blood cells • Explain different types of Bone marrows • Enumerate the different sites of erythropoiesisat 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 BloodCells

FP-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 thesevalues are disturbed • Enlist the abnormal types of hemoglobin	Medical Physiology	Hemoglobin
FP-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 leukemia • Explain the effects of leukemia on body • Define leukopenia • Explain the process of defense against invading agent by macrophages • Discuss different lines of defense during inflammation. • Explain the functions of Neutrophils & macrophages in spread of inflammation (walling off effect). • Define the reticuloendothelial system. • Explain the characteristics & functions of basophils. • Explain the characteristics & functions of eosinophil & enlist conditions in which these cells are raised.	Medical Physiology	White Blood Cells
FP-006	• Enumerate different blood group types. • Explain the basis of ABO and Rh blood system • Explain the Landsteiner law	Medical Physiology	Blood Types
FP-007	• Discuss Components of Autonomic nervoussystem • Explain the physiological anatomy of sympathetic and parasympathetic nervoussystem • Describe the types of adrenergic andcholinergic receptors and their functions. • Explain the effects of sympathetic and parasympathetic on various organs/ system of body	Medical Physiology	Autonomic Nervous System
PHYSIOLOGY PRACTICALS TOTAL HOURS=10			
FP-008	• Explain laboratory/clinical procedure to the subject. • Obtain verbal consent from subject before starting aprocedure. • Reassure the subject after the procedure.	Medical Physiology	Consent
FP-009	• Determine Erythrocyte Sedimentation Rate and packed cell volume		RBCs
FP-010	• Determination of blood group		Blood Group
FP-011	• Interpret Total Leucocyte Count, • Differential Leucocyte Count (normal & abnormal) in a CBC report generated by Automated Cell Counter.		WBCs
MEDICAL BIOCHEMISTRY TOTAL HOURS=40			
CODE	**SPECIFIC LEARNING OBJECTIVES**	**DISCIPLINE**	**TOPIC**

FB-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 cells.	Cell Biology	Structure ofcell
FB-002	• Describe the composition and structure of cell on Bio chemical basis and justify it as fluid mosaic model. • Describe the structure and function of cell membrane with particular reference to the role of a. Lipids b. Carbohydrates c. Proteins • Explain why the cell membrane is called fluid mosaic model		Cell Membrane
FB-003	• Discuss the various ways of cell-to-cell communication and to the environment. • Describe cell to cell communications. Cell signalingpathways (only G protein signaling). • Describe cell to cell adhesion.	Cell Biology	Signal transduction
FB-004	• Explain the Biochemical markers & importance of sub cellular organelles & their inherited disorders especially. a. Cell disease. b. Refsum Disease. c. Parkinsonism d. Progeria	Cell Biology	Sub Cellular organelles
FB-005	• Describe the chemistry of purines and pyrimidine's and their linkage in nucleic acid synthesis and their metabolism.		Chemistry ofpurine and pyrimidine's
FB-006	• Discuss the organization of DNA with special reference to Watson and crick model, composition structure, role of pairing and genetic coding. • Describe the structural forms of DNA.		DNA
FB-007	• Discuss the structure of different types of RNAs with special reference to composition, linkage, functions hn RNA & micro RNA. • Illustrate structure & functions of various types of RNAs. • Describe the functions of various small RNAs present in cell.		
FB-008	• Explain the structure and nomenclature of nucleotides, biomedical importance of natural and synthetic analogues • Interpret the role of synthetic analogues of nucleotides in medicine based on sign/symptoms and data e.g. Methotrexate, 5 Fluorouracil and Allopurinol.		Neocleotides
FB-009	• Explain the higher organization of DNA. • Difference between DNA, chromatid and chromosome.		Chromosomes
FB-010	• Illustrate de Novo and salvage pathways of purines and pyrimidine's. • Describe the degradation of purine and pyrimidine		Nucleotide

	nucleotides Interpret Leach- Nyman syndrome, gout and adenosine deaminize deficiency on given data. • Interpret Lesch-Nyhan Syndrome, Gout & Adenosine deaminase deficiency in given data.		Metabolism
FB-011	• Describe in detail all steps in prokaryotic DNA replication with emphasis on: Different proteinsrequired, Primers, DNA polymerase; their differentcomponents and functions, Initiation, elongationand termination of replication, Topoisomerases Describe in detail all the steps in Eukaryotic DNAreplication with emphasis on differences between Pro- and Eukaryotes		Replication
FB-012	• Describe DNA repair especially Xeroderma pigments		DNA Repair
FB-013	• Explain the transcription in prokaryotes focusing on the following key points; RNA polymerase, its components and functions, Initiation, elongation, and termination of transcription • Illustrate the transcription in eukaryotes focusing on the differences between pro- and eukaryotic transcription and post transcriptional modifications Wobble hypothesis		Transcription
FB-014	• Interpret the translation focusing on the following key points: Initiation, elongation and termination and inhibition by drugs • Describe Post-translational modification of proteins		Translation
BIOCHEMISTRY PRACTICAL TOTAL HOURS=10			
FB-015	• Demonstrate the step taken to prevent or rectify the Laboratory Hazards	Biochemistry	Lab Hazards
FB-016	• Identify the structure of cells under microscope		Cell
FB-017	• Identify the methods of isolation of cell organelles		Cell organelles
FB-018	• Identify the different parts of equipment i.e., centrifuge, Micro lab, Electrophoresis		Equipment
FB-019	• Demonstrate the basic principles, uses and working of centrifuge, chromatography, electrophoresis & spectrophotometer.		Demonstration of Techniques
PATHOLOGY THEORY TOTAL HOURS=12			
CODE	**SPECIFIC LEARNING OBJECTIVES**	**DISCIPLINE**	**TOPIC**
FPa-001	• Discuss the significance of pathology. • Discuss the causes of cell injury. • Identify the types of cell injury. Describe the mechanism of cell injuryIdentify 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	General Pathology	Cell Injury

	• Discuss the mechanism and types of intracellular accumulations and pathological calcifications		
FPa-002	• Enumerate the microbes causing infectious diseases. • Describe the structure of bacterial cel. • 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. • Discuss the determinants of Bacterial Pathogenesis.	General Microbiology	Introduction to Micro Organisms
FPa-003	• Define sterilization & disinfection. • Describe the principles of sterilization & disinfectants. • Describe clinical uses of common disinfectants & their mode of sterilization. • Discuss physical & chemical agents of Sterilization		• Sterilization & disinfectants.
PHARMACOLOGY & THERAPEUTICS TOTAL HOURS=04			
FPh-001	• Definitions of Pharmacology, drug, pro-drug, placebo, active principles, sources of drugs. • Brief outline of Absorption, Distribution, Metabolism & Excretion	General Pharmacology	Absorption, Distribution, Metabolism and Excretionof drugs
FPh-002	• Definitions of receptor, agonist, partial agonist, Inverse agonist, antagonist and types of receptors and second messengers; • Diagrammatic concept of Signaling mechanisms		Basic terminologies of Pharmacology
FPh-003	• Pharmacological aspects of Autonomic Receptors (types of autonomic receptors, important sites and actions).		Autonomic System
COMMUNITY MEDICINE & PUBLIC HEALTH HOURS=08			
CODE	**LEARNING OBJECTIVES**	**DISCIPLINE**	**TOPIC**
FCM-001	• Describe the changing concepts and new philosophy of health. • Explain responsibility for health	Community Medicine & Public Health	Concept of Health
FCM-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
FCM-003	• Describe the importance of health indicators. • Classify Health Indicators. • Calculate Morbidity & Mortality. • Describe disability Indicators. • Compare indicators among countries.		Health Indicators
	• Conceptualize disease causation & natural history of disease.		

FCM-004	• Explain Germ theory & Multifactorial causation. • Describe epidemiological Triad. • Discuss web of disease causation. • Describe gradient of Infection.	Community Medicine & Public Health	Disease Causation
FCM-005	• Describe principles of prevention control on prevalent disease. • Explain difference between elimination & eradication. • Describe disease surveillance, types & cycle. • Explain primary, secondary & tertiary prevention. • Describe five levels of interventions.		Disease Prevention
AGING TOTAL HOURS=01			
FAg-001	• Discuss telomerase & Telomerase & their clinical significance in aging.	Geriatrics Integrate with Biochemistry	Process of Aging
IMPACT (EPIDEMIOLOGY, SOCIOLOGY, COMMUNITY MEDICINE & PUBLIC HEALTH			
	THEORY	**TOTAL HOURS=08**	
FBhs-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.	Behavioral Sciences Integrate with Healthcare	Biological Basis of Behavior.
FBhs-002	• Identify the burden of mental illness on the person, family and society. • Describe Intellectual disability, Mental Disorders and Personality Disorders		Psychological Behavior
FBhs-003	• Identify the role of psychosocial factors in various illnesses • Describe psychosocial aspects of various system diseases such as CVS, CNS, GIT, • Respiration, renal, endocrine and Cancer		Psychological Disease
FBhs-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		Behavior Factors & Pharmacological Treatment
FBhs-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		Palliative Care
FBhs-006	• Identify the various physiological effects ofstress • Explain ANS response to stress, • Describe behavioral manifestations of stress & Stress related multiple sclerosis and autoimmune diseases		Stress

9A. LEARNING OBJECTIVES OF BLOOD & LYMPHATIC MODULE

LEARNING OBJECTIVES OF BLOOD & LYMPHATIC MODULE			
THEORY			
Weeks	**03 Weeks**	**Recommended Minimum Hours**	**071**
CODE	**SPECIFIC LEARNING OUTCOMES**	**DISCIPLINE**	**TOPIC**
	GROSS ANATOMY	**TOTAL HOURS = 2**	
HL-A-001	• Identify and describe the components of the • Hematopoietic & Lymphoid Tissue and their function Location, coverings, relations of Spleen. • Origin, course branches and distribution of Splenic artery • Venous drainage of Spleen, Portal vein formation, tributaries, and area of drainage. • Location and relations of Thymus. Age related changes in Thymus	General Anatomy	Hematopoietic& Lymphoid Tissue
	EMBRYOLOGY & POST-NATAL DEVELOPMENT	**TOTAL HOURS = 1**	
HL-A-002	Intrauterine Development of spleen	Embryology	Developmental Anatomy ofSpleen
PRACTICAL			
	HISTOLOGY	**TOTAL HOURS = 2**	
HL-A-003	Light microscopic structure of Spleen, Thymus, Lymph nodes, tonsils and MALT including Appendix	Histology	Histological Features ofLymph node, spleen & thymus
	MEDICAL PHYSIOLOGY	**Total Hours = 20**	
HL-P-001	• Define anemia • Classify anemia on the basis of morphology and cause. • Discuss the effects of anemia on the body	Medical Physiology	Anemia
HL-P-002	• Define Polycythemia • Explain types of polycythemias • Discuss the effects of Polycythemia on the body		Polycythemia
HL-P-003	• Define hemostasis • Describe the mechanisms by which hemostasis is secured		Hemostasis
HL-P-004	• Discuss the characteristics and functions of platelets. • Explain the mechanism of formation of platelet plug		Platelets
HL-P-005	• Enlist the clotting factors in blood. • Explain the conversion of Prothrombin to Thrombin & formation of Fibrin Fibers. • Explain the Intrinsic & extrinsic clotting pathway. • Name & explain the mechanism of anticoagulants used in laboratory. • Explain the factors that prevent intravascular coagulation.		Coagulation Factors

	• Explain the role of Calcium ions in Intrinsic and Extrinsic Pathways. • Enlist the vitamin K dependent clotting factors. • Explain the pro thrombin time, INR, and its clinical Significance		
HL-P-006	• Enlist and explain the conditions that cause excessive bleeding. • Define Thrombocytopenia. • Enlist the causes and consequences of Thrombocytopenia	Integrate with Medicine	Coagulation Disorders
HL-P-007	• Define immunity. • Classify immunity. • Explain humeral immunity. • Explain innate immunity. • Elaborate cell mediated immunity. • Describe the structure of antigen and Immunoglobulin • Describe the role of Helper T-cells in cell mediated Immunity. • Enlist the types of Immunoglobulin's along with their functions. • Explain the role of memory cells in enhancing Antibody response (secondary response). • Describe the mechanism of action of antibodies. • Elaborate the complement system.	Medical Physiology	Immunity
HL-P-008	• Elaborate Immune tolerance. • Explain the process of clone selection during T cell Processing. • Discuss the Failure of tolerance mechanism.	Medical Physiology	Tolerance
HL-P-009	• Discuss Immunization. • Define passive Immunity. • Explain features and physiological basis of delayed Reaction allergy. • Explain features and physiological basis of Atopic Allergy. • Explain features and physiological basis of Anaphylaxis, urticarial and Hay fever.	Medical Physiology Integrate with Pediatrics	Immunization
HL-P-010	• Discuss the pathophysiology, features and treatment of ABO and RH incompatibility.	Medical Physiology	Blood group In compatibility
HL-P-011	• Discuss the features and complications of Mismatched Blood Transfusion Reaction	Integrate with Pathology	
	• Elaborate the Transplantation of Tissues and Organs		Blood Mismatch Transfusion Reactions
HL-P-012	• Explain the Process of Tissue Typing • Explain prevention of Graft Rejection by suppressing immune system	Medical Physiology Integrate with Nephrology	Transplantationon of tissues
	MEDICAL BIOCHEMISTRY	**Total Hours = 21**	
	• Discuss the biochemical role and types of		

HL-B-001	hemoglobin. • Differentiate Hemoglobin and myoglobin. • Explain oxygen dissociation curve of hemoglobin and myoglobin and factors regulating them. • Interpret CO toxicity on basis of sign and symptoms. • Explain the role of 2,3 BPG in fetal circulation.	Medical Biochemistry	Hemoglobin and its types/ RBCs
HL-B-002	• Discuss haemoglobinopathies and their biochemical and genetic basis with special emphasis on sickle cell anemia, Thalassemia and methemoglobinemia • Discuss the following types of anemia on the basisof signs and symptoms and laboratory data: a. Hypochromic microcytic b. Normochromic microcytic c. Normochromic normocytic d. Macrocytic (megaloblastic)	Medical Biochemistry integrate with Pathology	Hemoglobin opathies/ RBCs/ Homeostasis
HL-B-003	• Explain the iron metabolism with mechanism of absorption and factors affecting it. • Interpret Iron deficiency anemia on basis of given data and microscopic findings • Interpret folic acid and coalman in relation to anemia's on given data and microscopic findings • Discuss biochemical role of pyridoxine and vitamin C in microcytic anemia	Medical Biochemistry Integrate with Medicine	Iron Metabolism/ RBCs
HL-B- 004	• Discuss the degradation of heme in macrophages of reticuloendothelial system. • Describe the formation of bile pigments, their types and transport. • Discuss the fate of bilirubin	Medical Biochemistry	Heme Degradation/ RBCs
HL-B- 005	• Discuss hyperbilirubinemias and their biochemical basis. • Differentiate types of jaundice on basis of sign/symptoms and data. • Evaluate the genetic basis of jaundice on the basis of lab investigations		Hyperbilirubi nemias / RBCs/ Blood Groups
HL-B- 006	• Classify and Explain the biomedical importance of each class of plasma proteins		Plasma Proteins/ Homeostasis
HL-B- 007	• Explain the structure and biochemical role of immunoglobulin's • Describe the production, structure and functions of B cells, plasma cells, and antibodies (IgA, IgD, IgE, IgG, and IgM). • Discuss the functions of the cytokines (ILs, TNFs, IFs, PDGF, and PAF). • Interpret multiple myeloma on basis of given data		Immunoglobulin lines/ WBCs/ Immunity
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
PRACTICAL		**Total Hours = 6+6=12**	

HL-B- 009	• Interpret jaundice on the basis of estimation of bilirubin. • Perform estimation of ALT and interpret the findings • Perform estimation of AST and interpret the findings. • Perform estimation of ALP and interpret the findings. • Interpret graph based on oxy HB curve and 23 BP • Interpret different types of anemias & porphyrias on basis of s/s and data	Medical Biochemistry	Jaundice & Anemias/ RBCs/ Homeostasis
HL-P-013	• Interpret the Red Blood Cell Count, Hemoglobin concentration, Hematocrit and RBC Indices by Automated Cell Counter	Medical Physiology	Blood Cells
HL-P-014	• Determine Bleeding Time. • Determine Clotting Time.	Medical Physiology	Bleeding & Clotting Time
PATHOPHYSIOLOGY & PHARMACOTHERAPEUTICS TOTL HOURS=2+5=7			
HL-Ph-001	• Describe the oral and parenteral iron preparations including their pharmacokinetics, uses, and adverse effects. • Vitamin B12 preparations, Iron Antidotes Should know the terms: Hematopoietic growth factors, their name, mechanism of actions , usesand adverse effects	Pharmacology& Therapeutics	Anemia
HL-Pa-001	• Define and classify anemia according to underlying mechanism and MCV/MCH. • Discuss the causes and investigations of iron deficiency anemia and megalo blastic anemia. • Classify the benign and malignant disorders of WBCs. • Discuss the causes leading to reactive leukocytosis. • Interpretation of anemia's on the basis of peripheral blood smear and bone marrow findings. • Classify bleeding disorders. • Discuss first line laboratory investigations for bleeding disorders. • Describe the basic concept of blood grouping and acute hemolytic transfusion reaction	Pathology	Blood Cells, Platelets and BloodGroup
DISEASE PREVENTION AND IMPACT TOTAL HOURS=05			
HL-CM-001	• Describe the nutritional aspects of iron deficiency anemia and psychological aspects of diseases	Community Medicine & Public Health	Anemia
HL-CM-002	• Enlist most common blood borne diseases in Pakistan • Describe the routes of spread of blood borne diseases		Communicable Diseases
HL-CM-003	• Genetic counseling of parents		Genetic Diseases
HL-BhS-001	• Psychological Counseling of patients and their families	Behavioral Sciences	Counseling Informational Care
HL-BhS-002	• 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		Personal, Psychosocial and vocational issues

	Society. • Describe gradient of Infection.	Community Medicine & Public Health	
AGING TOTAL HOURS=01			
HLAg-001	• Discuss the role of platelets in PRP treatment in old age (for skin, hairs and joints)	Biochemistry /Dermatology	PlateletRich Plasma Therapy
HLAg-002	• Explain the role of glutathione in skin whitening		Glutathione

10. CLINICAL SKILLS IN INTEGRATED MEDICINE

CODE	EARLY CLINICAL EXPOSURE			Total Hours=15	
	Date	Specific learning Objectives	Topic	Logbook Entries	Page #
CSIM-001		Demonstrate the procedure of taking the pulse	Radial Pulse	03	05
CSIM-002		Record the Respiratory Rate of patient.	Respiratory Rate Measurement	03	14
CSIM-003		Demonstrate the procedure of taking the Blood Pressure.	Blood Pressure	03	15
CSIM-004		Demonstrate the process of wearing the Gloves.	Gloving	02	26
CSIM-005		Demonstrate steps of hand washing.	Hand washing	02	31
CSIM-006		Demonstrate the steps of giving Intra-muscular (I/M) Injection.	Intramuscular Injection	03	36

Code	11. PERLs MODULE-BLOCK-1 ENTRIES				
	Specific learning Objectives	**Domain**	**Attribute**	**TOPIC**	**Portfolio Entry**
PERLs-1-01	Describe Portfolio Describe Types of Portfolios Identify Portfolios Entries. Write reflection based on Gibbs Reflective Cycle.	PERLs	PERLs	Reflective writing	Reflective Writing Portfolio outline development
PERLs-1-02	Demonstrate non-verbal & verbal communication skills. Describe principles of Communication. Describe types of communication at professional level. Identify different communication style. Explain the importance of no-verbal communication. Demonstrate active listening Describe assertive communication technique. Describe barriers to Effective communication.	Professionalism	Communicator	Verbal & Non Verbal Communication Skills	Communication encounter with peer or teacher
PERLs-1-03	Follow the dress code & rules & regulations of the Institution. Demonstrate Punctuality.	Professionalism	Responsible & Accountable	Responsibility towards institution & the Profession.	Quiz on Rules & Regulations of Institutions
PERLs-1-04	Describe characteristics of Team. Describe types of teams. Discuss stages of Team Development. Identify various team roles. Discuss barriers to effective communication.	Professionalism	Team Player	Team Work	Self-evaluation through reflective Writing
PERLs-1-05	Maintain personal privacy while sharing information. Identify cyber bullying, harassing & sexting. Describe cybersecurity laws. Discuss digital rights & responsibilities.	Ethics	Digital Citizen	Digital Identity & Footprint	Case discussion on Cyberbullying
PERLs-1-06	Discuss Science & Scientific Evidence	Research	Evidence based Practionor	Difference Between Science, Philosophy, Art & Scientific Method	Assignment on application of Scientific Method to Problem
PERLs-1-07	Identify Gaps in Learning through Reflection	Leadership	Self-Directed Learner	Strategic Planning, personnel Development Plans, Goal Setting	Written gaps in being a learner with goals

12. OPERATIONAL DEFINITIONS

<table>
<tr><th colspan="2">OPERATIONAL DEFINITION OF DIFFERENT TEACHING STRATEGIES</th></tr>
<tr><td colspan="2">Delivery of a curriculum also needs a diversity of educational Vernacular for the different learning styles. Following are a few of recommended Instructional Strategies. It is advised that at least three different methods of Instructions should be adopted in the institutional Planning. This will enable the diversity of Learning patterns to be facilitated.</td></tr>
<tr><td>Interactive Session (Large Group LGIS)</td><td>➢ Lecture format is the most widely used approach to teaching especially in a large class size with average attention span of 20-30 mins.
➢ Interactive lecturing involves a two-way interaction between the presenter and the participants.
➢ Interactive methods like brainstorming, buzz group, simulation, role play, and clinical cases canbe used.
Significance of its usage:
• Relaxed environment
• Diverse opinions
• Active involvement
• Increase attention and motivation.
• Independence and group skills.
• Cost effective.
• Suitable for taking advantage of available audiovisual technologies</td></tr>
<tr><td>Team Based learning (TBL)</td><td>➢ TBL is a uniquely powerful form of small group learning.
➢ It provides a complete coherent framework for building a flipped course experience.
➢ There are four essential elements of TBL which include:
• Teams must be properly formed and managed 5-7 students).
• Getting students ready.
• Applying course concepts
• Making students accountable
Significance of its usage
• Students are more engaged.
• Increased excitement in TBL classroom.
• Teams outperform best members.
• Students perform better in final and standardized exams.</td></tr>
<tr><td>Problem Based Learning (PBL)</td><td>➢ It is an instructional student-centered approach in which students work in small groups on a health problem.
➢ Identifying their own educational needs.
➢ Being responsible for the acquisition of the knowledge required to understand the scenario.
Significance of its usage
• Teamwork
• Critical evaluation of literature
• Self-directed learning.
• Use of resources
• Presentation skills
• Leadership</td></tr>
</table>

	• Respect for Colleagues view.
Case Based Learning (CBL)	➢ It is an inquiry structured learning experience utilizing live or simulated patient cases to solve, or examine a clinical problem, with the guidance of a teacher and stated learning objectives. **Significance of Its Usage** • Induce a deeper level of learning by inculcating critical thinking skills. • Flexibility on use of case • Helps students acquire insightful information. • Stay abreast with novel advancements in healthcare
Tutorials	➢ Tutorial is a class or short series of classes, in which one or more instructors provides intensive instruction on some subject to a small group. ➢ Its purpose is to explore student point of view for discussion. ➢ It directed reflective learning skills. **Significance of Its Usage** • Develop and assess the extent of background knowledge of students which enables them to properly understand concepts which may not have been understood in lectures. • Develop problem-solving skills. Develop practice of self-learning. Reduced time to understand the topic.
Reflective Writing	➢ It is a metacognitive process that occurs before, during and after the situation with the purpose of developing greater understanding of both the self and situation so that future encounters with the situation are informed from previous encounters. **Significance of its usage** • Questioning attitude and new perspectives.Areas for change and improvement. • Respond effectively to new challenges. • Critical thinking and coping skills
Case Presentations	➢ It is a teaching method which provides descriptive information about a clinical patientscenario and to share this educational experience with the general medical and scientific community. ➢ It prepares students for clinical practice, using authentic clinical cases by linking theory to practice with the help of inquiry-based learning methods. **Significance of its usage** • Cultivate the capacity for critical analysis. • Judgment and Decision making. • Facilitate creative problem solving. • Allow students to develop realistic solutions to complex problems
Bedside Teaching	➢ Teaching and learning that occurs with actual patient as the focus. ➢ It occurs in wards,emergency departments, operating rooms, and high dependency units. **Significance of its usage** • Stimulus of clinical contact. • Psychomotor skills • Communication skills • Language skills. • Interpersonal skills • Professional attitudes and empathy • Role modeling
Simulation	➢ Person, device or set of conditions, which attempts to present education and evaluation of problems authentically. ➢ The student or trainee is required to respond to the problems as s/he would under natural circumstances. **Significance of its usage**

	• Safety for patients Liberty to make mistakes. • Manageable/variable complexity of tasks • Opportunity to develop self-efficacy before real patient encounter. • Repeatability of tasks. • Learning at different pace is permissible
Skills Laboratories	➢ It refers to specifically equipped practice rooms functioning as training facilities offering hands on training for the practice of clinical skills within non-threatening environment prior to their real-life application. ➢ This applies to both basic clinical skillsas well as complex surgical skills. **Significance of its usage** • Controlled, anxiety-free, and risk-free learning environment to students. • A platform for repeated practice for mastery in relevant clinical skills. • Increase the preparedness of student learners before transitioning to the real hospital setting. • Build strong communication skills. • Enable learners to make critical decisions.
Case Based Conference	Clinical Case based conferences allow clinicians and medical students to present difficult case material and include discussions of diagnostic, clinical formulation, and/or treatment issues. **Significance of its usage** • Provides detailed (rich qualitative) information. • Provides insight for further research. • Permitting investigation of otherwise impractical (or unethical) situations.
Lab Practical	Lab practical involve things like identifying a structure, a type of stain through a microscope, a problem with a preparation, reading biochemical test results and answering safety questions. These simulations allow students to attempt theexperiments in the laboratory in a risk-free way that provides the opportunity to makemistakes and learn how to correct them using the immediate feedback generated. **Significance of its usage** Enhance mastery of subject matter.Develop scientific reasoning. Develop practical skills. Develop teamwork abilities.
Demonstrations	The demonstration method in teaching can be defined as giving a demo or performing a specific activity or concept. It is a teaching-learning process carried outin a very systematic manner. **Significance of its usage** • Promotes learning and correlates theory with practice. • Sharpens the observation skills. • Sustain interests in learning environment • Helps teacher to evaluate student's response.
Ward Rounds	It is a composite clinical practice to review inpatients management and progress, tomake decisions about further investigations, treatment options and discharge from hospital. It is an opportunity for clinicians, students, and patients to participate in education and training at bedside. **Significance of its usage** Patient management skills History taking Physical examination Time management skills Communication skills

13. ASSESSMENT POLICY

STATUES

1. The First Professional MBBS Examination shall be held at the end of first year MBBS class

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/Ethics 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 four papers in the professional examination. Three papers shall be based on contents of three Blocks and the fourth paper on contents of Islamic Studies/Ethics and Pakistan Studies:
   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.
   d. Paper 4 will be based on contents of Islamic Studies/Ethics and Pakistan Studies
4. Each paper will comprise of "Written' and 'Oral/Practical/Clinical examinations except the paper of Islamic Studies/Ethics and Pakistan Studies, which shall comprise of written component alone.
5. The Written and Oral/Practical/Clinical examinations in each paper will carry 150 marks each, making the total marks of 300 for each paper of papers 1.2. And 3.
6. Total marks of the First Professional Examination will be 1000, however marks of Islamic Studies/Ethics and Pakistan Studies shall not be counted towards merit determination and determination of positions in the examination.
7. Major content areas of the year are 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. Minor content areas of the year are from Behavioral Sciences, Community Medicine & Public Health, Pathology, Pharmacology & Therapeutics, Clinical Foundation I and PERLS I.
10. **Written Examination**
    - There will be one written paper in each of the Papers 1, 2, and 3,
    - Each written paper will consist of One-best-type' Multiple Choice Questions (MCO) and Structured Essay Questions (SEQ) in a ratio of 70:30 %
    - Each MCQ will have five options (one best response and four distractors) and will carry one (01) mark
    - There will be no sections within an SEO, and it will be a structured question with five (05) marks each.
    - SEO's will only be based on the major content areas of the year
    - There will be total of 85 MCQs and 07 SEOS in every written paper Papers 1,2, and 3.
    - The duration of each written paper will be 180 minutes (03 hours)
    - The MCQs section will be 110 minutes duration and the SEQ section 70 minutes.

11. **Oral/Practical/Clinical Examination**
    - There will be an Oral Practical/Clinical examination in each of Papers 1 2, and 3.
    - There will be a total of twelve (12) OSPE/OSCE/Viva stations in each Oral/Practical/Clinical examination.
    - There will be seven (07) Observed OSPE stations from major subject areas.
    - There will be two (02) Observed OSCE stations, 01 from C-FRC1 and 01 from PERLs-1 in each Oral/Practical/Clinical examination.
    - There will be three (03) structured viva stations in each Oral/Practical/Clinical examination.
    - Each OSPE/ OSCE will carry night (08) marks.
    - Each structured viva station will carry 16 marks (8 marks each for internal and external examiner)
    - The duration of each Oral/Practical/Clinical examination will be 150 minutes (2.5 hours).

- Time for each OSPE and OSCE station will be eight (08) minutes Time for each structured viva station will be 20 min (10 min for each examiner)

12. Every candidate shall take the examination in the following Blocks/subjects of First Professional MBBS Examination
    A. Block 1 (Foundation Hematopoietic & Lymphatic Modules) 300 Marks
    B. Block 2 (Musculoskeletal & Locomotion Module) 300 Marks
    C. Block 3 (Cardiovascular System Respiratory Modules) 300 Marks
    D. Islamic Studies Ethics and Pakistan Studies 100 Marks 300 Marks

13. Block 3 (Cardiovascular System + Respiratory Modules)

The examination in Block 3 shall be as follows:-

1. One written paper of 120 marks having two parts:

a) Part I shall have eighty five Multiple Choice Questions (MCQs) of 85 marks and the time allotted shall be 110 minutes.

b) Part II shall have seven Structured Essay Questions (SEQs) of 35 marks and the time allotted shall be 70 minutes.

2. Oral/Practical/Clinical examination shall have 120 marks,
3. The continuous internal assessment through Block Examination conducted by the college of enrollment shall carry 60 marks, ie., 20% of the total allocated marks for the block. The score will be equally distributed to the Written and Oral/Practical/Clinical Examinations.

14. ISLAMIC STUDIES/ETHICS AND PAKISTAN STUDIES

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

I. One written paper of 100 marks in Islamic Studies/Ethics and Pakistan Studies having two components: Islamic Studies/Ethics component having 60 marks, three (3) Long Essay Questions (LEOs) to be attempted out of five (5) Long Essay Questions (LEOs), having 20 marks each.

II. Pakistan Studies component having 40 marks, two (2) Long Essay Questions (LEOS) to be attempted out of four (4) Long Essay Questions (LEQS), having 20 marks each.

Note: Islamic Studies for Muslims, and Ethics for Non-Muslims candidates,

15. The marks distribution in each subject is given in Table 1

Table 1

Subject	Theory		Practical		Total
Block 1 (Foundation + Hematopoietic and Lymphatic Modules)	Part I MCQs Part II SEQS	85 Marks 35Marks	Oral and Practical / Clinical Examination	120 Marks	**300**
	Internal Assessment	30 Marks	Internal Assessment	30 Marks	
		150		**150**	
Block 2 (Musculoskeletal & Locomotion Module)	Part I MCQs Part II SEQS	85 Marks 35Marks	Oral and Practical / Clinical Examination	120 Marks	**300**
	Internal Assessment	30 Marks	Internal Assessment	30 Marks	
		150		**150**	
Block 3 (CVS & Respiratory)	Part I MCQs Part II SEQS	85 Marks 35Marks	Oral and Practical / Clinical Examination	120 Marks	**300**
	Internal Assessment	30 Marks	Internal Assessment	30 Marks	
		150		**150**	
				Total	**900**
***Islamic Studies/ Ethics and Pakistan Studies**		**Islamic Studies/Ethics** 3 LEQs to be attempted out of 5 LEQs		60 Marks	
		Pakistan Studies 2 LEQs to be attempted out of 4 LEQs		40 Marks	
				100	

13-A. TABLE OF SPECIFICATION
BLOCK- 1

Written Exam				Oral/ Practical/ Clinical Exam				
					OSPR/OSCE/Viva Stations			
Theme	**Subject**	**MCQ (1 mark)**	**SEQ (5 mark each)**	**Marks**	**OSPE (O8 marks each) Observed**	**OSCE (O8 marks each) Observed**	**Structured Viva (16 marks each)**	Marks
Normal Structure	Anatomy & Applied/ Clinical	20	3	35	3	-	1	24
Normal function	Physiology & Applied/ Clinical	22	2	32	2	-	1	48
	Biochemistry & Applied/ Clinical	22	2	32	2	-	1	32
Disease Burden & Prevention	Community Medicine Public Health	05	-	05	-	-	-	-
	Behavioral sciences	05	-	05	-	-	-	-
Pathophysiology & Pharmacotherapeutics	Pathology	06	-	06	-	-	-	-
	Pharmacology	05	-	05	-		-	-
CFRC	CFRC-1-2	-	-	-		1	-	08
PERLs	PERLs-1-2	-	-	-		1	-	08
		85	7*5=35	**120**	7 Stations x 08=56	2Stations x 08=16	3 Vivas x 16=48	**120**

13B. ASSESSMENT PLAN

BAHAWALPUR MEDICAL COLLEGE
DEPARTEMENT OF MEDICAL EDUCATION
FIRST YEAR MBBS-BATCH-II-2023

EXAMINATION PLAN					
# of Exams	**Disciplines**	**PATTERN**	**Bimonthly Assessment**	**Day**	**End of Block (EOB)/ Module Exam**
I	Anatomy	Written test(MCQ and SEQ)	21st-March-2023	Tuesday	
	Physiology	Written test(MCQ and SEQ)	22nd -March-2023	Wednesday	
	Biochemistry	Written test(MCQ and SEQ)	31st -March-2023	Friday	
II	Anatomy	Written test (MCQ and SEQ) VIVA	10th-April-2023, 11th-April-2023	Monday & Tuesday	
	Physiology	Written test(MCQ and SEQ) OSPE	12th-April-2023, 13th-April-2023	Wednesday	
	Biochemistry	Written test(MCQ and SEQ)	14th-April-2023	Friday	
III	Anatomy	Written test(MCQ and SEQ)	2nd May-2023	Tuesday	
	Physiology	Written test(MCQ and SEQ)	3rd May-2023	Wednesday	
	Biochemistry	Written test(MCQ and SEQ)	5th- May-2023	Friday	
I-EOB	Applied Anatomy, Physiology, Biochemistry, CHS, BS, Pathology, Pharmacology **Written test (MCQ and SEQ)**			Thursday	25th- May-2023
	EOB-3-Group-A (OSPE/OSCE/Viva (Internal/External)			Monday	29th- May-2023
	EOB-3-Group-B (OSPE/OSCE/Viva (Internal/External			Tuesday	30th- May-2023
	EOB-3-Group-C (OSPE/OSCE/Viva (Internal/External			Wednesday	31st- May-2023
IV	Anatomy	Written test(MCQ and SEQ)	05th- June-2023	Monday	
	Physiology	Written test(MCQ and SEQ)	07th- June-2023	Wednesday	
	Biochemistry	Written test(MCQ and SEQ)	09th- June-2023	Friday	

V	Anatomy	Written test(MCQ and SEQ)	24th- July-2023	Monday	
	Physiology	Written test(MCQ and SEQ)	26th- July-2023	Wednesday	
	Biochemistry	Written test(MCQ and SEQ)	28th- July-2023	Friday	
II-EOB	Applied Anatomy, Physiology, Biochemistry, CHS, BS, Pathology, Pharmacology **Written test (MCQ and SEQ**)			Monday	28th- Aug-2023
	EOB-3-Group-C (OSPE/OSCE/Viva (Internal/External)			Wednesday	30th-Aug-2023
	EOB-3-Group-A (OSPE/OSCE/Viva (Internal/External			Thursday	31st-Aug-2023
	EOB-3-Group-B (OSPE/OSCE/Viva (Internal/External			Friday	01-Sep-23
VI	Anatomy	Written test(MCQ and SEQ)	18th -Sep-2023	Monday	
	Physiology	Written test(MCQ and SEQ)	25th -Sep-2023	Monday	
	Biochemistry	Written test(MCQ and SEQ)	02nd-Oct-2023	Monday	
VII	Anatomy	Written test(MCQ and SEQ)	10th -Oct-2023	Monday	
	Physiology	Written test(MCQ and SEQ)	16th -Oct-2023	Monday	
	Biochemistry	Written test(MCQ and SEQ)	23rd -Oct-2023	Monday	
III-EOB	Applied Anatomy, Physiology, Biochemistry, CHS, BS, Pathology, Pharmacology **Written test (MCQ and SEQ**)			Monday	21st--Nov-2023
	EOB-3-Group-B (OSPE/OSCE/Viva (Internal/External)			Wednesday	22nd-Nov-2023
	EOB-3-Group-A (OSPE/OSCE/Viva (Internal/External			Thursday	23rd--Nov-2023
	EOB-3-Group-C (OSPE/OSCE/Viva (Internal/External			Friday	24th-Nov-2023

14. BOOKS & READING RESOURCES

Anatomy

- Snell. R.S. Clinical Anatomy for MedicalStudents. Philadelphia USA Lippincott Williams and Wilkins: Latest Ed.
- Sinnatamby C. S. Lasts Anatomy Regional and Applied London, ChurchillLiving Stone: Latest Ed.
- Williams, P.L. Bannister, L.H. Berry, M.B,Collins, P., Dyson M. Ferguson, M.WJ. Gray's Anatomy London. Churchill living stone: Latest Ed.
- Moore K.L. Clinically Oriented Anatomy.Baltimore, U.S.A. Williams and Wilkins: Latest Ed.

Physiology

- Fox, S.I. Human Physiology, McGraw-Hill, Boston.
- Ganong WF. Review of Medical Physiology. Lange Medical Publications,McGraw-Hill, Boston.
- Guyton AC and Hall JE. Textbook of Medical Physiology. W. B. Sunders &Co., Philadelphia.
- Mushtaq Physiology-Board Reviewseries physiology

Biochemistry

- Champe, P.C. & Harvey, E.A. Biochemistry (Lippincott's Illustrated Reviews). J.B Lippincott Co
- Marks, D.B., Marks, A.D. &Smith, C.M.Basic Medical Biochemistry: A Clinical Approach. Williams and Wilkins Co. Baltimore.
- Robert K. Murray, Daryl K. Granner, Peter A. Mayes, Victor W. Rodwell. Harper's Biochemistry. McGraw-Hill
- Biochemistry by Stryer

Pathology

- Vinary Kumar, Abul K. Abbas and NelsonFausto 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.

Pharmacology

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

Behavioral Sciences

- Handbook of Behavioral Sciences byProf. Mowadat H.Rana, 3rd Edition
- Integrating Behavioral Sciences inHealthcare by Asma Humayun & Michael Herbert, 1st Edition

Community Medicine

- Parks Textbook of Preventive and SocialMedicine. K. Park (editor)
- Public Health and Community MedicineIlyas, Ansari (Editors)