AVICENNA MEDICAL & DENTAL COLLEGE

AVICENNA
MEDICAL COLLEGE

STUDY GUIDE

2025

Forensic Medicine & Toxicology I

BLOCK 7- MODULE 15

Program: MBBS
Year: 3rd Professional Year
Batch No: M-22
Session: 2024-2025

Table of Contents

List of Abbreviations

Letter	Abbreviations	Subjects
A	**A**	Anatomy
	ABCDE	Airway, Breathing, Circulation, Disability, Exposure
	ABG	Arterial blood gas
	ACS	Acute Coronary Syndromes
	Ag	Aging
	AKI	Acute kidney injury
	ALT	Alanine transaminase
	AMI	Acute Myocardial Infarction
	AMP	Adenosine monophosphate
	ANA	Antinuclear Antibody
	ANCA	Anti-neutrophil Cytoplasmic Antibodies
	ANS	Autonomic Nervous System
	AO	Association of osteosynthesis
	APTT	Activated Partial Thromboplastin Clotting Time
	ARDS	Acute Respiratory Distress Syndrom
	ARVC	Arrhythmogenic Right ventricular Cardiomyopathy
	ASD	Atrial Septal Defect
	AST	Aspartate aminotransferase
	ATLS	Advanced Trauma Life Support
	Au	Autopsy
	AUC	Area under the curve
	AV	Atrioventricular
B	**B**	Biochemistry
	BhS	Behavioral Sciences
	BHU	Basic Health Unit
	BSL	Biological Safety Level
C	**C**	Civics
	C-FRC	Clinical-Foundation Rotation Clerkship
	C.burnetii	Clostridium burnetii
	C.neoformans	Clostridium neoformans
	C.pneumoniae	Clostridium pneumoniae
	C.psittaci	Clostridium psittaci
	C.trachomatis	Clostridium trachomatis
	CA	cancer
	CABG	coronary artery bypass grafting
	CAD	coronary artery disease
	CBC	Complete Blood Count
	CCR5	cysteine-cysteine chemokine receptor
	CD31	cluster of differentiation 31
	CD34	cluster of differentiation 34
	CD4	cluster of differentiation 4
	CF	cystic fibrosis
	CK	Creatine kinase
	CLED	cystine lactose electrolyte deficient
	CLL	chronic lymphocytic leukemia
	CM	Community Medicine
	CML	chronic myeloid leukemia

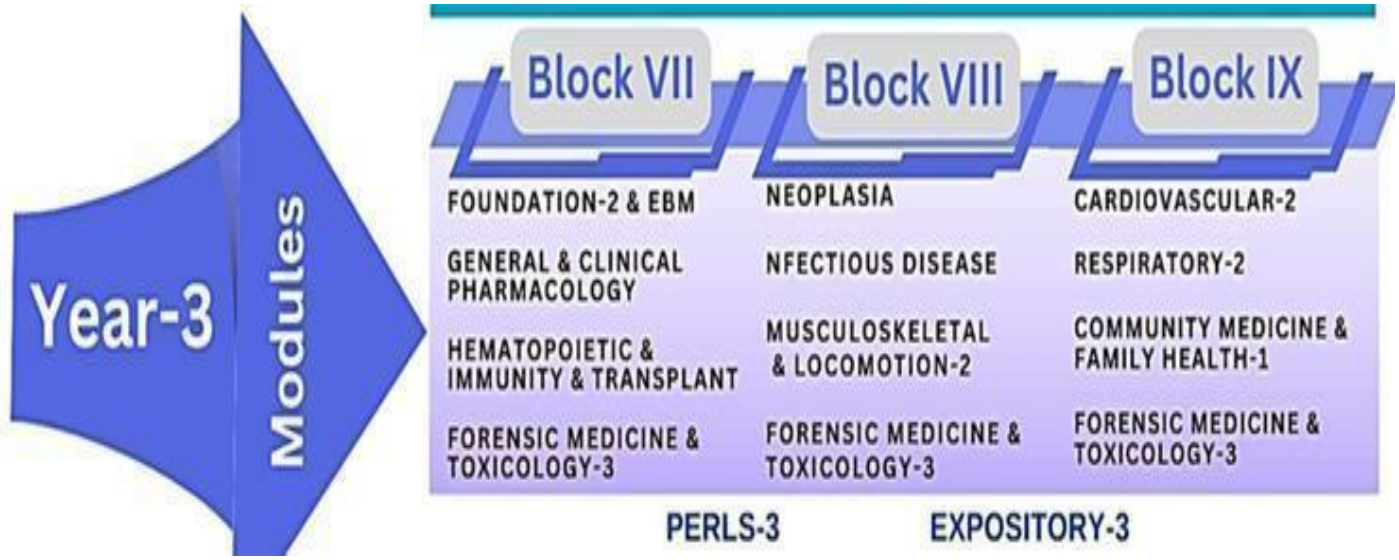
	CMV	cytomegalo virus
	CNS	Central Nervous System
	CO	Carbon monoxide
	CO2	Carbon dioxide
	CODIS	combined DNA index system
	COPD	Chronic obstructive pulmonary disease
	COVID-19	Corona Virus Disease 2019
	COX	Cyclooxygenase
	CPR	Cardiopulmonary Resuscitation
	CR	Clinical Rotation
	CRP	Clinical Rotation CSF C- Reactive Protein
	CSF	Cerebro Spinal Fluid
	CT	Computed tomography
	CV	Cardiovascular
	CVA	Cerebral vascular accident
	CVS	Cerebrovascular system
D	**D.medinensis**	Dracunculus Medinensis
	DALY	Disability-Adjusted Life Year
	DCIS	Ductal Carcinoma in situ
	DCM	Dilated Cardiomyopathy Dorsal Colu
	DCMLS	Dorsal column medial lemniscus system
	DLC	Differential Leukocyte Count
	DMARDs	Disease Modifying Anti Rheumatic Drugs
	DNA	DeoxyRibonucleic Acid
	DOTS	Directly Observed Treatment Short-course
	DTP	Diphtheria, Tetanus, Pertussis
	DVI	Disaster Victim Identification
	DVT	Deep Vein Thrombosis
E	**E.coli**	Escherichia coli
	ECF	Extracellular Fluid
	ECG	Electrocardiography
	ECP	Emergency contraceptive pills
	ED50	Median Effective Dose
	EEG	Electroencephalogram
	EIA	Enzyme Immunoassay
	ELISA	Enzyme Linked Immunosorbent Assay
	EnR	Endocrinology & Reproduction
	ENT	Ear Nose Throat
	EPI	Expanded Programme on Immunization
	ER	Emergency Room
F	**F**	Foundation
	FAST	Focused Assessment with Sonography
	FEV1	Forced Expiratory Volume 1
	FM	Family Medicine
	For	Forensic Medicine
	FPIA	Fluorescent Polarization Immunoassay
	FS	Forensic Serology
	FSc	Forensic Science
	FVC	Forced Vital Capacity
G	**GCS**	Glasgow Coma Scale

	GFR	Glomerular Filtration Rate
	GIT	Gastrointestinal tract
	GL-MS	Gas Liquid Mass Spectrometry
	GLC	Gas Liquid Chromatography
	GLP	Guanosine Monophosphate
	GMP	Guanosine monophosphate
	GO	Gynecology and Obstetrics
	GP	General Practitioner
	GPE	General Physical Examination
	GTO	Golgi Tendon Organ
	Gynae & Obs	Gynecology and Obstetrics
H	**H & E**	Hematoxylin and eosin
	H. influenzae	Haemophilus influenzae
	H.pylori	Helicobacter pylori
	HAI	Healthcare Associated Infections
	HbC	Hemoglobin C
	HbS	Sickle Hemoglobin
	HbSC	Hemoglobin Sickle C Disease
	HCL	Hydrochloric Acid
	HCM	Hypertrophic Cardiomyopathy
	HHV	Human Herpesvirus
	HIT	Hematopoietic, Immunity and Transplant
	HIV	Human Immunodeficiency Virus
	HL	Hematopoietic & Lymphatic
	HLA	Human Leukocyte Antigen
	HMP	Hexose Monophosphate
	HNSS	Head & Neck and Special Senses
	HPLC	High Pressure Liquid Chromatography
I	**ICF**	Intra Cellular Fluid
	ID	Infectious Diseases
	IE	Infective Endocarditis
	IL	Interleukin
	ILD	Interstitial Lung Disease
	IN	Inflammation
	INR	International Normalized Ratio
	INSTIs	ntegrase Strand Transfer Inhibitors
	IPV	Intrauterine Device
	IUD	Intrauterine device
	IUGR	Intra-Uterine Growth Restriction
J	**JVP**	Jugular Venous Pulse
L	**L**	Law
	LD50	Median Lethal Dose
	LDH	Lactate Dehydrogenase
	LSD	Lysergic acid diethylamide
M	**M**	Medicine
	MALT	Mucosa Associated Lymphoid Tissue
	MBBS	Bachelor of Medicine, Bachelor of Surgery
	MCH	Mean corpuscular hemoglobin
	MCHC	Mean Corpuscular Hemoglobin Concentration
	MCV	Mean Corpuscular Volume
	MHO2001	Mental Health Ordinance 2001
	MoA	Mechanism of action

	MRI	Mechanism of action
	MS	Musculoskeletal
	MSD	Musculoskeletal disorders
	MSDS	Minimum Service Delivery Standards
	MSK	Musculoskeletal
N	**N**	Neoplasia
	NEAA	Non-Essential Amino Acids
	NK cells	Natural Killer Cells
	NNRTI	Non-nucleoside Reverse Transcriptase Inhibitors
	NRTIs	Nucleoside Reverse Transcriptase Inhibitors
	NS	Neurosciences
	NSAIDs	Non-steroidal Anti-Inflammatory Drugs
O	**O**	Ophthalmology
	OA	Osteoarthritis
	OPC	Organophosphate
	OPV	Oral poliovirus vaccine
	Or	Orientation
	Orth	Orthopaedic
P	**P**	Physiology
	P.jiroveci	Pneumocystis jiroveci
	Pa	Pathology
	PAD	Pathology
	PAF	Platelet activating factor
	PBL	Problem Based Learning
	PCH	Psychiatry
	PCR	Polymerase Chain Reaction
	PDA	Patent Ductus Arteriosus
	PDGF	Platelet derived growth factor
	Pe	Pediatrics
	PEM	Protein Energy Malnutrition
	PERLs	Professionalism, Ethics,Research, Leadership
	PET	Positron Emission Tomography
	Ph	Pharmacology
	Ph	Pharmacology
	PI	Personal Identity
	PID	Pelvic inflammatory disease
	PIs	Protease in hibitors
	PMC	Pakistan Medical Commission
	PMDC	Pakistan Medical and Dental Council
	PMI	Post-Mortem Interval
	PNS	Peripheral Nervous System
	PPD	Paraphenylenediamine
	PPE	Personal Protective Equipment
	Psy	Psychiatry
	PT	Prothrombin Time
	PVC	Premature Ventricular Contraction
	PVD	Peripheral Vascular Diseases
Q	**QALY**	Quality-Adjusted Life Year
	QI	Quran and Islamiyat
R	**R**	Renal
	Ra	Radiology

	RA	Radiology
	RBCs	Red Blood cells
	RCM	Restrictive Cardiomyopathy
	RDA	Recommended Dietary Allowance
	Re	Respiratory
	RF	Rheumatoid factor
	RFLP	Restriction Fragment Length Polymorphism
	Rh	Rheumatology
	RHC	Rural Health Center
	RIA	Radioimmunoassay
	RMP	Resting Membrane Potential
	RNA	Ribonucleic Acid
	RTA	Road Traffic Accident
S	**S**	Surgery
	S.pneumonia	Streptococcus pneumoniae
	SA	Sinoatrial
	SCC	Squamous-cell carcinoma
	Se	Sexology
	Sec	Section
	SIDS	Sudden Infant Death Syndrome
	SLE	Systemic Lupus Erythematosus
	SOP	Standard Operating Procedure
T	**TB**	Tuberculosis
	TBI	Traumatic Brain Injury
	TCA	Tricarboxylic acid cycle
	TCBS	Thiosulphate Citrate Bile salts Sucrose
	TD50	Median Toxic Dose
	TGA	Transposition of the Great Arteries
	Th	Thanatology
	TLC	Thin Layer Chromatography
	TNF	Tumor Necrotic Factor
	TNM	Tumor Necrotic Factor
	TOF	Tetralogy of Fallot
	Tox	Toxicology
	Tr	Traumatology
	TSI	Triple Sugar Iron
U	**USG**	Ultrasonography
	UTI	Urinary Tract Infections
	UV	Ultraviolet
V	**VAP**	Ventilator-Associated Pneumonia
	Vd	Volume of Distribution
	VEGF	Vascular Endothelial Growth Factor
	VSD	ventricvular septal defect
W	**W. bancroft**	Wuchereria bancroft
	WBCs	White Blood Cells
	WHO	World Health Organization
Z	**ZN Staining**	Ziehl-Neelsen Staining

Curriculum Framework



Introduction to the Study Guide

Welcome to the Avicenna Medical & Dental College Study Guide!

This guide serves as your essential resource for navigating the complexities of your medical education at Avicenna Medical & Dental College. It integrates comprehensive details on institutional framework, curriculum, assessment methods, policies, and resources, all meticulously aligned with UHS, PMDC and HEC guidelines.

Each subject-specific study guide is crafted through a collaborative effort between the Department of Medical Education and the respective subject departments, ensuring a harmonized and in-depth learning experience tailored to your academic and professional growth.

Objectives of the Study Guide

1. **Institutional Understanding:**
    - Gain insight into the college's organizational structure, vision, mission, and graduation competencies as defined by PMDC, setting the foundation for your educational journey.
2. **Effective Utilization:**
    - Master the use of this guide to enhance your learning, understanding the collaborative role of the Department of Medical Education and your subject departments, in line with PMDC standards.
3. **Subject Insight:**
    - Obtain a comprehensive overview of your courses, including detailed subject outlines, objectives, and departmental structures, to streamline your academic planning.
4. **Curriculum Framework:**
    - Explore the curriculum framework, academic calendar, and schedules for clinical and community rotations, adhering to the structured guidelines of UHS & PMDC.
5. **Assessment Preparation:**
    - Familiarize yourself with the various assessment tools and methods, including internal exam and external exam criteria, and review sample papers to effectively prepare for professional exams.
6. **Policies and Compliance:**
    - Understand the institutional code of conduct, attendance and assessment policies, and other regulations to ensure adherence to college standards and accrediting body requirements.
7. **Learning Resources:**
    - Utilize the learning methodologies, infrastructure resources, and Learning Management System to maximize your educational experience and academic success.

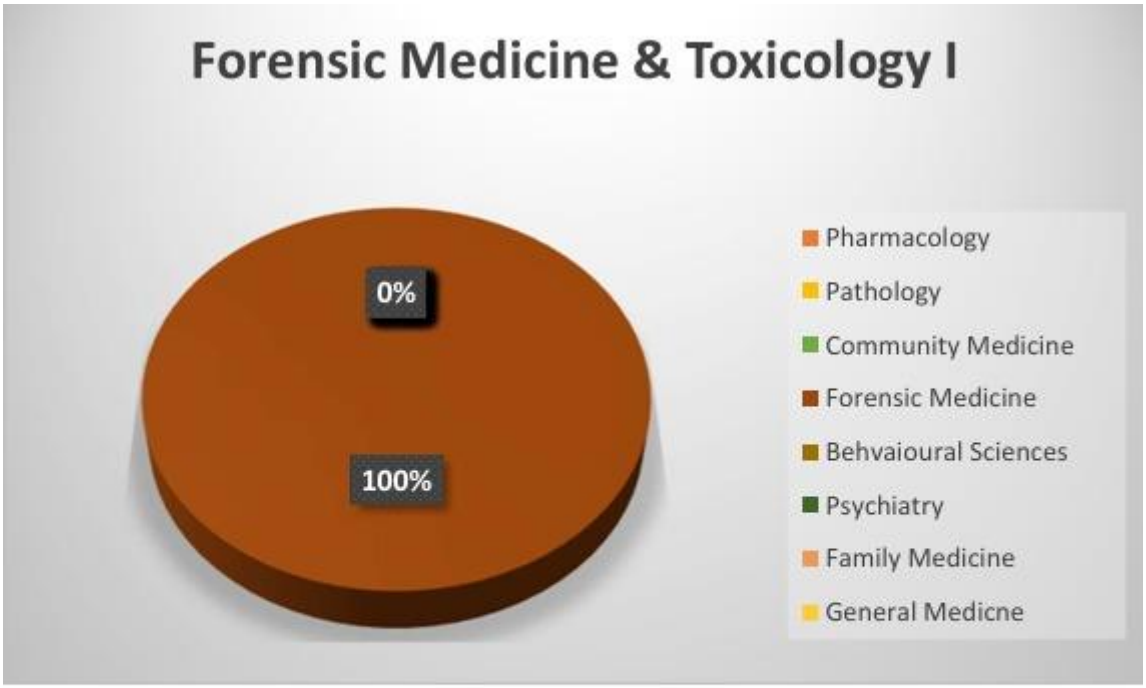
This guide, meticulously developed in collaboration with your subject departments, is designed to support your academic journey and help you achieve excellence in accordance with the highest standards set by PMDC and HEC.

Introduction to Module

- The Forensic Medicine and Toxicology Module 1 prepares the medical graduate to handle the complexities of life and death and the medico-legal cases they encounter in their early career as doctors.

- The Autopsy training provides them with diagnostic skills for determining the cause of death, personal identity is essential for disaster victim identification, and medico-legal cases involving unidentified bodies.

- The death indicators and certification of death are important in their clinical practice. Introducing these topics in the 3rd year builds a strong foundation for handling medico-legal cases; ensuring students are ready to navigate the complexities of death-related issues in their future careers.



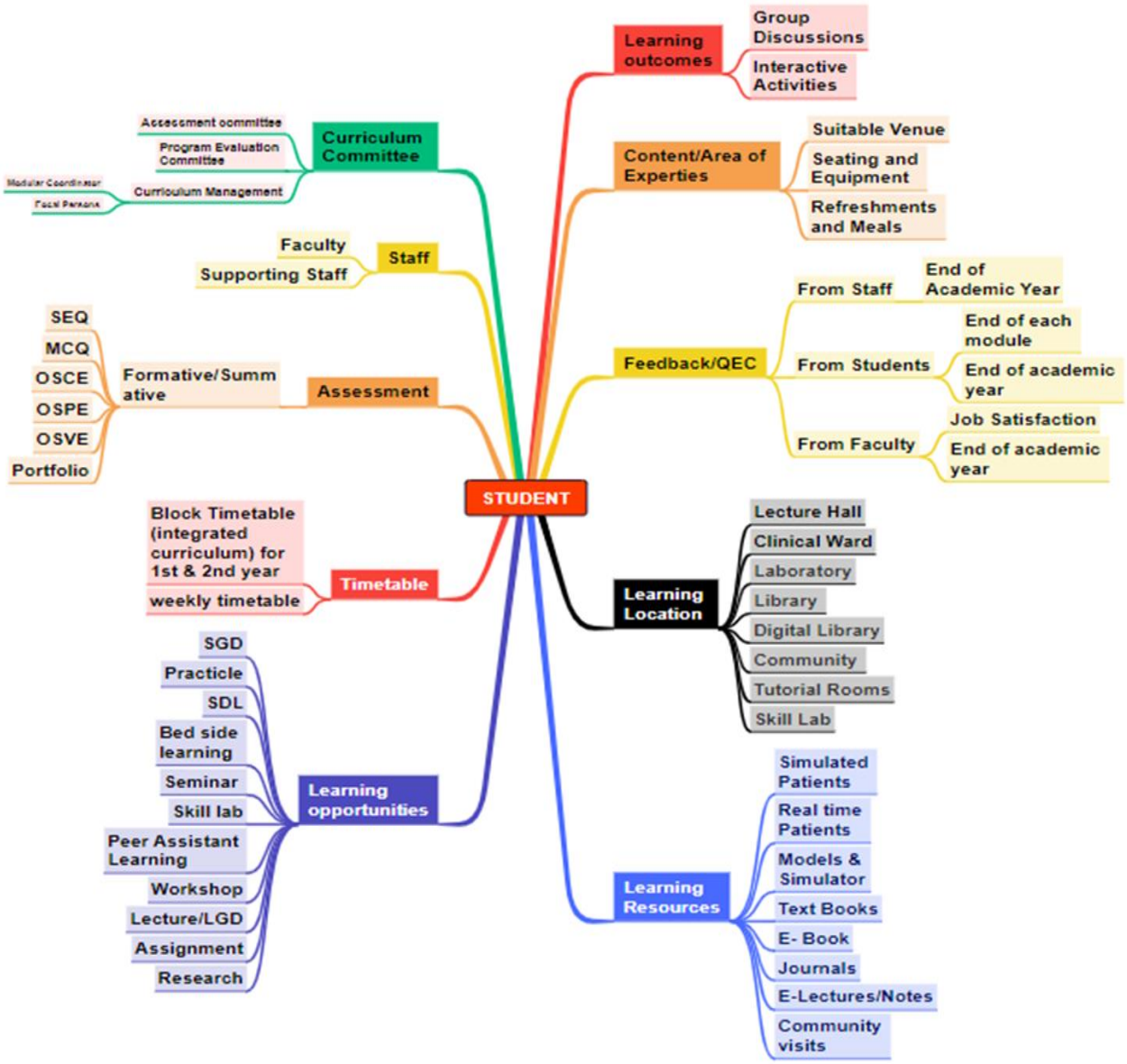
Module Weeks	Recommended Minimum Hours
01	32

Module Committee

Name	Designation	Department
Prof. Dr. Gulfreen Waheed	Principal & Director	Medical Education
Dr. Saba Iqbal	Associate Director	Medical Education
Dr. Ijlal Zehra	Head	Assessment Cell
Dr. Javaid Shabkhez Rab	Coordinator	Medical Education
Dr. Salar Arsalan	Demonstrator	Medical Education
Dr. Huma Fatima	Demonstrator	Medical Education
Ms. Tamzeela	Co-Coordinator	Medical Education
Mr. Adeel	Head	Student Affairs
Prof. Dr. Saeed Afzal	Head	Pathology
Dr. Majid	Focal Person	Pathology
Prof. Dr. Asma Saeed	Head	Pharmacology
Dr. Azka	Focal Person	Pharmacology
Prof. Dr.Rana Akhtar	Head	Community Medicine
Dr. Usman Sheikh	Focal Person	Community Medicine
Prof. Dr. Zainab	Head	Forensic Medicine
Dr. Anwar	Focal Person	Forensic Medicine
Prof. Dr. Muzammil	Head	Medicine Unit-1
Prof. Dr. Waheed Ahmed	Head	Medicine Unit-2
Dr. Usman	Focal Person	General Medicine
Dr. Usman	Focal Person	Psychiatry
Dr. Usman	Focal Person	Family Medicine
Dr. Farhat	Head	Behavioural Sciences

Curriculum Map

This pictorial, vertical and horizontal presentation of the course content and extent shows the sequence in which various systems are to be covered. Curricular map to cover all the subjects and modules and the time allocated to study of the systems for the undergraduate programs offered at four colleges at campus are as follows:



Timetable

AVICENNA MEDICAL & DENTAL COLLEGE

TIME TABLE		M-22 3rd Year MBBS	SESSION 2024-2025						Week-8
DATE	DAY								BLOCK # VII
									MODULE - 15
DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-12.30	12.30-1.30		1.30-3.30
5-May	MON	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE SURGERY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PERLs (PAEDS) Project Management LECTURE HALL3	BREAK	Tutorial 3 batches		CFRC CLINICAL ROTATION PRACTICAL
6-May	TUE	8.00-10.00		10.00-10.30	10.30-12.30		12.30-1.30		1.30-3.30
		GRAND TEST Pharmacology EXAMINATION HALL		BREAK	OSPE/VIVA		LECTURE PERLs (Pharmacology) Drug safety in trials LECTURE HALL3		CFRC CLINICAL ROTATION PRACTICAL
7-May	WED	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-12.30	12.30-1.30		1.30-3.30
		LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE FOR.MEDICINE LECTURE HALL3	BREAK	LECTURE PERLs (DME) Artificial Intelligence in Research	Tutorial 3 batches		CFRC CLINICAL ROTATION PRACTICAL
8-May	THU	8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-12.30	12.30-1.30		1.30-3.30
		LECTURE PATHOLOGY LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	BREAK	LECTURE BIOCHEMISTRY LECTURE HALL3		Tutorial 3 batches
9-May	FRI	8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.000		2.00-3.30
		LECTURE FOR.MEDICINE LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE COMMUNITY MEDICINE LECTURE HALL3	LECTURE PERLs (Medicine) onflict of interest in pharmaceuticals	JUMMA BREAK		SDL

Prepared by DME

AVICENNA MEDICAL & DENTAL COLLEGE

TIME TABLE		M-22 3rd Year MBBS	SESSION 2024-2025	Week-9
DATE	DAY			BLOCK # VII
				MODULE - 15

DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-1.00	1.00-3.30
12-May	MON	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PERLs LECTURE HALL3	BREAK	TUTORIAL IN 3 BATCHES	CFRC CLINICAL ROTATION PRACTICAL

		8.00-10.00	10.00-10.30	10.30-12.30	12.30-1.30	1.30-3.30
13-May	TUE	GRAND TEST Pathology EXAMINATION HALL	BREAK	OSPE/VIVA	LECTURE PERLs LECTURE HALL3	CFRC CLINICAL ROTATION PRACTICAL

		8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-12.30	12.30-3.30
14-May	WED	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE COMMUNITY MEDICINE LECTURE HALL3	LECTURE PERLs LECTURE HALL3	BREAK	CFRC CLINICAL ROTATION PRACTICAL

		8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.30-1.30	1.30-3.30
15-May	THU	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE FOR.MEDICINE LECTURE HALL3	TUTORIAL IN 3 BATCHES

		8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.00	2.00-3.30
16-May	FRI	LECTURE FOR.MEDICINE LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE SURGERY LECTURE HALL3	TUTORIAL IN 3 BATCHES	JUMMA BREAK	SDL

Prepared by DME

AVICENNA MEDICAL & DENTAL COLLEGE

TIME TABLE		M-22 3rd Year MBBS	SESSION 2024-2025	Week-10
DATE	DAY			BLOCK # VII
				MODULE - 15

DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-1.00	1.00-3.30
19-May	MON	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE SURGERY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	BREAK	TUTORIAL IN 3 BATCHES	CFRC CLINICAL ROTATION PRACTICAL

DATE	DAY	8.00-10.00	10.00-10.30	10.30-12.30	12.30-1.30	1.30-3.30
20-May	TUE	GRAND TEST PHARMACOLOGY EXAMINATION HALL	BREAK	OSPE/VIVA	LECTURE PERLs (Ortho) informed consent in rehabilitation LECTURE HALL3	CFRC CLINICAL ROTATION PRACTICAL

DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-1.00	1.30-3.30
21-May	WED	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE FOR.MEDICINE LECTURE HALL3	BREAK	TUTORIAL IN 3 BATCHES	CFRC CLINICAL ROTATION PRACTICAL

DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-12.30	12.30-1.30	1.30-3.00
22-May	THU	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	BREAK	LECTURE PERLs (DME) Portfolio Dr. Salar LECTURE HALL3	TUTORIAL IN 3 BATCHES

DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-1.00	1.00-2.00	2.00-3.30
23-May	FRI	LECTURE FOR.MEDICINE LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	Module Exam EXAMINATION HALL	JUMMA BREAK	SDL

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AVICENNA MEDICAL & DENTAL COLLEGE

TIME TABLE		M-22 3rd Year MBBS	SESSION 2024-2025	Week-11
DATE	DAY			BLOCK # VII
				MODULE - 15

DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-2:00	2:00-3.30
26-May	MON	OFF FOR EXAM			BLOCK EXAM WRITTEN	TUTORIAL IN 3 BATCHES
27-May	TUE	8.00-12.00			12.00-12.30	12.30-3.30
		BLOCK EXAM OSPE/VIVA			BREAK	CFRC CLINICAL ROTATION PRACTICAL
28-May	WED	8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.30-3.30
		LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE FOR.MEDICINE LECTURE HALL3	TUTORIAL IN 3 BATCHES	CFRC CLINICAL ROTATION PRACTICAL
29-May	THU	8.00-9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.30-1.30 / 1.30-3.30
		LECTURE PATHOLOGY LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PERLs LECTURE HALL3 / TUTORIAL IN 3 BATCHES
30-May	FRI	8.00-9.00	9.00-10.00	10.00-11.00	11.00-1.00 / 1.00-2.00	2.00-3.30
		LECTURE FOR.MEDICINE LECTURE HALL3	LECTURE PHARMACOLOGY LECTURE HALL3	LECTURE PATHOLOGY LECTURE HALL3	LECTURE PATIENT SAFETY LECTURE HALL3 / JUMMA BREAK	SDL

Prepared by DME

Principal Prof.Dr.Gulfreen Waheed

Allocation of Hours

week#	Pharmacology	Pathology	For.Medicine	Com.Medicine	Beh. Science	Surgery	Medicine	Paeds	Gynae	Bio	Phy	PERLs	Patient Safety	Clinical Rotation/ Practical	Tutorial	Assessment	SDL
Week-1	5	6	3	1	1	1	1					1	1	7	6		4
Week-2	5	6	2	1		1	1			1	1	1	1	7	6		4
Week-3																	
Week-4	5	5	2	1	1	1				1	1	2	1	7	6		4
Week-5	4	5	2	1			1			1		1	1	7	6	4	4
Week-6	5	5	2	1			1					2	1	7	5	4	4
Week-7	4	3	2	1						1		1		7	3.5	4	3
Week-8	5	5	2	1		1				1		1		7	6	4	4
Week-9	5	5	2	1		1								7	6	4	4
Week-10	5	5	2			1						1		7	6	4	4
Week-11	4	4	2									1	1	5	5.5	7	4
Week-12	3	6	2		1	1	1					1		7	4		4
Week-13	3	6	2			1	1	1		1			1	5	4.5		3
Week-14	3	6	2			1	1		1			1	1	7	6	4	4
Week-15	3	6	2	1		1	1					1	1	7	6	4	4
Week-16	3	6	2	1			1					1	1	7	6	4	4
Week-17	2	6	2	1		1	1	1				1	1	7	6	4	4
Week-18	2	6	2			1	1		1			1	1	7	6	4	4
Week-19																	
Week-20																	
Week-21																	
Week-22																	
Week-23	2	7	2			3	2					1	1	7	7		4
Week-24	2	6	2			2	2					1	1	7	6	4	4
Week-25	2	5	2			1	1							7	4	4	4
Week-26	2	6	2			2	2					1	1	7	6	4	4
Week-27	1	2	1	2	1	2	2					1	1		5.5	7	3
Week-28	1	2	1	2		1	1					2	1	7	7		4
Week-29	2	2	1	2			2						1	7	5.5	4	4
Week-30	1	2	1	3	1		1						1	7	5.5	4	4
Week-31	2	2	1	2		1	1					1		7	5.5	4	4
Week-32	2	2	2	3								1		7	5.5	4	4
Week-33	1	2	2	3		1						1		7	5.5	4	4
Week-34	2	2	2	2		1	2					2	1	7	7	4	4
Week-35	2	2	2	3		1	2					1	1	7	7	4	4
Week-36	2	2	2	2		2	3					1	1	7	7	4	4
Week-37	2	2	2	3		1	2					1	1	7	7	4	4
Week-38	2	2	2	2		1	2					2	1	7	7	4	4
Week-39	2	2	2			1	3					3		7	7	4	4
Week-40														2.5	1	7	2
Total Hours	**96**	**141**	**64**	**40**	**5**	**32**	**39**	**2**	**2**	**6**	**2**	**36**	**24**	**229.5**	**200.5**	**121**	**135**

Modular Outcomes

Module Name	Modular Outcomes
Block 7 Module 15 Forensic Medicine & Toxicology I	• Explain the concept of death and its medico-legal aspect • Discuss the indicators of death • Describe the inter-relationship of cause, mechanism, mode, and manner of death • Determine the parameters of personal identification in living and dead • Describe the types, objectives, rules, and techniques of autopsy • Discuss the post-mortem artifacts and their medic-legal significance • Discuss the methodologies and techniques employed for personal identification. • Describe the methods of age certification

Learning Objectives

Week No.	Total Hours	Mode of Teaching	Code	Learning Objective	Topic	Reference	Facilator
Week:8	PHARMACOLOGY						
Week:8	1	Lecture	GPh-Ph003	Discuss the pharmacological actions / systemic effects of direct and indirect-acting adrenergic agonistsEnlist the therapeutic uses, adverse effects, and contraindications of direct-acting adrenergic agonists.	Autonomic nervous system	katzung edition 16	Dr. Azka Khan
Week:8	2	Lecture	GPh-Ph003	Classify alpha blockers Elaborate the clinical uses of alpha-blockers. Discuss the adverse effects of alpha-blockers	Autonomic nervous system	katzung edition 16	Dr. Asma Saeed
Week:8	3	Lecture	GPh-Ph003	Classify Beta-blockers Explain the clinical indications of beta antagonists Enlist their adverse effects.	Autonomic nervous system	katzung edition 16	Dr. Azka Khan

Week:8	**4**	**Lecture**	**GPh-Ph003**	**Compare and contrast the characteristics of Reserpine and Guanethidine. Explain the pharmacological actions of ganglion blockers**	**Autonomic nervous system**	**katzung edition 16**	**Dr. Asma Saeed**
Week:8	**5**	**Lecture**	**GPh-Ph003**	**Discuss epinephrine reversal Expand on the pharmacology of drugs that balance sympathetic and parasympathetic activity. (like clonidine and methyldopa)Use of Artificial Intelligence (AI) in understanding and modulating the autonomic nervous system Use of AI to improve pharmacotherapy for conditions like hypertension and chronic heart failure**	**Autonomic nervous system**	**katzung edition 16**	**Dr. Asma Saeed**

Week:8	**6**	**Tutorial**	**GPh-Ph003**	**Classify Beta-blockers Explain the clinical indications of beta antagonists Enlist their adverse effects. Compare and contrast the characteristics of Reserpine and Guanethidine. Explain the pharmacological actions of ganglion blockers. Discuss epinephrine reversal Expand on the pharmacology of drugs that balance sympathetic and parasympathetic activity. (like clonidine and methyldopa**	**Autonomic nervous system**	**katzung edition 16**	**Demonstrators**
Week:8	**PATHOLOGY**						
Week:8	**7**	**Lecture**	**HIT-Pa-1**	**Understand the types and apply the knowledge in clinical aspects of antibodies**	**Immunology**	**LEVINSON 18TH EDITION**	**DR MUNAZZA**
Week:8	**8**	**Lecture**	**HIT-Pa-1**	**Correlate complement activation pathways with their role in immune response to infections, autoimmunity, transplant rejection and immune deficiency disease**	**Immunology**	**LEVINSON 18TH EDITION**	**DR MUNAZZA**

Week:8	**9**	**Lecture**	**HIT-Pa-1**	**Elaborate MHC and their role in clinical diseases Describe types of transplant rejection & Graft vs Host disease and apply the knowledge in different clinical scenarios**	**Immunology**	**LEVINSON 18TH EDITION**	**DR MUNAZZA**
Week:8	**10**	**Lecture**	**HIT-Pa-2**	**Identify the major cytokines and other immunomodulating agents and know their clinical applications.**	**Hematopoietic System**	**LEVINSON 18TH EDITION**	**DR MARYAM**
Week:8	**11**	**Lecture**	**HIT-Pa-3**	**Understand the clinical aspects of hypersensitivity reactions and interpret the data related to these conditions (infectious diseases and autoimmune disease)**	**Immunology**	**LEVINSON 18TH EDITION**	**DR MARYAM**
Week:8	**12**	**Tutorial**	**HIT-Pa-1**	**Elaborate MHC and their role in clinical diseases Describe types of transplant rejection & Graft vs Host disease and apply the knowledge in different clinical scenarios**	**Immunology**	**LEVINSON 18TH EDITION**	**Demonstrators**
Week:8	**FOR.MEDICINE**						

Week:8	**13**	**Lecture**	**For-PI-002** **For-PI-003**	**Determine the age of a living person for medico-legal purpose** **Determine the age of a fetus regarding its length, weight & morphological features** **Determine the age of an examinee from appearance & union of ossification centres of different bone** **Identify the sequence of appearance of ossification activity in intrauterine life** **Relate the medico-legal importance of bones in the identification** **Determine the sex of an individual by carrying out anatomical, chromosomal investigations** **Diagnose the disorders of sexual development** **Describe the Medico Legal importance of Sex determination** **Enlist limitations of sex determination in Dead**	**Age Determination** **Sex Determination**	**NRA 1st Ed. pg 34-45**	**Dr. Zainab**

Week:8	**14**	**Lecture**	**For-PI-004**	**Describe the process of estimation of age from primary, secondary & mixed dentition Describe different methods for age estimation from odontology Enlist the information obtained from dental examination Relate medico legal importance of identification with odontology**	**Forensic Odontology**	**NRA 1st Ed. pg 38-40**	**Dr. Zainab**
Week:8	**15**	**Tutorial**	**For-PI-011**	**Identify the person for different medicolegal cases (age and sex determination)**	**Personal Identification**	**NRA 1st Ed. pg 34-45**	**Demonstrators**
Week:8	**COM.MEDICINE**						

Week:8	**17**	**Lecture**	**ID-CM004**	**Discuss the global distribution of measles, mumps, Rubella and its occurrence in different populations groups, Describe the mode of transmission (airborne droplets) and the highly contagious nature of measles, mumps, Rubella,Recognize the role of vaccination coverage and herd immunity in controlling outbreaks of measles, mumps, Rubella,Discuss public health strategies for prevention and control of measles, mumps, Rubella including vaccination campaigns, surveillance, and outbreak response.**	**Measles, Mumps, Rubella**	**K.Park 23rd Ed. Ch# 4**	**Dr Usman Sheikh**
Week:8	**SURGERY**						
Week:8	**18**	**Lecture**	**ID-S001**	**Discuss the treatment of carbuncle, necrotizing fasciitis and gas gangrene**	**Skin infections**	**B & L**	**Dr. Sumaira**
Week:8	**BIOCHEMISTRY**						

Week:8	**19**	**Lecture**	**For-Th002**	**Enlist late changes after death Explain the process of putrefaction. Describe different stages of putrefaction Summarize factors affecting putrefaction**	**Postmortem changes**	**Prof Dr Haroon habib**	
Week:8	**SDL**						
Week:8	**20**	**Self Directed Learning**					
Week:8	**21**	**Self Directed Learning**					
Week:8	**22**	**Self Directed Learning**					
Week:8	**23**	**Self Directed Learning**					
Week:8	**CLINICAL ROTATION / PRACTICAL**						
Week:8	**24**	**PRACTICAL**	**For-PI-013**	**Interpret the findings from x-rays of bones for appearance and union of ossification centers for age determination**	**Age and sex determination**	**Practical copy NRA 1st Ed. pg 34-45**	**Demonstrators**
Week:8	**25**	**PRACTICAL**	**For-PI-013**	**Interpret the findings from x-rays of bones for appearance and union of ossification centers for age determination**	**Age and sex determination**	**Practical copy NRA 1st Ed. pg 34-45**	**Demonstrators**

Week:8	**26**	**PRACTICAL**	**F2-Ph013**	**Analysis and interpretation of different Concentrations of Acetylcholine on Rabbit's Ileum through online videos / simulations / graphs / practical performance.**	**calculations**	**Practical copy**	**Demonstrators**
Week:8	**27**	**PRACTICAL**	**CV2-PH006**	**Analysis and interpretation of different Concentrations of Acetylcholine on Frog's heart through online videos / simulations / graphs / practical performance**	**cvs**	**Practical copy**	**Demonstrators**
Week:8	**28**	**CLINICAL ROTATION**	**MS2-M 001**	**Elicit symptom of "pain" in history in terms of location, intensity, duration, character, aggravating and relieving factors.**	**General Medicine**	**Log Book**	**Medical Faculty**
Week:8	**29**	**CLINICAL ROTATION**	**MS2-S 001**	**Elicit symptom of "swelling" in history in terms of location, intensity, duration, character, aggravating and relieving factors.**	**General Surgery**	**Log Book**	**Medical Faculty**

Week:8	**30**	**PRACTICAL**	**HIT-H-006**	**Identify normal blood cells. Identify common malignant disorders e.g. CML, CLL, Acute Leukemias.**	**HAEMATOLOGY**	**Practical copy**	**Demonstrators**
Week:8	**31**	**PRACTICAL**	**HIT-H-006**	**Identify normal blood cells. Identify common malignant disorders e.g. CML, CLL, Acute Leukemias.**	**HAEMATOLOGY**	**Practical copy**	**Demonstrators**
Assessment							
Week:8	**32**	**GRAND TEST**					
Week:8	**33**	**GRAND TEST**					
Week:8	**34**	**OSPE/VIVA**					
Week:8	**35**	**OSPE/VIVA**					
TUTORIAL (Pathology)							
Week:8	**36**	**Tutorial**	**HIT-Pa-1**	**Elaborate MHC and their role in clinical diseases Describe types of transplant rejection & Graft vs Host disease and apply the knowledge in different clinical scenarios**	**Immunology**	**LEVINSON 18TH EDITION**	**Demonstrators**
Week:8	**37**	**Tutorial**	**HIT-Pa-1**	**Elaborate MHC and their role in clinical diseases Describe types of transplant rejection & Graft vs Host disease and**	**Immunology**	**LEVINSON 18TH EDITION**	**Demonstrators**

				apply the knowledge in different clinical scenarios			

Week No.	Total Hours	Mode of Teaching	Code	Learning Objective	Topic	Reference	Facilator
Week:9	**PHARMACOLOGY**						
Week:9	**1**	**Lecture**	**HIT-H-OO3**	**Classify anticlotting drugs: Compare their usefulness in venous and arterial thromboses Describe the mechanisms of action, clinical uses and adverse effects of anticoagulants Compare Unfractionated heparin, LMW heparins and oral anticoagulants**	**Hematopoietic System**	**katzung edition 16**	**Dr. Asma Saeed**

Week:9	**2**	**Lecture**	**HIT-H-OO3**	**Compare and contrast the mechanism of action, clinical uses, and toxicities of the oral anticoagulants (warfarin, rivaroxaban, and dabigatran). Explain the pharmacokinetic and pharmacodynamic drug interactions of Warfarin**	**Hematopoietic System**	**katzung edition 16**	**Dr. Asma Saeed**
Week:9	**3**	**Lecture**	**HIT-H-OO3**	**Describe the mechanisms of action, clinical uses and adverse effects of antiplatelet drugs Illustrate where the 4 major classes of antiplatelet drugs act Differentiate between Clopidogrel and Ticlopidine**	**Hematopoietic System**	**katzung edition 16**	**Dr. Azka Khan**

Week:9	**4**	**Lecture**	**HIT-Pa002**	**Discuss the mechanism of action, clinical uses, adverse effects and contraindications of Thrombolytics Tabulate differences between Streptokinase & recombinant tissue plasminogen activators.Classify immunosuppressants and antibodies with their mechanism of action, clinical uses, and toxicities Identify the major cytokines and other immunomodulating agents and know their clinical applications.**	**Hematopoietic System**	**katzung edition 16**	**Dr. Asma Saeed**
Week:9	**5**	**Lecture**	**HIT-Pa004**	**Enumerate hematopoietic growth factors, explain their mechanism of action, uses and adverse effects.List the drugs used to treat bleeding disorders.Overview of prophylactic treatments of PostTransplant Infections, such as antiviral drugs (e.g., valganciclovir for CMV) and antifungal medication**	**Hematopoietic System & Transplant**	**katzung edition 16**	**Dr. Azka Khan**

Week:9	**6**	**Tutorial**	**HIT-H-OO3**	**Describe the mechanisms of action, clinical uses and adverse effects of antiplatelet drugs Illustrate where the 4 major classes of antiplatelet drugs act Differentiate between Clopidogrel and Ticlopidine**	**Hematopoietic System**	**katzung edition 16**	**Demonstrator**
Week:9	**PATHOLOGY**						
Week:9	**7**	**Lecture**	**HIT-Pa-3**	**Understand the clinical aspects of hypersensitivity reactions and interpret the data related to these conditions (infectious diseases and autoimmune disease)**	**Immunology**	**LEVINSON 18TH EDITION**	**DR MARYAM**
Week:9	**8**	**Lecture**	**HIT-Pa-4**	**Describe clinical aspects of auto immunity and autoimmune disease and apply the knowledge in different clinical settings.**	**Transplantation**	**LEVINSON 18TH EDITION**	**DR MARYAM**
Week:9	**9**	**Lecture**	**N-Pa-001**	**Define neoplasia, Nomenclature and difference between benign and malignant tumors based on morphological and functional**	**Nomenclature, benign and malignant tumors**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**

				characteristics and epidemiology of cancer.			
Week:9	**10**	**Lecture**	**N-Pa-002**	**Understand the molecular basis of cancer and pathogenesis of neoplasia, including the role of genetic mutations, oncogenes, tumor suppressor genes, mechanisms of cell cycle dysregulation, apoptosis evasion, angiogenesis in tumor progression and metastasis Differentiate Carcinomas, Sarcomas and lymphoreticular neoplasm**	**Difference between carcinoma and sarcoma and pathways of spread of malignant tumors**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**
Week:9	**11**	**Lecture**	**N-Pa-003**	**Carcinogenic agents with their cellular interactions.**	**Carcinogenesis**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**

Week:9	**12**	**Tutorial**	**N-Pa-001**	**Define neoplasia, Nomenclature and difference between benign and malignant tumors based on morphological and functional characteristics and epidemiology of cancer.**	**Nomenclature, benign and malignant tumors**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**Demonstrators**
Week:9	**13**	**Tutorial**	**N-Pa-001**	**Define neoplasia, Nomenclature and difference between benign and malignant tumors based on morphological and functional characteristics and epidemiology of cancer.**	**Nomenclature, benign and malignant tumors**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**Demonstrators**
Week:9	**FOR.MEDICINE**						

Week:9	**14**	**Lecture**	**For-PI-005 For-PI-006 For-PI-007 For-PI-008**	**Determine Race of a person from different parameters Determine stature of a person by different methods. Describe anthropometry with reference to age determination Classify fingerprint patterns according to Galton's classification Explain different methods of recording fingerprints. Describe the advantages & medico legal importance of Dactylography Define Poroscopy / Locards method**	**Race determination Stature estimation Anthropometry Dactylography**	**NRA 1st Ed. pg 32-45**	**Dr. Zainab**

Week:9	**15**	**Lecture**	**For-PI-009 For-PI-010**	**Describe the role of DNA fingerprinting in identification Enlist the samples required for DNA profiling in medicolegal cases Enumerate the medicolegal importance of DNA fingerprinting Identify different methods of identification in case of mutilated, burnt and decomposed dead bodies Apply the international SOP of disaster Victim Identification (DVI) in mass disaster**	**DNA Profiling Mass Disaster identification**	**Parikh 7th Ed. pg 75-86, pg 478**	**Dr. Zainab**
Week:9	**16**	**Tutorial**	**For-PI-013**	**Estimate the age of a person from the oral examination of the teeth**	**Age and sex determination**	**NRA 1st Ed. pg 32-45**	**Demonstrators**
Week:9	**PERLs**						
Week:9	**17**	**Lecture**	**Investigating medical errors**		**Lecture Presentation**	**Dr. Saba Iqbal**	
Week:9	**COM.MEDICINE**						

Week:9	**18**	**Lecture**	**ID-CM005**	**Identify the recommended vaccine schedule for children and adults. Analyse community-based vaccination campaigns. Analyse public awareness programs & school health initiatives to control its transmission.**	**Diphtheria**	**K.park 23rd ed. CH#4**	**Dr Usman Sheikh**
Week:9	**SURGERY**						
Week:9	**19**	**Lecture**	**ID-S002**	**Discuss the signs symptoms diagnosis and surgical treatment of hydatid cyst and its differential diagnosis with amoebic liver abscess**	**GIT**	**Dr. Usman**	
Week:9	**SDL**						
Week:9	**20**	**Self Directed Learning**					
Week:9	**21**	**Self Directed Learning**					
Week:9	**22**	**Self Directed Learning**					
Week:9	**23**	**Self Directed Learning**					
Week:9	**CLINICAL ROTATION / PRACTICAL**						

Week:9	**24**	**PRACTICAL**	**For-PI-013**	**Identify the sex and age from morphological features of different bones**	**Age and sex determination**	**Practical copy NRA 1st Ed. pg 32-45**	**Demonstrators**
Week:9	**25**	**PRACTICAL**	**For-PI-013**	**Identify the sex and age from morphological features of different bones**	**Age and sex determination**	**Practical copy NRA 1st Ed. pg 32-45**	**Demonstrators**
Week:9	**26**	**PRACTICAL**	**Fh-Ph013**	**Analysis and interpretation of drug Antagonism Between Acetylcholine and Atropine on Rabbit's Ileum through online videos / simulations / graphs / practical performance**	**calculations**	**Practical copy**	**Demonstrators**
Week:9	**27**	**PRACTICAL**	**Fh-Ph013**	**Analysis and interpretation of Drugs (Pilocarpine, Adrenaline, Atropine, Homatropine, Proparacaine) on Rabbit's Eye through online videos / simulations / graphs / practical performance**	**calculations**	**Practical copy**	**Demonstrators**
Week:9	**28**	**PRACTICAL**	**HIT-H-006**	**Identify normal blood cells. Identify common malignant disorders e.g. CML, CLL, Acute Leukemias.**	**HAEMATOLOGY**	**Practical copy**	**Demonstrators**

Week:9	**29**	**PRACTICAL**	**HIT-H-006**	**Identify normal blood cells. Identify common malignant disorders e.g. CML, CLL, Acute Leukemias.**	**HAEMATOLOGY**	**Practical copy**	**Demonstrators**
Week:9	**30**	**CLINICAL ROTATION**	**MS2-M 002**	**Elicit symptom of "swelling" in history in terms of location, duration, pattern and any family or drug history.**	**General Medicine**	**Log Book**	**Medical Faculty**
Week:9	**Assessment**						
Week:9	**32**	**GRAND TEST**					
Week:9	**33**	**GRAND TEST**					
Week:9	**34**	**OSPE/VIVA**					
Week:9	**35**	**OSPE/VIVA**					
TUTORIAL (Pharmacology)							
Week:9	**36**	**Tutorial**	**HIT-H-OO3**	**Describe the mechanisms of action, clinical uses and adverse effects of antiplatelet drugs Illustrate where the 4 major classes of antiplatelet drugs act Differentiate between Clopidogrel and Ticlopidine**	**Hematopoietic System**	**katzung edition 16**	**Demonstrator**

Week:9	**37**	**Tutorial**	**HIT-H-OO3**	**Describe the mechanisms of action, clinical uses and adverse effects of antiplatelet drugs Illustrate where the 4 major classes of antiplatelet drugs act Differentiate between Clopidogrel and Ticlopidine**	**Hematopoietic System**	**katzung edition 16**	**Demonstrator**

Week No.	Total Hours	Mode of Teaching	Code	Learning Objective	Topic	Reference	Facilator
Week:10	**PHARMACOLOGY**						
Week:10	**1**	**Lecture**	**N-Ph-001**	**Patho physiology cell cycle ,Abnormalities in cell cycle leading to oncogenesis**	**Cell cycle**	**Katzung edition 16**	**Dr. Asma Saeed**
Week:10	**2**	**Lecture**	**N-Ph-002**	**Cell Cycle specific and non-specific anti-tumour agent mechanism of action, adverse effect, indication drugs interaction of various class of chemotherapeutic agents. Drugs for palliative therapy in various tumours**	**Cell Cycle specific and non-specific anti-tumour agent**	**Katzung edition 16**	**Dr. Asma Saeed**

Week:10	**3**	**Lecture**	**N-Ph-002**	**Drugs related with rehabilitation. Drugs used during phases of radiotherapy e.g tumour lysis syndrome Drugs used beside surgical resection of various tumour to treat complications.**	**Cell Cycle specific and non-specific anti-tumour agent**	**Katzung edition 16**	**Dr. Asma Saeed**
Week:10	**4**	**Lecture**	**ID-Ph001**	**Glucocorticoids as part of various anti-cancer cocktails.**	**Cell Wall Inhibitors**	**Katzung edition 16**	**Dr. Asma Saeed**

Week:10	**5**	**Lecture**	**ID-Ph001**	**Classify cell wall synthesis inhibitors. Discuss the mechanism of action of beta-lactam antibiotics (Penicillin G, V, Oxacillin, Naicillin, Ampicillin, Amoxicillin, Piperacillin). Delineate the mechanism of resistance to beta-lactam antibiotics. Enlist the major adverse effects of penicillin. Differentiate the clinical uses of beta-lactam antibiotics. Discuss the mechanism of action and clinical significance of Beta Lactamase Inhibitors (Clavulanic acid, Sulbactam, Tazobactam, Avibactam, Vaborbactam).**	**Cell Wall Inhibitors**	**Katzung edition 16**	**Dr. Azka Khan**
Week:10	**6**	**Tutorial**	**ID-Ph001**	**Classify cephalosporin generations. Describe their antibacterial spectrum and clinical uses. Differentiate the clinical uses of cephalosporin generations.**	**Cell Wall Inhibitors**	**Katzung edition 16**	**Dr. Asma Saeed**

				List the major adverse effects of cephalosporins.			
Week:10	**PATHOLOGY**						
Week:10	**7**	**Lecture**	**N-Pa-002**	**Understand the molecular basis of cancer and pathogenesis of neoplasia, including the role of genetic mutations, oncogenes, tumor suppressor genes, mechanisms of cell cycle dysregulation, apoptosis evasion, angiogenesis in tumor progression and metastasis Differentiate Carcinomas, Sarcomas and lymphoreticular neoplasm**	**Difference between carcinoma and sarcoma and pathways of spread of malignant tumors**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**
Week:10	**8**	**Lecture**	**N-Pa-003**	**Carcinogenic agents with their cellular interactions.**	**Carcinogenesis**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**

Week:10	**9**	**Lecture**	**N-Pa-004**	**Describe the role of diagnostic tools like biopsy, histopathology with IHC (Immuno-histochemistry) and special stains and molecular diagnostics with common tumor markers.**	**Tumor markers**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**
Week:10	**10**	**Lecture**	**N-Pa-005**	**Grading and Staging Invasion and metastasis**	**Grading and Staging Invasion and metastasis**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**
Week:10	**11**	**Lecture**	**ID-Pa-1**	**Explain the morphological, pathological and diagnostic aspects of: Staphylococci**	**Bacterial infectious agents**	**LEVINSON 18TH EDITION**	**DR MAJID**
Week:10	**12**	**Tutorial**	**N-Pa-005**	**Grading and Staging Invasion and metastasis**	**Grading and Staging Invasion and metastasis**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**Demonstrators**
Week:10	**FOR.MEDICINE**						

Week:10	**13**	**Lecture**	**For2-Tr-001** **For2-Tr-002**	**Define injury, wound and hurt.** **Classify injuries on the basis of causative weapons** **Classify injuries as per Qisas and Diyyat Act.** **Explain mechanism of wound production with reference to subject, object and contact.**	**General concept** **Wound production** **Abrasion**	**NRA 1st Ed. Chapter 4, 6**	**Dr. Zainab**

Week:10	**14**	**Lecture**	**For2-Tr-003 For2-Tr-004 For2-Tr-005 For2-Tr-007**	**Define abrasions. Classify abrasion. Describe mechanism of production of abrasions. Differentiate between different types of abrasions. Explain medicolegal importance of abrasions Define bruises. Describe mechanism of production of bruises. Classify bruises. Explain pathophysiology of color changes in the bruise Assess the age of wound from color changes of wound. Distinguish between bruise, artificial bruise and hypostasis. Explain medico legal importance of bruises. Define lacerated wound. Outline mechanism of production of a lacerated wound. Classify lacerated wounds. Differentiate between a lacerated wound and incised wound on gross examination. Explain medico legal importance. Define incised/stab wounds. Discuss mechanism of production of an incised wound. Explain medico-legal significance of incised/stab wounds**	**Abrasion Bruise Laceration Incised/Stab wounds**	**NRA 1st Ed. Chapter 6**	**Dr. Zainab**

Week:10	**15**	**Tutorial**	**For2-Tr-026**	**Recognize and identify common conventional blunt objects, sharp objects, firearms, electrical instruments and chemicals and their medicolegal aspects (lathi, knife, axe, gandasa, sickle, dagger, razor**	**Mechanical injuries**	**NRA 1st Ed. Chapter 6**	**Demonstrators**
Week:10	**PERLs**						
Week:10	**17**	**Lecture**	**Legal and Ethical Aspects of Research**		**Lecture Presentation**		**Dr. Javaid**
Week:10	**SURGERY**						
Week:10	**18**	**Lecture**	**MS2-Orth006**	**Understand surgical intervention in severe sports injuries.**	**Sports Injuries**	**B & L**	**Dr. Shoaib**
Week:10	**SDL**						
Week:10	**19**	**Self Directed Learning**					
Week:10	**20**	**Self Directed Learning**					

Week:10	**21**	**Self Directed Learning**					
Week:10	**22**	**Monitoring for drug side effects**					
Week:10	**Prescribing antibiotics for infection CLINICAL ROTATION / PRACTICAL**						
Week:10	**23**	**PRACTICAL**	**For2-Tr-026**	**Recognize and identify common conventional blunt objects, sharp objects, firearms, electrical instruments and chemicals and their medicolegal aspects (lathi, knife, axe, gandasa, sickle, dagger, razor**	**Mechanical injuries**	**NRA 1st Ed. Chapter 6**	**Demonstrators**
Week:10	**24**	**PRACTICAL**	**For2-Tr-026**	**Recognize and identify common conventional blunt objects, sharp objects, firearms, electrical instruments and chemicals and their medicolegal aspects (lathi, knife, axe, gandasa, sickle, dagger, razor**	**Mechanical injuries**	**NRA 1st Ed. Chapter 6**	**Demonstrators**

Week:10	**25**	**PRACTICAL**	**HIT-Pa-005, HIT-Pa- 006**	**Interpret the data of ELISA for different tests related to immunology. Interpret the data of Graft rejection, Graft versus host disease.**	**IMMUNOLOGY**	**PRACTICAL COPY**	**Demonstrators**
Week:10	**26**	**PRACTICAL**	**HIT-Pa-005, HIT-Pa- 006**	**Interpret the data of ELISA for different tests related to immunology. Interpret the data of Graft rejection, Graft versus host disease.**	**IMMUNOLOGY**	**PRACTICAL COPY**	**Demonstrators**
Week:10	**27**	**CLINICAL ROTATION**	**MS2-Orth 017**	**Elicit symptom of "joint mobility" in history in terms of its location, duration, pattern, mechanism of injury with associated symptoms.**	**Orthopedics**	**Log Book**	**Medical Faculty**
Week:10	**28**	**CLINICAL ROTATION**	**MS2-Orth 017**	**Elicit the signs and symptoms of patient with joint dislocation in history**	**Orthopedics**	**Log Book**	**Medical Faculty**

Week:10	**29**	**CLINICAL ROTATION**	**MS2-Orth 017**	**Elicit symptom of "joint mobility" in history in terms of its location, duration, pattern, mechanism of injury with associated symptoms.**	**Orthopedics**	**Log Book**	**Medical Faculty**
Week:10	**ASSESSMENT**						
Week:10	**30**	**Grand Test**					
Week:10	**31**	**Grand Test**					
Week:10	**32**	**OSPE/Viva**					
Week:10	**33**	**OSPE/Viva**					
Week:10	**34**	**Module Exam**					
Week:10	**35**	**Module Exam**					
Week:10	**WHOLE CLASS TUTORIAL**						
Week:10	**36**	**Self Directed Learning**					
Week:10	**37**	**Self Directed Learning**					

Week No.	Total Hours	Mode of Teaching	Code	Learning Objective	Topic	Reference	Facilator
Week:11	**PHARMACOLOGY**						

Week:11	**1**	**Lecture**	**ID-Ph001**	**Describe important features of the carbapenems and monobactam. Describe the mechanism of action of Membrane-active antibiotics (daptomycin, Fosfomycin, bacitracin, cycloserine). Describe the mechanism of resistance of Membrane-active antibiotics. Describe the adverse effects and toxicities of Membrane-active antibiotics. Describe antibacterial spectrum, mechanism of action, resistance, clinical uses and toxicity of vancomycin. Discuss clinical features of Redman Syndrome. Describe antibacterial spectrum, mechanism of action of Teicoplanin, Telavancin, Delbavancin, Oritavancin**	**Cell Wall Inhibitors**	**Katzung edition 16**	**Dr. Azka Khan**

Week:11	**2**	**Lecture**	**ID-Ph002**	**Explain briefly the major steps of protein synthesis Classify protein synthesis inhibitors. Demonstrate the tetracycline's and discuss mechanism of action, resistance, antibacterial spectrum, clinical uses, adverse effects of tetracycline's. Outline features of Milk Alkali Syndrome. List pharmacological indication and adverse effects of Glycylcycline.**	**Protein Synthesis Inhibitors**	**Katzung edition 16**	**Dr. Asma Saeed**

Week:11	**3**	**Lecture**	**ID-Ph002**	**Classify Macrolide/ Ketolide Describe the mechanism of action and pharmacokinetics, antimicrobial spectrum, clinical uses, adverse effects of Erythromycin, Clarithromycin, Azithromycin, Fidaxomycin Enlist mechanism of resistance & drug interactions of Macrolides Describe the antibacterial spectra, therapeutic uses and side effects of Ketolides (Telithromycin, solithromycin) Discuss the main characteristics of Clindamyc inincluding mechanism of action, pharmacokinetics, clinical uses and adverse effects.**	**Protein Synthesis Inhibitors**	**Katzung edition 16**	**Dr. Asma Saeed**

Week:11	**4**	**Lecture**	**ID-Ph002**	**Classify Antifolate drugs. Define Sulfonamides. Discuss the classification of Sulfonamides. Describe the mechanism of action of Sulfonamides. Discuss the clinical uses of Sulfonamides. Describe the adverse effects and toxicities of Sulfonamides. Outline clinical features of Steven Johnsons Syndrome. Explain Trimethoprim & Trimethoprim - Sulfamethoxazol with respect to their mechanism of actions, resistance, antibacterial spectrum, pharmacokinetics, clinical uses and adverse effects**	**Protein Synthesis Inhibitors**	**Katzung edition 16**	**Dr. Asma Saeed**

Week:11	**5**	**Tutorial**	**ID-Ph002**	**Describe the adverse effects and toxicities of Sulfonamides. Outline clinical features of Steven Johnsons Syndrome. Explain Trimethoprim & Trimethoprim - Sulfamethoxazol with respect to their mechanism of actions, resistance, antibacterial spectrum, pharmacokinetics, clinical uses and adverse effects**	**Protein Synthesis Inhibitors**	**Katzung edition 16**	**demonstrators**
Week:11	**PATHOLOGY**						
Week:11	**6**	**Lecture**	**N-Pa-005**	**Understand the concept of invasion and metastasis**	**Grading and Staging Invasion and metastasis**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**
Week:11	**7**	**Lecture**	**N-Pa-005**	**Basic tumor markers**	**Grading and Staging Invasion and metastasis**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**

Week:11	**8**	**Lecture**	**N-Pa-006**	**Molecular basis of cancer**	**Molecular basis of cancer**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**DR SAEED**
Week:11	**9**	**Lecture**	**ID-Pa-1**	**Explain the morphological, pathological and diagnostic aspects of: Staphylococci**	**Bacterial infectious agents**	**LEVINSON 18TH EDITION**	**DR MAJID**
Week:11	**10**	**Tutorial**	**N-Pa-006**	**Molecular basis of cancer**	**Molecular basis of cancer**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**Demonstrators**
Week:11	**FOR.MEDICINE**						

Week:11	**11**	**Lecture**	**For2-Tr-006**	**Explain mechanism of fracture of bones/tooth. Discuss the mechanism of fractures/tooth. Describe different types of fractures of bones Interpret the age of fractures from radiological findings. Illustrate stages of healing of fractures of bones/teeth. Apply the nature of the fracture in the injury certificate as per Qisas and Diyat act. Explain medico-legal importance of fracture of bone/tooth.**	**Fractures**	**Parikh 7th Ed. Chapter 20**	**Dr. Zainab**

Week:11	**12**	**Lecture**	**For2-Tr-014**	**Define fire arms and ballistics. Classify fire arm. Explain different parts of fire arm weapons. Describe ammunition used in firearms. Explain chain of events of firing**	**Internal Ballistics**	**Parikh 7th Ed. Chapter 17**	**Dr. Anwar**
Week:11	**13**	**Tutorial**	**For2-Tr-027 For2-Tr-028**	**Differentiate between different types of abrasions Assess the age of a bruise on the basis of color changes. Differentiate between a bruise and post mortem staining**	**Abrasion Bruise**	**NRA 1st Ed. Ch. 6**	**Demonstrators**
Week:11	**PERLs**						
Week:11	**15**	**Lecture**	**Reporting medical errors**		**Lecture Presentation**	**Dr. Saba Iqbal**	
Week:11	**Patient Safety**						

Week:11	**16**	**Lecture**	**GPh-PS002**	**Learn and practice ways to improve the safety of medication use.**	**Medication safety**	**Dr. Usman**
Week:11	**17**	**Lecture**	**GPh-PS002**	**Learn and practice ways to improve the safety of medication use.**	**Medication safety**	**Dr. Usman**
Week:11	**SDL**					
Week:11	**18**	**Self Directed Learning**				
Week:11	**19**	**Self Directed Learning**				
Week:11	**20**	**Self Directed Learning**				
Week:11	**21**	**Self Directed Learning**				
Week:11	**22**	**Self Directed Learning**				
Week:11	**23**	**Self Directed Learning**				
Week:11	**24**	**Self Directed Learning**				
Week:11	**CLINICAL ROTATION / PRACTICAL**					

Week:11	**25**	**PRACTICAL**	**For2-Tr-030**	**Assess the age of fracture by recognition of healing stages on x rays Apply different sections of Qisas and Diyat Act from examination of fractures on x rays**	**Age of Fracture**	**Parikh 7th Ed. Chapter 20 Practical Copy**	**Demonstrators**
Week:11	**26**	**PRACTICAL**	**For2-Tr-030**	**Assess the age of fracture by recognition of healing stages on x rays Apply different sections of Qisas and Diyat Act from examination of fractures on x rays**	**Age of Fracture**	**Parikh 7th Ed. Chapter 20 Practical Copy**	**Demonstrators**
Week:11	**27**	**CLINICAL ROTATION**	**Knowledge of common drug classes relevant to foundational clinical care (e.g., antibiotics, analgesics, antihypertensives).**			**Log Book**	**Medical Faculty**
Week:11	**28**	**CLINICAL ROTATION**	**Knowledge of common drug classes relevant to foundational clinical care (e.g., antibiotics, analgesics, antihypertensives).**			**Log Book**	**Medical Faculty**

Week:11	**29**	**CLINICAL ROTATION**	**Knowledge of common drug classes relevant to foundational clinical care (e.g., antibiotics, analgesics, antihypertensives).**			**Log Book**	**Medical Faculty**
Week:11	**Assessment**						
Week:11	**30**	**BLOCK-7 EXAM WRITTEN**					
Week:11	**31**	**BLOCK-7 EXAM WRITTEN**					
Week:11	**32**	**BLOCK-7 EXAM WRITTEN**					
Week:11	**33**	**BLOCK -7 EXAM OSPE/VIVA**					
Week:11	**34**	**BLOCK -7 EXAM OSPE/VIVA**					
Week:11	**35**	**BLOCK -7 EXAM OSPE/VIVA**					
Week:11	**WHOLE CLASS TUTORIAL (Pharmacology)**						
Week:11	**36**	**Tutorial**	**N-Pa-006**	**Molecular basis of cancer**	**Molecular basis of cancer**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**Demonstrators**
Week:11	**37**	**Tutorial**	**N-Pa-006**	**Molecular basis of cancer**	**Molecular basis of cancer**	**ROBBINS PATHOLOGY 10TH EDITION CHAPTER 7**	**Demonstrators**

Operational Definitions

Traditional & Innovative Teaching Methodologies

Sr.	Pedagogical Methodologies	Description
1.	Lectures	Traditional method where an instructor presents information to a large group of students (large group teaching). This approach focuses on delivering theoretical knowledge and foundational concepts. It is very effective for introducing new topics.
2.	Tutorial	Tutorials involve small group discussion (SGD) where students receive focused instruction and guidance on specific topics.
3	Demonstrations	Demonstrations are practical displays of techniques or procedures, often used to illustrate complex concepts or practices, particularly useful in dental education for showing clinical skills.
4	Practicals	Hands-on sessions where students apply theoretical knowledge to real-world tasks. This might include lab work, clinical procedures, or simulations. Practicals are crucial for developing technical skills and understanding the application of concepts in practice.
5.	Student Presentations	Students prepare and deliver presentations on assigned topics. This method enhances communication skills, encourages students to explore topic in-depth. It also provides opportunities for peer feedback and discussion.
6.	Assignment	Tasks given to students to complete outside of class. Assignments can include research papers, case studies, or practical reports. They are designed to reinforce learning, assess understanding, and develop critical thinking and problem-solving skills.
7.	Self-directed Learning	Students take initiative and responsibility for their own learning process. Students are encouraged to seek resources, set goals, and evaluate their progress. This is a learner-centered approach where students take the initiative to plan, execute, and assess their own learning activities. This method promotes independence, critical thinking, and lifelong learning skills.

8.	Flipped Classroom	In this model, students first engage with learning materials at home (e.g., through videos, readings) and then use class time for interactive activities, discussions, or problem-solving exercises. This approach aims to maximize in-class engagement and application of knowledge.
9.	Peer-Assisted Learning (PAL)	A collaborative learning approach where students help each other understand course material. PAL involves structured peer tutoring, study groups, or collaborative tasks. It enhances comprehension through teaching, reinforces learning, and builds teamwork skills.
10.	Team-based Learning (TBL)	A structured form of small group learning where students work in teams on application-based tasks and problems. Teams are responsible for achieving learning objectives through collaborative efforts, promoting accountability, and deeper understanding of the material.
11.	Problem-based Learning (PBL)	Students work on complex, real-world problems without predefined solutions. They research, discuss, and apply knowledge to develop solutions. PBL fosters critical thinking, problem-solving skills, and the ability to integrate knowledge from various disciplines.
12.	Academic Portfolios	A collection of student's work that showcases learning achievements, reflections, and progress over time. Portfolios include assignments, projects, and self-assessments. They provide a comprehensive view of student development, highlight strengths and areas for improvement, and support reflective learning (experiential learning)
13.	Seminar	A seminar is an academic or professional setting where individuals discuss, present, and explore specific topics, often with expert guidance

AVICENNA MEDICAL & DENTAL COLLEGE
DEPARTMENT OF MEDICAL EDUCATION

Internal Assessment Policy

Introduction

This policy outlines the guidelines for internal assessment of students at Avicenna Medical and Dental College. Internal assessment plays a crucial role in evaluating a student's progress, understanding their strengths and weaknesses, and providing timely feedback. This policy aims to ensure fairness, consistency, and transparency in the internal assessment process.

Internal Assessment Components

The internal assessment for each course will be comprised of the following components:

1. Attendance

- Attendance will be recorded regularly and will contribute to the overall internal assessment score.
- Students are expected to maintain a minimum attendance of 75% to be eligible for internal assessment marks.

2. Continuous Assessment

- Continuous assessment will be based on regular assignments, quizzes, presentations, and other activities conducted throughout the semester.
- These assessments will evaluate students' understanding of the course material, their critical thinking skills, and their ability to apply knowledge to real-world scenarios.

3. Grand Test and Module Exams

- Grand tests and module exams will be conducted to assess students' comprehensive understanding of the course content.
- These exams will be designed to evaluate both theoretical knowledge and practical skills.

4. Attitude and Behavior

- Students' attitude towards learning, participation in class activities, and adherence to college rules and regulations will be assessed.
- This component will evaluate students' professionalism, teamwork skills, and ethical conduct.

5. Logbook and Portfolio

- Students will be required to maintain a logbook and portfolio to document their learning journey.
- The logbook will include reflections on lectures, tutorials, and practical sessions.
- The portfolio will showcase students' best work, including assignments, projects, and research papers.

Assessment Criteria and Weighting

The following table outlines the weighting of each component in the internal assessment:

Component	Marks	Percentage
Attendance	6	2%
Continuous Assessment	12	4%
Grand Test and Module Exams	30	10%
Attitude and Behavior	10	3%
Logbook and Portfolio	2	1%
Total	60	20%

Assessment Procedures

- Faculty Responsibility: Faculty members will be responsible for designing and administering the internal assessments in accordance with the course syllabus and this policy.
- Marking and Grading: Faculty members will mark and grade the assessments using a transparent and consistent marking scheme. Candidates shall be required to score at least 50% marks in the internal assessment in each subject to become eligible for admission to professional examinations.
- Feedback: Faculty members will provide timely and constructive feedback to students on their performance.
- Record-Keeping: Faculty members will maintain accurate records of all internal assessments, including marks and feedback.
- Moderation: Internal assessments will be moderated by the course coordinator or the head of the department to ensure fairness and consistency.

Appeal Process

Students who have concerns about their internal assessment marks may appeal to the concerned faculty member or the head of the department. The appeal process will be handled promptly and fairly.

The internal assessment policy is designed to promote student learning, assess their progress, and provide a fair and transparent evaluation system. Faculty members and students are expected to adhere to this policy to ensure the integrity of the internal assessment process.

Attendance Requirement & Internal Assessment Criteria

The institution follows the regulations for examinations of the UHS in letter and spirit. The students require **75% attendance** in all academic sessions and **50% passing marks** with internal assessments and send-up examinations to be eligible for the UHS Professional Examinations.

Assessment Guidelines

Assessment in medical & dental education is a critical component designed to ensure that medical & dental students acquire the necessary knowledge, skills, and competencies required for effective medical & dental practice.

Assessment drives learning! – George E. Millar

You will encounter a variety of assessment methods, each serving a specific purpose.

- Written examinations, including multiple-choice and essay questions, will test your grasp of theoretical concepts and subject matter.
- Practical assessments will require you to demonstrate your clinical skills and ability to apply knowledge in real-world scenarios.

- Clinical exams will evaluate your communication skills and reasoning abilities through case discussions and problem-solving exercises.
- Clinical skills and work-place based assessments will observe your hands-on proficiency and patient management capabilities.

At Avicenna Medical & Dental College, internal assessments are systematically conducted throughout each academic year of the MBBS program, as per the guidelines established by the University of Health Sciences (UHS). These assessments, overseen by the Assessment Cell, adhere to either the Annual Subject-Based System or the Integrated/Modular System, depending on the curriculum structure.

Notably, beginning with the 2024-25 academic year, the weightage of internal assessments will be increased from 10% to 20%. The UHS administers professional examinations independently, organizing them at designated neutral sites and appointing external examiners to ensure objectivity and fairness.

Internal Assessment Weightage	20%	100%
External Assessment Weightage	80%	

Assessment Schedule

Avicenna Medical & Dental College
3rd Year MBBS (M-22)
Test Schedule Block-7

Week	Date	Day	Subject	Test	Topic
1st	17-Mar-25	Mon	Session Commencement: 17th March, 2025		
	18-Mar-25	Tue	All Subjects	Lecture	Lecture Time Divided
2nd	25-Mar-25	Tue	All Subjects	Lecture	Lecture Time Divided
3rd	Eid- Ul- Fitr + Spring Vacations Holidays: 30th March-6th April,2025				
4th	8-Apr-25	Tue	All Subjects	Lecture	Lecture Time Divided
5th	15-Apr-25	Tue	Pharamcology	Grand Test OSPE+VIVA	Pharmacokinetics (Absorption, distribution, metabolism,excretion)
6th	22-Apr-25	Tue	Pathology	Grand Test OSPE+VIVA	Genetics ,GB, Haematology-1
7th	29-Apr-25	Tue	For.Medicine	Grand Test OSPE+VIVA	Thanatology and Autopsy
8th	6-May-25	Tue	Pharamcology	Grand Test OSPE+VIVA	Pharmacodynamics,ANS Parasympathomimetics, parasympatholytics
9th	13-May-25	Tue	Pathology	Grand Test OSPE+VIVA	Haematology-2, Immunity
9th	15-May-25	Thus	Allied Test	Grand Test	Whole Syllabus of Module 12,13,14,15
10th	20-May-25	Tue	Pharamcology	Grand Test OSPE+VIVA	Sympathomimetics, sympatholytic, oral anticoagulants, antiplatelets, thrombolytics, Hematopoitic growth factors, drugs used in bleeding disorders, Immunosuppressants
10th	23-May-25	Fri	Integrated	Module Exam: VIVA/OSPE	Whole Syllabus
11th	27-May-25	Tue	Integrated	Block-7 Exam	Whole Syllabus of Module 12,13,14,15
	28-May-25	Wed		OSPE+VIVA	
End Of Block-7					

Table of Specification

MBBS 3rd Professional							
Block-7							
Subject	Written Exam			Oral/Practical/Clinical Exam			
	MCQ (1 mark)	SEQ (5 mark each)	Marks	OSPE /OSCE (8 marks each observed)	OSCE (10 marks each observed)	OSVE (14 marks each observed)	Marks
Pharmacology	30	05	55	03	-	01	38
Pathology	30	04	50	03	-	01	38
Family Medicine	-	-	-	-	-	-	-
Community Medicine	02	-	02	01		-	08
Surgery	05	-	05	01	-	-	08
Medicine	05	-	05	01	-	-	08
Forensic	13	01	18	01	-	01	22
Behavioral	02	-	02	-	-	-	-
Patient Safety	03	-	03	-	-	-	-
CFRC	-	-	-	01	-	-	08
PERLs + ExposITory	-	-	-	-	01	-	10
Total	**90**	**10x5=50**	**140**	**11 stations x 08 = 88**	**01 stations x 10 = 10**	**03 stations x 14=42**	**140**

YEAR-3		
		Marks
A.	**Block 7** (Foundation-II + Hematopoietic, Immunity & Implant + General Pharmacology + Forensic Medicine & Toxicology-I)	350
B.	**Block 8** (Musculoskeletal & Locomotion-II + Infectious Diseases + Neoplasia + Forensic Medicine & Toxicology - II)	350
C.	**Block 9** (Cardiovascular-II + Respiratory II + Community Medicine & Public Health + Family Medicine I + Forensic Medicine & Toxicology - III)	350
	Total	1050

Recommended Books & Reading Resources

Anatomy

Snell's Clinical Anatomy 10th ed.

Langman's Medical Embryology 12thed

Medical Histology by Laiq Hussain Siddiqui 8th edition.

General Anatomy by Laiq Hussain Siddiqui 6th edition.

Biochemistry

Harpers illustrated Biochemistry (latest edition). Rodwell.V.W MCGrawHill publishers.

Lippincott illustrated Review (latest edition). Kluwer.W.

Essentials of Medical Biochemistry vol 1&2 by Mushtaq Ahmed.

Pathology

Vinary Kumar, Abul K. Abbas and Nelson Fausto Robbins and Cotran, Pathologic basis of disease. WB Saunders.

Robbins and Cotran Pathological Basis of Disease. Kumar, V., Abbas, A. and Aster, J. Latest Edition

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.

Robbins & Kumar, Medical Microbiology and Immunology Levinson.

General Medicine

Principles and Practice of Medicine by Davidson (latest edition)

Clinical Medicine by Parveen J Kumar & Michaell Clark

Oxford Handbook of Medicine

Macleod's Clinical Examination book

Medicine and Toxicology by C.K. Parikh

Hutchison's Clinical Methods by Michael Swash. 21st edition

Pharmacology And Therapeu cs

Katzung and Trevor’s Pharmacology: Examination and Board Review- 15th Edition

Basic and Clinical Pharmacology by Bertram G Katzung (case scenarios only) - 16th Edition-

Current Medical Diagnosis and Treatment- reference book –Edition-2024

Basic and Clinical Pharmacology by Bertram G Katzung (case scenarios only) - 15th Edition

Basic and Clinical Pharmacology by Katzung, McGraw-Hill. 16th Edition.

Pharmacology by Champe and Harvey, Lippincott Williams & Wilkins 8th Edition.

Katzung Basic and Clinical pharmacology, Lippincot Illustated reviews.

Clinical Pathology Interpretations by A. H. Nagi

Behavioural Sciences

Handbook of Behavioural Sciences by Prof. Mowadat H.Rana, 3rd Edition

Medical and Psychosocial aspects of chronic illness and disability 6th edition by Donna R.Falvo and Beverely E.Holland,

Integrating behavioral sciences in healthcare, Asma Humayun,2003, 1st edition

Community medicine

Parks Textbook of Preventive and Social Medicine. K. Park

Public Health and Community Medicine by Ilyas Ansari

MSDS manual of Government of Punjab

Text book of Community Medicine by Park J E. Latest Edition

Surgery

Bailey & Love’s Short Practice of Surgery (latest edition)

Browse's Introduction to the Symptoms & Signs of Surgical Disease 4th Edition

Bailey & Love Short Practice of Surgery, Clinical Surgery pearls by Dayananda Babu RACS for Surgical Audits.

Patent Safety

Patient Safety Currciulum Guide: Multi Professional Guide

Microbiology

Levinson’s review of Microbiology

Medical Microbiology and Immunology by Levinson and Jawetz,

Pediatrics Medicine

Nelson Textbook of Pediatrics

Basis of Pediatrics by Pervez Akbar Khan

Gynecology

Gynecology by Ten Teachers

Infection Control

National Guidelines Infection Prevention and control, National Institute of Health Pakistan

Biosafety

Biosafety in Microbiological and Biomedical Laboratories, 6th Edition (CDC, USA)

WHO Laboratory Biosafety Manual, Fourth Edition, And Associated Monographs

WHO safe management of wastes from healthcare facilities chapter 7 -8 page 77-99, 105-125)

Family medicine

Oxford Handbook of General Practice, 5th Edition

Orthopedics

Apley and Solomon's System of Orthopaedics and Trauma by Ashley Blom (Editor)

Rheumatology

Davidson's Principles and Practice of Medicine

Clinical Medicine by Parveen J Kumar & Michaell, Clark

Hutchison's Clinical Methods by Michael Swash

Radiology

Aids to Radiological Differential Diagnosis by Chapman S. and Nakielny R. 4th edition.

Elsevier Science Limited; 2003.

Forensic Medicine

Knight’s Forensic Pathology by Barnard Knight 3rd edition

G. Principles and Practice of Forensic Medicine by Prof. NasibR. Awan,2nd edition

Forensic DNA Typing – 2nd Edition, Author: John M. Butler

Parikh’s Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology by C.K. Parikh 6th Ed., CBS Publisher.

Gun Shot Wounds 2nd edition by V.J.Deimaio

Knight B. Simpson’s Forensic Medicine.

Knight and Pekka. Principles of Forensic Medicine

Forensic Pathology

Forensic pathology 2nd edition by V.J.Deimaio CRC press Boca Raton London New York

Washington DC

Toxicology

Principles of clinical toxicology 3rd edition Thomas. Gossel CRC press Taylor and Francis group

Forensic Sciences

Fundamentals of Forensic Science- 3rd Edition: Author: Max M Houck, Jay A. Siegel

TextBook of forensic medicine and toxicology Principles and Practice 5th edition by Krishan Vig

Biomedical ethics

Principles of Biomedical ethics, 8th edition by Tom. L. Beauchamp, James F. Childress.

Evidence Based Medicine

Databases for the latest articles/manuscripts

Clinical Practice Guidelines- local and international - (within last 3 years)

Books (Latest edition-within last 5 years)

Pediatrics

Nelson's Book of Pediatric 22 edition Illustrated book of Pediatrics, Pervaiz Akbar textbook peads medicine

Islamiyat

Standard Islamiyat (compulsory) for B.A, BSc, MA, MSc, MBBS by Prof M Sharif Islahi.

IImi Islamiyat(compulsory) for BA, BSc & equivalent.

About Avicenna Medical College

Avicenna Medical & Dental College is a purpose-built, fully equipped institution with experienced and excellence-driven faculty to train high-quality dental professionals in Pakistan.

Avicenna Medical & Dental College runs under the umbrella of Abdul Waheed Trust. Abdul Wahid Trust is a non-profit social welfare organization and registered under the Societies Act with the Registrar of Societies. The Trust is legalized through a Trust Deed that bears necessary rectifications. The Trust Deed is further supported by its Memorandum and Article of Association that authorizes the establishment and operation of the Medical College, the Dental College, the Nursing College, the Allied Health Sciences College, and other activities in the healthcare sector.

In 2009, Avicenna Medical & Dental College was recognized by the Pakistan Medical & Dental Council. With the advent of advanced tools and technology in every field of health science, medicine today has shot up to the greater end of the gamut with superior choice and promises in medical therapy in the very vicinity of the common man. AVMDC promises to be one such neighborhood.

Infrastructure Resources

Sr.	Infrastructure Resources	Description
1.	Lecture Hall	Each year has a dedicated lecture hall, totaling five lecture halls for the five professional years. These halls are equipped with modern audiovisual aids to support effective teaching and learning.
2.	Tutorial Room	The college's tutorial rooms, each with a capacity of 30, are specifically designed to support small group discussions and interactive sessions. These rooms facilitate personalized instruction, enabling more engaged and effective learning through direct interaction between students and instructors.
3.	Lab	The college is equipped with state-of-the-art laboratories for practical and clinical work. Each lab is designed to support various disciplines, to facilitate hands-on learning.
4.	Library on campus	A huge library occupies a full floor and has 260 seats including study carrels and group-discussion tables. Latest reference books of Basic and Clinical Sciences along with national & international journals are available in the library.
5.	Digital Library	The digital library offers access to a vast collection of e-books, online journals, research databases, and other digital resources. It supports remote access and provides tools for academic research and learning.
6.	Learning Management System (LMS)	The LMS is a comprehensive online platform that supports course management, content delivery, student assessment, and communication. It provides tools for tracking progress, managing assignments, and facilitates ongoing academic activities.

6.	Phantom Labs	Specialized Phantom Labs are available for advanced simulation and practice in dental procedures. These labs provide high-fidelity models and simulators that help students refine their clinical skills in a controlled environment.
7.	Mess & Cafeteria	The College has its own on-campus Mess which caters to 600 students. All food items including dairy, meat, and vegetables are sourced organically and bought in at the time of cooking, in order to ensure that students get freshly cooked meals at all times Students form the Mess committee which decides the mess menu in consultation with other students. The Mess offers fresh food to all residents three times a day. However, day scholars are also welcome to use the Mess facility at a reasonable cost. Two 50- inch LCD screens provide students an opportunity to get entertained during their meal times.
8.	Gymnasium & Sports	We recognize sports as a pivotal key to shape and maintain students' personality and good health. The College has indoor and outdoor sports facilities to help enhance the cognition and capacity to learn. There is a proper sports section for various games like basketball, football, volleyball, and cricket. The gym itself is fully equipped with modern machinery both for students and faculty.
9.	IT Lab	The IT Lab is equipped with modern computers and software available for students who need access for academic purposes.
10.	Auditorium	The college has a spacious auditorium equipped with advanced audio-visual facilities. It is used for large-scale lectures, guest presentations, and academic conferences, providing a venue for students to engage with experts and participate in important educational events.
11.	Examination Halls	The college provides dedicated examination halls that are designed to accommodate a large number of students comfortably. These halls are equipped with necessary facilities to ensure a smooth and secure examination process, including proper seating arrangements, monitoring systems, and accessibility features.

7-Star Doctor Competencies (PMDC)

According to national regulatory authority PMDC, a Pakistani medical/dental graduate who has attained the status of a 'seven-star doctor' is expected to demonstrate a variety of attributes within each competency. These qualities/ generic competencies are considered essential and must be exhibited by the individual professionally and personally.

1. Skillful / Care Provider.
2. Knowledgeable / Decision Maker.
3. Community Health Promoter / Community Leader.
4. Critical Thinker / Communicator
5. Professional / Lifelong learner.
6. Scholar / Researcher
7. Leader/ Role Model / Manager

Message from the Principal

As a Co-Founder and Co-Chairperson, I have been involved in planning, construction and accreditation of Avicenna Medical College by the Pakistan Medical and Dental Council (PM&DC) and its affiliation with the esteemed University of Health Sciences (UHS). It is a pleasure to see Avicenna Medical College develop, progress and achieve maximum academic excellence in a short period since its inception in 2009. The institution has lived up to its mission of training and producing medical graduates of international standards. Three batches have passed out as Doctors, who currently are serving in the country and abroad while several have opted for post-graduation and are on road to progress. We have achieved several milestones since 2009 including the recognition of our College for FCPS training by College of Physicians and Surgeons of Pakistan (CPSP), establishment of College of Nursing and Avicenna Dental College.

Principal
Prof. Dr. Gulfreen Waheed
MBBS, FCPS, MHPE, PhD Scholar - HPE
Avicenna Medical & Dental College

Message from the Chairman

The Avicenna Medical & Dental College is a project of Abdul Waheed Trust which is a Non-profitable, Non-governmental, Non -political & Social organization, working for the welfare of Humanity and based on Community empowerment. Avicenna Medical College has its own 530 bedded Avicenna teaching Hospital (Not for Profit hospital) within the College Campus & 120 bedded Aadil Hospital, at 15 minutes' distance. Separate comfortable hostels for boys & girls are provided on the campus.

Our students benefit from the state of the art College Library with facilities of Internet & online Journals that remain open 15 hours a day, for our students & faculty members. I am particularly pleased with the hard work by the Faculty and Students in the achievement of historic 100% results for all the classes. It is a rare achievement and speaks of dedication of the Faculty and Staff. Our motto is Goodness prevails and we aim at producing Doctors' who are knowledgeable, competent in clinical skills and ethical values.

Avicenna Medical College & Hospital was founded to provide quality health care services to the deserving patients belonging to the rural areas near Avicenna Hospital as well as to provide quality medical education of international standard to our students. The Hospital provides all medical services and Lab diagnostics to the local population at minimal cost. So far by the grace of Allah Almighty the number of patients being treated and operated upon at our Hospital is increasing every day as there is no other public or charity hospital in the circumference of 20km. We have already established two Satellite Clinics in the periphery which are providing outdoor care while admission cases are brought to the Hospital in Hospital transport.

Following the success of our reputable Medical College and Hospital, we were able to successfully establish Avicenna Dental College which is recognized by the Pakistan medical & Dental Council & University of Health Sciences. To date, we have enrolled five batches in our dental college and we aim to achieve the same level of success for our dental students as our medical students.

Chairman
Abdul Waheed Sheikh
Avicenna Medical & Dental College

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Vision

The vision of **Avicenna Medical & Dental College** is to become a college that thrives to achieve improvement in healthcare of masses through creative delivery of educational programs, innovative research, commitment to public service and community engagement in a environment that supports diversity, inclusion, creative thinking, social accountability, life-long learning and respect for all.

Mission

The mission of **Avicenna Medical and Dental College** is to educate and produce competent, research oriented healthcare professionals with professional commitment and passion for life-long learning from a group of motivated students through quality education, research and service delivery for the improvement of health status of the general population.