

AVICENNA MEDICAL & DENTAL COLLEGE



STUDY GUIDE
2026

Forensic Medicine & Toxicology III
BLOCK 9 - MODULE 23



Program: MBBS
Year: 3rd Professional Year
Batch No: M-23
Session: 2025-2026

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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.

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





Avicenna Medical & Dental College



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.

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

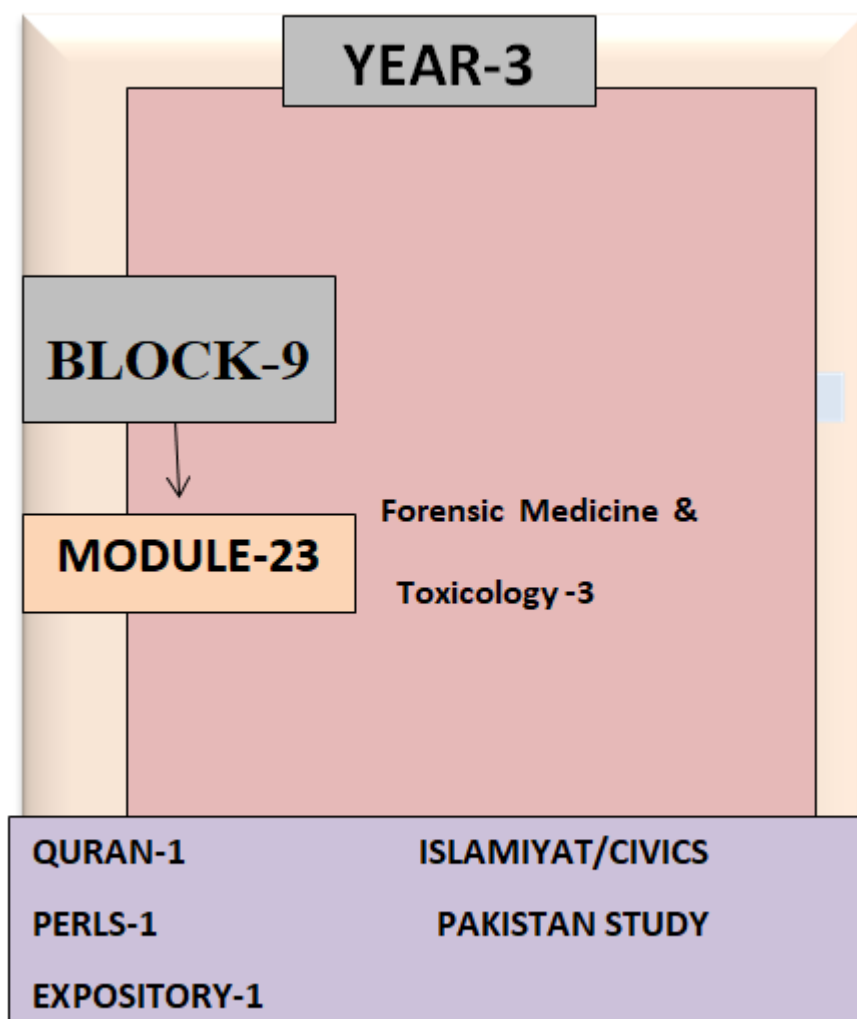
	CK	Creatine kinase
	CLED	cystine lactose electrolyte deficient
	CLL	chronic lymphocytic leukemia
	CM	Community Medicine
	CML	chronic myeloid leukemia
	CMV	cytomegalo virus
	CNS	Central Nervous System
	CO	Carbon monoxide
	CO2	Carbon dioxide
	CODIS	combined DNA index system
	COPD	Chronic obstructive pulmonary 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	Integrase 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
O	NSAIDs	Non-steroidal Anti-Inflammatory Drugs
	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 inhibitors
	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



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.

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.

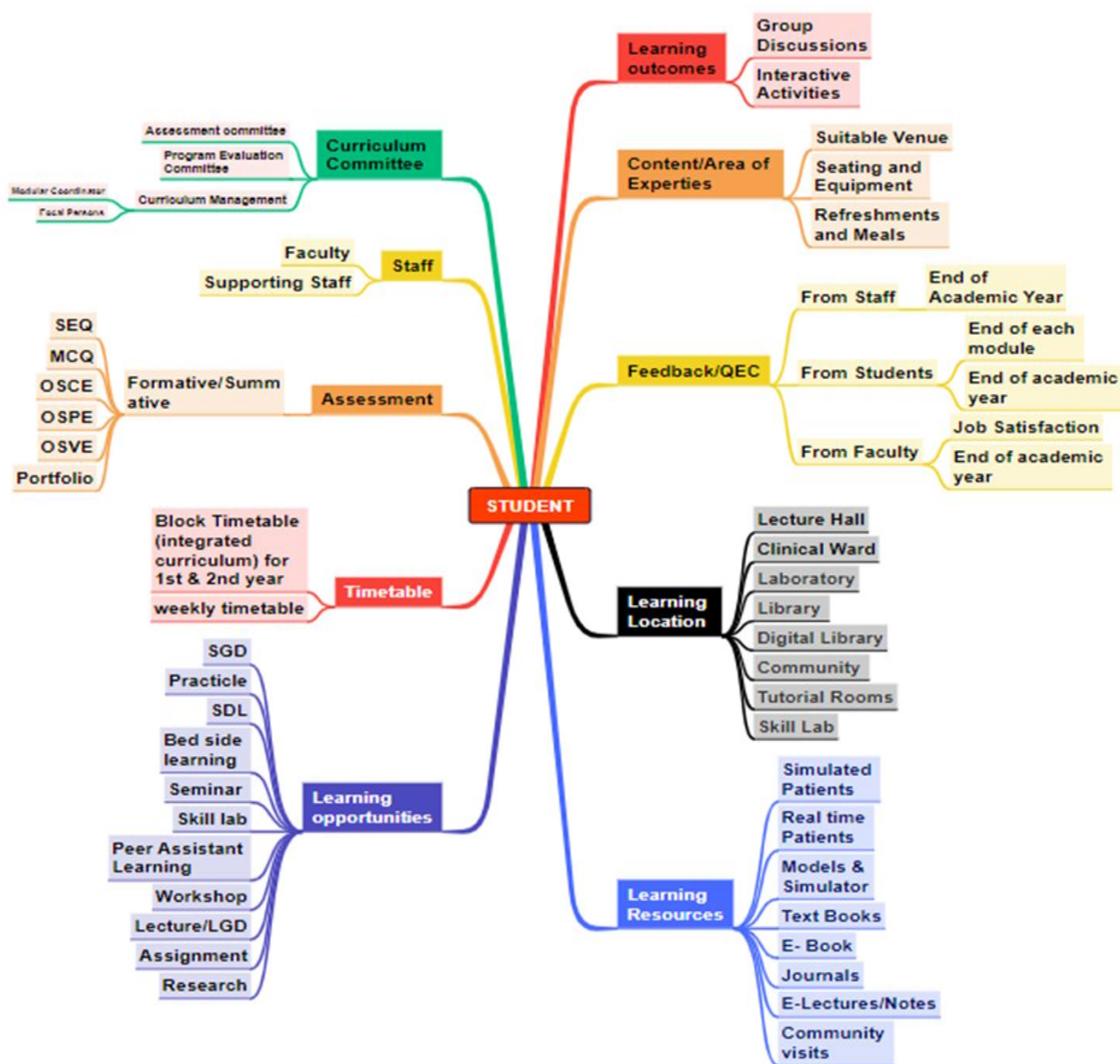
1. Skillful / Care Provider.
2. Knowledgeable / Decision Maker.
3. Community Health Promoter / Community Leader.
4. Critical Thinker / Communicator
5. Professional / Lifelong learner.
6. Scholar / Researcher
7. Leader/ Role Model / Manager

Module Committee

Name	Designation	Department
Prof. Dr. Gulfreen Waheed	Principal & Director	Medical Education
Dr. Saba Iqbal	Associate Director	Medical Education
Dr Hussain Raza	Assistant Professor	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.Hassan Khan	Head	Surgery Unit-1
Prof. Dr.Khalid Nizami	Head	Surgery Unit-2
Dr. Sumaira	Focal Person	General Surgery
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
Dr.Uzma	Focal Person	Paediatrics

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:



Academic Calender:

Avicenna Medical & Dental College Calendar 2025-2026 3rd Year MBBS																											
	January 2026								February 2026								March 2026							SESSION START: 2nd March 2026			
	Sun	Mon	Tue	Wed	Thurs	Fri	Sat		Sun	Mon	Tue	Wed	Thurs	Fri	Sat		Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Generalized Holidays			
					1	2	3		1	2	3	4	5	6	7	Week-01	1	2	3	4	5	6	7	i- Kashmir Holiday - 5th Feb. 2026			
	4	5	6	7	8	9	10		8	9	10	11	12	13	14	Week-02	8	9	10	11	12	13	14	ii- Eid-ul-Fitr- 19th March - 11th March			
	11	12	13	14	15	16	17		15	16	17	18	19	20	21	Week-03	15	16	17	18	19	20	21	iii- Pakistan Day - 23rd March 2026			
	18	19	20	21	22	23	24		22	23	24	25	26	27	28	Week-04	22	23	24	25	26	27	28	iv- Labor Holiday- 1st May 2026			
	25	26	27	28	29	30	31										29	30	31					v- Eid- Ul- Adha- 27th May - 26th May 2026			
																								vi- Youm-e-Takbeer Pakistan - 26th May 2026			
																								vii- Ashura - 25th & 26th June 2026			
																								viii- Independence Day- 14th Aug. 2026			
																								ix- Milad un Nabi- 25th Aug. 2026			
																								x- Qaid-e-Azam Day- 23rd March - 25th			
																								Vacations			
																								Spring Vacations - 16th March - 23rd March, 2026			
																								Summer Vacations - 11th July - 24th Aug. 2026			
																								Winter Vacations - 19th Dec. 2026			
																								Events			
																								Happiness World TB Day			
																								World Autism Awareness Day			
																								World Health Day			
																								White Coat Ceremony			
																								Music Fest - 2026			
																								Spring Fest			
																								World Hand Hygiene Day			
																								International Nursing Day			
																								World Hypertension Day			
																								Debate & MUN			
																								Class Trip			
																								World Environment Day			
																								Fun Fair			
																								International Self-Care Day			
																								Independence Day			
																								Oral & Vnat Competition			
																								Blood Cancer Awareness Day			
																								World First Aid Day			
																								World Patient Safety Day			
																								World Heart Day			
																								Sports Fest - 26			
																								World Mental Health Day			
																								Breast Cancer Awareness			
																								Talent Hunt & Drum			
																								Block Exam			
																								a-Block: 7 Exam- 13th & 14th May 2026			
																								b-Block: 8 Exam- 16th & 17th September 2026			
																								c-Block: 9 Exam- 14th & 15th December 2026			
																								Internal Assessment Exam			
																								IAT: 1 16th December 2026			

Timetable

AVICENNA MEDICAL & DENTAL COLLEGE

AVICENNA MEDICAL & DENTAL COLLEGE

TIME TABLE Week 36		M-23 3rd Year MBBS	SESSION 2025-2026						BLOCK 9	
DATE	DAY		MODULE-23							
14-Dec	MON	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		
		PERL	LECTURE MEDICINE	TUTORIAL	Break	PRACTICAL		Clinical Rotation-CFRC		
15-Dec	TUE	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		
		FAMILY MEDICINE	LECTURE COMMUNITY MEDICINE	COMMUNITY MEDICINE FIELD VIST (HOUSEHOLD SURVEY)						
16-Dec	WED	8.00-9.00	9.00-10.00	10.00-11.00	10.30-11.30	11.30-12.30	12.30-1.30	1:30-3.30		
		LECTURE PATHOLOGY	TUTORIAL	COMMUNITY MEDICINE FIELD VIST (HOUSEHOLD SURVEY)						
17-Dec	THU	8.00-9.00	9.00-10.00	10.00-10.30	10.30-11.30	11.30-12.30	12.30-1.30	1.30-2.30	2.30-3.30	
		Module 22 Exam (Written)			Break	Module 22 Exam (OSPE/VIVA)			PRACTICAL	
18-Dec	FRI	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		
		LECTURE FOR.MEDICINE	LECTURE SURGERY	TUTORIAL	PRACTICAL		JUMMA BREAK	E.W		

Allocation of Hours

AVICENNA MEDICAL COLLEGE, LAHORE																																								
3RD YEAR MBBS (2025-26)																																								
	PATHOLOGY			PHARMACOLOGY			F.M			COMMUNITY MEDICINE				Surgery		Medicine		Cardio		Pulmo		ORTHO		Radiology		Paeds		Gynae		FAMILY MED	ioche	Physic	B.S	PERL	sitory Writin	Assesment	Total			
BLOCK-7	Wk #	Lec	Prac	Tut	Lec	Prac	Tut	Lec	Prac	Tut	Lec	Tut	Field	Prac	Lec	CR	Lec	CR	Lec	CR	Lec	CR	Lec	CR	Lec	CR	Lec	CR	Lec	CR										
	1	4	1	1	7	1	2	2	1		1				2	2	2	2									1	1					1	2.5	1		34.5			
	2	4	1	1	7	1	2	2	1		1				2	2	2	2									1					1	3.5			34.5				
	3	5	1	1	6	1	2	2	1		1				1	2		2																2.5			27.5			
	4	4	1	1	6	1	2	2	1							2		3					1									1	1	1	1.5	1	5	34.5		
	5	6	1	1	10	1	2	2	1							3		3														1	1	1	1.5			34.5		
	6	5	1	1	11	1	2	2	1							3		3																2.5		2	34.5			
	7	4	1	1	6	1	2	2	1						1	2	1	3					1									1			1.5	1	5	34.5		
	8	3	1	1	6	1	2	2	1							1	3	1	3													1					2	28		
	9	6	1	1	8	1	2	2	1						1	2	1	2																	2.5	1	2	34.5		
	10	3	1	1	4	1	2	2	1						1	3	2	3															1	1.5	1	7	34.5			
BLOCK-8	11	5	3.7		3			2	1.8		1						1							1								1		1				14	34.5	
	12	6	1.8		6			2	3.7						1	2	3	2					1	4	1							1							34.5	
	13	5	1.2		4	1.1		2	1.2		2				1	2	2	2					1	1	1	1									1	1	5	34.5		
	14	8	1	2	5	1		2	1		2	1			1	2	1	2								1	1	1	1							1.5			34.5	
	15	3	2	2	1			1	1		1	1			1	2	1	2							1													21		
	16	8	1	2	6			2	2		2	1				2	1	2							1												3.5			34.5
	17	3		2	2		1	2			2				3	2	3	2					3	2											2.5		5	34.5		
	18	4	1	2	1	1			1	1					3	2	1	2					4	2										1	1	1		28		
	19	6	1	2		1	1	2	1							2	5	2					7	2													1.5	1		34.5
	20	4	1	2	1	1		2	1	1							3	2					4	2									1	2.5				27.5		
	21	9	2	2	2			3	1	1						2	2	2					1	2											3.5	2		34.5		
BLOCK-9	22	9	2	2				2	1	1						2		2						2											2.5	1	8	34.5		
	23	6	2	2	1			2	1	1	1					2		2																		2.5		9	34.5	
	24	2	1.8		3	1.8		1	1.9		2				1		2	1	2	1						1	1		1										14	34.5
	25	4	1	1	3	1	1	1	1	1	2				3	2	3	2	5	2																1.5			34.5	
	26	3	1	1	4	1	1	2	1	1	1				1	2	4	2	5	2																2.5			34.5	
	27	2	1		2	1		1	1		1				4	2	1	2	2	2														1			5	28		
	28	4	1		4	1	1	2	1	1	2	1			4	2		2			5	2													1.5			34.5		
	29	5	1	1	4	1	1	2	1		4	1			1	1		2			5	3													1.5			34.5		
	30	4	1	1	4		1	2	2		5	1					2				6	3					1								1.5			34.5		
	31	4						2			5		5			2		2			2	2									3				1.5	1	5	34.5		
	32	2	1.1				1	3	2.4	1	5	1	5			2		2		1		1													2			34.5		
33		1					3	2		6		5	5		2		2		1		1													1.5			34.5			
34	1		1		1.1		4	2.4	1	5	1	5			2		2		1		1																6	34.5		
35	2	1.1		1			3	2.4		2		5			1	2	1	2		1	1	1															6	34.5		
36	1	1			1		1	4	1	1	2	10			1		1	1					1											1	1.5	5	34.5			
37																																						14	14	
	154	41.7	35	128	24	28	71	48.8	11	55	10	35	5	35	65	44	74	14	11	19	15	20	18	6	5	2	4	2	4	18	7	2	8	55.5	15	119	1209			
	230.7			180			130.8			105				100		118		25		34		38		11		6		6		18	7	2	8	55.5	15	119				
	PATHOLOGY			PHARMACOLOGY			F.M			COMMUNITY MEDICINE				Surgery		Medicine		Cardio		Pulmo		ORTHO		Radiology		Paeds		Gynae		FAMILY MED	ioche	Physic	B.S	PERL	Expository Writin g	Assesment				

Modular Outcomes

Module Name Forensic Medicine & Toxicology III

Block 9 **Module 23**

- Describe different types of Laws
- Define legal terms relevant to medical practice and explain procedures in the courts of law
- Explain legal aspects of medical practice
- Discuss the principles and methods of crime scene investigations
- Describe different analytical techniques to diagnose the nature of poison/drugs

Learning Objectives

THEORY			
LAW			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 05	
		INTEGRATING DISCIPLINE	TOPIC
For3-L-001	Define and describe different types of law.	Forensic Medicine	Law
For3-L-002	Describe different levels of courts of Pakistan and their judicial powers.		Hierarchy of courts and their judicial powers
For3-L-003	Define different legal terms. Understand legal procedures and its presentation in the courts		Legal Terms and Procedures

For3-L-004	Define and describe types of evidence Describe the stages of presentation of evidence in the court of law. Explain the types of witness and its presentation in the court Differentiate between dying deposition and declaration.		Evidence
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	Describe general presumptions and exemptions in law to fix the criminal responsibility Define insanity, immaturity and intoxication.		
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For3-L-005	Define illusions, delusions and hallucinations and their types and medico legal significance. Differentiate between true and feigned insanity. Reproduce different sections of PPC dealing with these factors. Describe Mc Naughtan's rule, Durham,s rule to test the criminal responsibility. Outline the fate of criminal responsibility- Unfit to plead, Diminished responsibility State testamentary capacity.		Forensic psychiatry and Criminal Responsibility
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For3-L-006	Define consent; describe its types and its role in medical treatment, consent & its legal basis. Differentiate between valid and invalid consent. Outline standard procedure of informed consent. Explain the informed consent procedure from a patient before undergoing a major surgical procedure. Explain the consent protocol of a minor. Prepare a blanket consent form. Apply modified procedure of consent taking in special Circumstances.	Forensic medicine & Behavioral sciences	Consent
	Define medical bioethics. Describe principles of ethics.		

For3-L-007	Explain different codes of medical ethics Reproduce duties of doctor towards patients, society and state. Outline the factors responsible for the deterioration of ethical values in medical practice.		Doctor patient relationship
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For3-L-008	Explain professional misconduct and its different types. Describe professional secrecy, privileged communication, medico legal significance of medical records.		Professional misconduct
For3-L-009	Differentiate between professional misconduct and professional negligence. Describe different types of professional negligence. Establish the extent of damage to patient in medical practice. Outline the laws dealing with negligence.		Professional Negligence

For3-L-010	Describe composition of PMDC Explain functions of body-supervision of standards of proficiency, maintenance of register, disciplinary powers. Compare composition of PMDC and PMC ACT 2020 Describe objective of ALLOPATHIC SYSTEM 1962 Outline Medical and Dental Degree Ordinance 1982. Explain relevant sections of Drug act 1976 and subsequent Amendments. Write Dangerous drug act 1930 and their different sections and rules.	Forensic Medicine	Laws dealing with medical practice
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For3- L- 011	Describe sections 2, 4, 5 and 6 of Hadood Ordinance 1979 Explain natural & un-natural sexual offences Reproduce criteria of legal marriage and dissolution of marriage.		Laws dealing with sexual offences Hadood Ordinance 1979, Women Protection Act 2006 Legal aspects of marriage, Muslim family law ordinance 1961.
For3- L- 012	Define different terms used in the Qisas and Diyat Act relevant to hurt and Qatl Classify hurt and its subtypes as per Qisas and Diyat Act 1997 Classify QATL and its subtypes.		Law relevant to Hurt and killings Qisas and Diyat Act 1997

	Describe ISQAT-E-HAML AND ISQAT-E-JANIN.		
For3- L- 013	Understand Mental Health Act 2001 Describe the composition and functions of the FEDERAL MENTAL HEALTH AUTHORITY. SEC 3 Explain composition and functions of BOARD OF VISITORS.SEC 4 Reproduce duration for period of detention for assessment, treatment, urgent admission and emergency holding.SEC 9 Outline the procedure of admission of the patient in the psychiatric centre. SEC 10,11 Explain holding of mentally disordered persons	Forensic Medicine	Law relevant to mental health

	wandering in public places. SECT19 Write the procedure of discharge from psychiatric centre SEC 20		
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For3- L- 014	Define child abuse Explain epidemiology Describe clinical features Diagnose a case of child abuse. Reproduce medico legal significance. Apply the knowledge to relevant situation for problem-solving		Laws relevant to Domestic violence Child abuse,
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For3- L- 015	Describe the provisions for medical aid and treatment of injured persons to save their lives and protect their health during emergency. Describe the concept of the ancient law of torts
For3- L- 016	Diagnose the injuries causing disablement and percentage loss of earning capacity.
For3- L- 017	Discuss the Health Commission Act
For3- L- 018	Describe the Consumers Protection Act in relation to Forensic Medicine
	Define and classify euthanasia.
	Describe different progonist and antagonist views.

Forensic Medicine

Injured Person (Medical Aid) Act 2004
Workman Compensation Act 1923 Employee social security ordinance 1965
Health Commission Act
Consumers Protection Act

For3- L- 019	Reproduce global laws relevant to euthanasia.		Euthanasia
	Discuss ethical and moral issues.		

For3- L- 020	Define and classify suicide. Describe different views about suicide in society. Elaborate high risks groups. Explain different methods used to reproduce preventive measures. Discuss moral and ethical issues. Explain the psychopathology of suicide	Forensic Medicine	Suicide
GENERAL TOXICOLOGY			
		TOTAL HOURS = 04	

CODE	SPECIFIC LEARNING OUTCOMES	INTEGRATING DISCIPLINE	TOPIC
For3-Tox-001	Enlist & define various branches of Toxicology Define terms like drug, poison, dose, acute and chronic poisoning. Explain the therapeutic index and toxicity rating scale Quote and cite characteristics of homicidal, suicidal, and accidental poisons in home and environment Describe preventive measures of such poisonings		General Toxicology
For3-Tox-002	Differentiate between Drug and Poison Classify different poisons according to their mode of action Enumerate legal classification of poisons		Classification of Poisons

For3-Tox-003	Describe routes of absorption, sites of metabolism and routes of excretion of poisons Enlist and describe different factors that modify the patient's response to a toxic agent.	Forensic Medicine & Chemical Pathology	Factors affecting the absorption of poison
For3-Tox-004	Enlist the clinical, ethical & statutory duties of a doctor while managing a case of poisoning.		Duties of doctor

	Collection, preservation, storage and dispatch of samples for toxicological analysis		
For3-Tox-005	Diagnose a case of poisoning in living Enlist various bed side tests used for diagnosis of poisoning Interpret post-mortem findings in a suspected case of poisoning		Diagnosis of a Poisoning case

For3-Tox-006	Apply general principles in treatment of poisoning cases Prescribe general treatment measures to poisoning cases Briefly describe the procedures to remove the unabsorbed poisons from the body Describe the procedure of Gastric lavage Enlist complications of Gastric Lavage Enumerate contra indications of gastric lavage procedure Describe the role of Activated Charcoal in poisoning patient Enlist indications & contraindications of administering cathartics in poisoning cases Classify antidotes according to their mode of action Define & classify Chelators Enlist properties of ideal chelating agents Enlist & briefly describe the methods of removal of absorbed poisons from the body		Treatment of a poisoned patient
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For3- Tox-007	Enlist medico-legal implications of poisoning cases Comprehend different laws relating to poisons & drugs Enlist important relevant points of Rule 8, Rule 13 & Rule 14 of the Dangerous Drug Act 1930 Enlist WHO recommendations being incorporated in the Drug act 1976 Enlist the WHO criteria for Drug Dependence Define National Formulary		Laws related to Drugs & poisons
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For 3- Tox- 008	Explain, observe/perform the following analytical techniques: Spectrophotometric: Calorimetric Fluorometric Automation. Chromatographic: Thin layer chromatography (TLC). Gas liquid chromatography (GLC). High pressure liquid chromatography (HPLC). Gas liquid mass spectrometry (GL-MS). Competitive binding assay or immunoreactive assay: Radioimmunoassay (RIA). Enzyme immunoassay (EIA). Fluorescent Polarization immunoassay (FPIA). Immunoturbidimetric assay.		Analytical techniques
SPECIAL TOXICOLOGY			
COD E	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 09	
		INTEGRATING DISCIPLINE	TOPIC

For 3- Tox- 009	Classify corrosive poisons. Describe sources, physical and chemical properties. Explain mechanism of action. Write the fatal dose and fatal period. Describe the clinical features of the poison. Manage the patient clinically. Explain the autopsy findings. Describe medico-legal aspects. Define Vitriol age. Apply the relevant section of qisas and diyat act to the hurt caused by the poison.	Forensic medicine & medicine	Corrosives Mineral acids- Sulfuric acid Nitric acid Hydrochloric acid Strong alkalis
For 3- Tox- 010	Classify corrosive poisons. Describe sources, physical and chemical properties. Explain mechanism of action.		Organic acid – Oxalic acid, Carbolic acid, Hydrocyanic acid

	Write the fatal dose and fatal period. Describe the clinical features of the poison. Manage the patient clinically. Explain the autopsy findings. Describe medicolegal aspects.		
For3-Tox-011	Classify snakes Differentiate between poisonous and non-poisonous snakes. Tabulate the differences between the elapids and vipers. Discuss the characteristics of snake venom. Describe the clinical feature of venomous snake bite. Explain clinical management of venomous snake bite. Discuss postmortem features and medico legal aspects of venomous snake bite.	Forensic medicine & medicine	Irritant Poisons Snakes- Elapids Vipers Hydrophidate or sea- snakes

For3- Tox-012	Describe the sources, properties, routes of absorption of the poison. Describe the fatal dose, clinical features of the poison. Outline the clinical management of such case. Enlist the samples to be collected, preserved and sent to chemical examiner for its detection. State the postmortem appearances of the poison. Explain the medico legal aspects of acute poisoning of the poison. Describe the clinical features of chronic poisoning of the poison. Explain the laboratory investigations to establish the diagnosis. Summarize the clinical management of a case of poisoning with irritant poisons Describe post mortem findings. Describe post mortem findings. Discuss medico legal aspects of chronic poisoning.	Forensic medicine & medicine	Irritant Metallic poisons – (Inorganic metallic origin- Arsenic, Mercury, Lead, Copper Nonmetallic irritant poisons- Phosphorus
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For3- Tox-013	Classify pesticides. Classify organophosphates.		Agricultural poisons –
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	Describe the sources of exposure, mechanism of action and fatal dose and fatal period Explain clinical features of poisoning Summarize laboratory investigations and bed side test to confirm the diagnosis. Enlist the samples to be collected and sent to the chemical examiner. Outline the clinical management. Reproduce the autopsy findings. Discuss the medico legal aspects.		Organophosphates, Carbamates, Chlorinated Hydrocarbon, Endrin Paraquet Aluminium Phosphide
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For3- Tox-014	Describe physical and chemical properties of the poison Describe different preparations of Cannabis Explain clinical features in acute and chronic poisoning, fatal dose and fatal period. Outline the clinical management of the poison. Enlist the samples to be collected and sent to the chemical examiner. Describe autopsy findings of the case. Explain the difference between the seeds of Dhatura and chilli. Outline medico legal aspects of acute and chronic poisoning.	Forensic medicine & medicine	Deleriant Poisons – Dhatura Cannabis Sativa
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For3- Tox-015	Classify barbiturates. Mention fatal dose and fatal period. Describe clinical features. Explain clinical management. Describe autopsy findings. Reproduce medico legal importance.	Pharmacology	Sedatives and Hypnotics – Barbiturates
For3- Tox-016	Classify alkaloids of opium. Mention the fatal dose and fatal period. Describe clinical features in acute and chronic poisoning. Describe the differential diagnosis of opium coma. List laboratory investigations and bedside test.		Somniferous / Narcotics– (Opium - Morphine, Heroine Drugs of dependence)

	Explain clinical management. Explain autopsy findings Reproduce medico legal aspects Define drug dependence. Differentiate between drug dependence and drug habituation. Enlist drugs Describe criteria of drug dependence as per WHO criteria. of dependence.		
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For3- Tox-017	Define Alcohols Describe different alcohol beverages with different alcohol concentrations. Explain toxicokinetic of alcohols Describe clinical features of acute ethyl alcohol poison. Correlate different clinical features with different BAC. Outline clinical management of poisoning Describe the laboratory investigation and samples to be sent to the chemical examiner. Describe protocol of examination of a drunken person. Describe autopsy findings. Explain medicolegal aspects. Describe clinical features of alcoholism. Explain clinical features of methanol toxicity Describe autopsy findings Explain medicolegal aspects of methanol poisoning.		Inebriants – Ethyl Alcohol / Methanol,
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For3- Tox-018	Describe the sources of exposure of asphyxiant gases. State the mechanism of action. Explain clinical features of poisoning. Outline clinical management of cases of poisoning. Enlist samples to be collected and sent to chemical examiner. Outline autopsy features Explain medico legal aspects of acute poisoning of asphyxiants gases.	Forensic Medicine	Asphyxiant Gases - Carbon Mono oxide, Hydrogen Sulphide, Carbon Dioxide
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For 3- Tox- 019	Describe source of exposure Explain methods of inhalation. Describe clinical features List the diagnostic findings on X rays chest. Explain clinical management Discuss autopsy findings Outline medico legal aspects of acute poisoning.		CNS Stimulant – Cocaine Amphetamine Methyl phenidate (ritalin) Hallucinogens- LSD, Mescaline, PHEN CYCLIDINE Tricyclic anti depressants - Sheesha (Nicotine + Fruits & Herbal Flavors & Coal
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For 3- Tox- 020	Describe source of exposure Explain methods of inhalation. Reproduce clinical features List the diagnostic findings on X rays chest. Explain clinical management Discuss autopsy findings Outline medico legal aspects of acute poisoning		Hydrocarbons-- kerosene oil, Volatile substance abuse Glue sniffing Sniffing Huffed Bagged
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For 3- Tox- 021	Describe source of exposure Describe clinical features List the diagnostic findings Explain clinical management Discuss autopsy findings Outline medico legal aspects of acute poisoning.	Forensic Medicine	Black stone Paraphenylene diamine (PPD)
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FORENSIC SEROLOGY			
COD E	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 04	
		INTEGRATI NG DISCIPLIN E	TOPIC
For 3-	Define Forensic Serology Describe the Medico-legal importance of Forensic Serology	Forensic Medicine	Definition &medico-legal importance of

FS-001			
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			Forensic Serology
For3 - FS-002	Define Trace Evidence Classify Trace Evidence Describe Locard's Exchange Principle		Trace Evidence
For3 - FS-003	Describe the protocol of scientific study (identification, collection, preservation, storage, labeling and transport to the concerned quarter) of trace evidentiary material.		Scientific study of trace evidentiary material
For3 - FS-004	Enlist the medico-legal importance of different biological fluids & stains	Forensic Medicine	Biological fluids
For3 - FS-005	Outline principles of chain of custody and its medico-legal significance		chain of custody

For3 - FS- 006	Describe the principles of chemical & physiochemical tests to determine the presence of blood in suspected stains Interpret the physical characteristics of a blood stain Describe the procedure of examination of blood stain comprising of physical, chemical, physiochemical & confirmatory tests Discuss the principle & importance of spectroscopic analysis of blood in the stain Describe microscopic, Immunological & enzymological methods for species determination of blood stain Explain different blood group systems Describe medico-legal importance of blood grouping Interpret the phenotype & genotype of different ABO blood groups	Pathology	Blood
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For3 - FS- 007	Describe the scheme for examination of Seminal stain including physical, chemical, microscopic & serological tests including DNA Analysis.	Forensic Medicine	Semen
	Describe the Medico-legal importance of seminal stain		

For3 - FS- 008	Describe the physical, chemical, serological & microscopic examination of hair Compare & contrast human and animal hair& hair like Structures as fibers. Enlist the Medico-legal significance of hair		Hair
For3 - FS- 009	Enumerate the tests for determination of other body fluids like Milk, saliva, urine, fecal matter Describe their medico-legal significance		Body Fluids

For3 - FS- 010	Explain the Structure of DNA. Describe DNA fingerprinting methods Outline the samples needed for DNA profiling, their collection, preservation, storage and dispatch to the analyst. Explain National DNA databank (CODIS). Discuss Ethical Issues relevant to DNA.		DNA
FORENSIC SCIENCES			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 02	
		INTEGRATING DISCIPLINE	TOPIC

For3- FSc- 001	Describe search patterns of scene of crime. Photograph the area/object of interest from scene of crime. Examine, collect, preserve and dispatch trace evidence and record his findings at scene of crime. Identify the stains of different biological fluids, collect, preserve, dispatch and record his findings Explain and demonstrate screening, chemical and microscopic analysis of biological stains. Describe forensic analysis of DNA.	Forensic medicine	Principles and methods of crime scene investigation
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For3 - FSc- 002	Describe the examination of firearm and tool mark evidence	Forensic medicine	Examination of firearm and tool mark evidence
For3- FSc- 003	Explain the examination of broken glass		Examination of broken glass

PRACTICAL / LAB WORK

LAW

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 03	
		INTEGRATING DISCIPLINE	TOPIC
For3-L-021	Demonstrate legal procedures and its presentation in the courts	Forensic Medicine	Legal Terms and Procedures
For3-L-022	Demonstrate presentation of different stages of evidence in the court of law.		Evidence
	Distinguish between different types of witness and its presentation in the court		
For3-L-023	Demonstrate the recording of dying deposition and dying declaration step wise.		Dying deposition and declaration

GENERAL TOXICOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 03	
		INTEGRATING DISCIPLINE	TOPIC

For3- Tox-022	Assess a suspected patient of poisoning Collect, preserve & dispatch the routine viscera of a suspected poisoning case sent to chemical examiner Demonstrate the procedure of gastric lavage on a mannequin	Forensic Medicine	Poisoning
SPECIAL TOXICOLOGY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 04	
		INTEGRATING DISCIPLINE	TOPIC
For3- Tox-023	Identify corrosive poisons. Describe identifying features. Identify autopsy features of H ₂ SO ₄ and HNO ₃ Apply the relevant section of qisas and diyat act to the hurt caused by the poison	Forensic Medicine	Mineral acids- Sulfuric acid Nitric acid Hydrochloric acid Strong alkalis

For3 - Tox- 024	Identify organic acid corrosive poisons Describe identifying features. Explain laboratory investigations Recognize autopsy findings.	Forensic Medicine	Organic acid – Oxalic acid, Carbolic acid, Hydrocyanic acid
For3 - Tox- 025	Label salient differentiating features of poisonous and non-Poisonous snakes. Identify snake bite wound. Apply the tourniquet above the site of bite of a patient.	Forensic Medicine	Irritant Animal Poisons (Snakes- Elapids Vipers Hydrophidate or sea-snakes
For3 - Tox- 026	Identify poison. Describe identifying features. Identify features of chronic arsenic poisoning Identify chronic lead poisoning on x rays Identify chronic lead poisoning (basophilic stippling) on blood cell slide. Collect samples to be sent to the chemical examiner.	Forensic Medicine	Irritant Metallic poisons – (Inorganic metallic origin- Arsenic, Mercury, Lead, Copper Nonmetallic irritant poisons- Phosphorus

For3 - Tox- 027	Diagnose a case of insecticide poisoning Explain laboratory investigations Manage a case of insecticide poisoning Identify autopsy features Collect, preserve and dispatch the specimens to chemical examiner Perform bedside test for certain pesticides (aluminium phosphide)	Forensic Medicine	Agricultural poisons – Organophosphates, Carbamates Chlorinated Hydrocarbon, Endrin Paraquet Aluminum Phosphide
For3 - Tox- 028	Identify the poison Describe identifying features Diagnose a case of deliriant poisoning Explain lab investigation Manage the case Identify autopsy features	Forensic Medicine	Deliriant Poisons – Dhatura Canabis Sativa

	Collect, preserve and dispatch the specimens to chemical examiner		
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For3 - Tox- 029	Diagnose a case of sedatives / hypnotic's toxicity Explain lab investigation Manage the case Identify autopsy features Collect, preserve and dispatch the specimens to chemical examiner	Forensic Medicine	Sedatives and Hypnotics – Barbiturates
For3 - Tox- 030	Identify the poison (Opium / Poppy capsule) Describe identifying features Diagnose a case of narcotic poisoning Perform bedside test Explain lab investigations Recognize autopsy features Collect, preserve and dispatch the specimens to chemical examiner	Forensic Medicine	Somniferous / Narcotics– (Opium - Morphine, Heroine Drugs of dependence

For3 - Tox- 031	Diagnose a case of Acute alcohol Toxicity (Ethanol / Methanol) Explain lab investigations Manage the case Conduct examination of a case of ethyl alcohol toxicity and certify findings with opinion Collect appropriate samples Recognize autopsy features Collect, preserve and dispatch the specimens to chemical examiner	Forensic Medicine	Inebriants – Ethyl Alcohol / Methanol,
For3 - Tox- 032	Diagnose a case of Asphyxiant gases Explain lab investigations Manage the case Recognize autopsy features Collect, preserve and dispatch the specimens to chemical examiner	Forensic Medicine	Asphyxiant Gases - Carbon Mono oxide, Hydrogen Sulphide, Carbon Dioxide

For3 - Tox- 033	Identify the poison Describe identifying features	Forensic Medicine	CNS Stimulant – Cocaine
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	Diagnose the case Explain lab investigation Manage the case Recognize autopsy features Collect, preserve and dispatch the specimens to chemical examiner		Amphetamine Methyl phenidate (ritalin) Hallucinogens- LSD, Mescaline, PHEN CYCLIDINE Tricyclic anti depressants - Sheesha (Nicotine + Fruits & Herbal Flavors & Coal)
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For3 - Tox- 034	Identify the poison Diagnose the case Explain lab investigation Manage the case Recognize autopsy features Collect, preserve, and dispatch the specimens to the chemical examiner	Forensic Medicine	Hydrocarbons-- -- kerosene oil - Volatile substance abuse - Glue sniffing - Sniffing - Huffed - Bagged
For3 - Tox- 035	Identify the poison Diagnose the case Explain lab investigation Manage the case Recognize autopsy features Collect, preserve, and dispatch the specimens to the chemical examiner	Forensic Medicine	Black stone Paraphenylene diamine (PPD)
FORENSIC SEROLOGY			

COD E	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 06	
		INTEGRATI NG DISCIPLIN E	TOPIC
For 3- FS- 011	Categorize different trace evidence to Biological & Non-biological sources	Forensic Medicine	Trace evidence

For3- FS- 012	Identify, collect, preserve, label and dispatch trace evidentiary material to the concerned quarters.		The scientific study of trace evidentiary material
For3- FS- 013	Interpret the physical characteristic of a suspected blood stain with naked eye & under UV lamp		Bloodstain
For3- FS- 014	Preserve & seal the clothes with suspected blood/seminal stain		Cloth examination

For3- FS- 015	Perform Screening tests (Benzedine & Phenolphethein/Kastle Mayer) on suspected blood stain	Forensic Medicine	Blood stain
	Identify the Takayama (Haemochromogen) & Teichmann (Haemin) Crystals under the microscope		
	Identify different absorption bands of hemoglobin & its derivatives with spectroscope		
	Perform forward & reverse blood grouping techniques & interpret the results		
	Differentiate various species (human, hen, goat and camel) with the help of microscopic examination of RBCs		
For3- FS- 016	Identify & confirm the presence of semen with the help of microscopic examination	Forensic Medicine	Semen
	Prepare the slide of hair & Differentiate Human & Animal Hair under the microscope		

For3- FS- 017	Differentiate human/animal hair from cotton fiber, polyester fiber		Hair
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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

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.

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%	

YEAR-3		
A.	Block 7 (Foundation-II + Hematopoietic, Immunity & Implant + General Pharmacology + Forensic Medicine & Toxicology-I)	Marks
		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

Avicenna Medical & Dental College
3rd Year MBBS (M-23)
Test Schedule Block-9

We ek	Date	Day	Subject	Test	Topic	Reference
25t h	29-Sep-26	Tue	All subjects	Lecture	Lecture time divided	
26t h	Whole Week		Pathology/ Pharmacology / Forensic Med	Tutorial Test		
27t h	13-Oct-26	Tue	Integrated	Module-20 Exam		
				OSPE+VIVA		
28t h	Whole Week		Community Med/ Pharmacology / Forensic Med	Tutorial Test		
29t h	Whole Week		Pathology/ Pharmacology / Community Med	Tutorial Test		
30t h	Whole Week		Pathology/ Pharmacology / Community Med	Tutorial Test		
31st	10-Nov-26	Tue	Integrated	Module-21 Exam		
				OSPE+VIVA		
32nd	Whole Week		Pharmacology / Community Med/ Forensic Med	Tutorial Test		
33rd	24-Nov-26	Tue	All subjects	Lecture	Lecture time divided	

34th	30-Nov-26	Mon	Medicine & Allied Test Cardiology, Pulmonology)	Grand Test		
34th	2-Dec-26	Wed	Com. Medicine	Grand Test		
34th	4-Dec-26	Fri	Surgery & Allied Test	Grand Test		
35th	7-Dec-26	Mon	Pharmacology	Grand Test		
35th	9-Dec-26	Wed	Pathology	Grand Test		
35th	11-Dec-26	Fri	Forensic Medicine	Grand Test		
36th	17-Dec-26	Thu	Integrated	Module-22 Exam		
				OSPE+VIVA		
37th	21-Dec-26	Mon	Integrated	Block-9 Exam		
	22-Dec-26	Tue		OSPE+VIVA		
End Of Block-9						
Winter Vacations- 23rd Dec- 31st Dec,2026						

Table of Specification

MBBS 3 rd Professional						
Block-9						
Subject	Written Exam		Oral/Practical/Clinical Exam			
	MCQ (1 mark)	Marks	OSPE /OSCE (8 marks each observed)	OSCE (10 marks each observed)	OSVE (14 marks each observed)	Marks
Pharmacology	19	19	02	-	01	30
Pathology	22	22	02	-	-	16
Family Medicine	05	05	-	-	-	-
Community Medicine	42	42	03	-	01	38
Surgery	15	15	-	-	-	-
Medicine	15	15	01	-	-	08
Forensic	20	20	02	-	01	30
Behavioral Sciences	02	02	-	-	-	-
Patient Safety	-	-	-	-	-	-
CFRC	-	-	01	-	-	08
PERLs + Expository	-	-	-	01	-	10
Total	140	140	11 stations x 08 = 88	01 stations x 10 = 10	03 stations x 14=42	140

Recommended Books & Reading Resources

Anatomy

Snell's Clinical Anatomy 10th ed.

Langman's Medical Embryology 12th ed

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

Vinay 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 Mitchell, Vinay Kumar, Abul K. Abbas and Nelson Fausto Robbins and Cotran, Pocket Companion to Pathologic basis of diseases, Saunders 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 & Michael 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 Therapeutics

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, Lippincott Illustrated 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 Beverly 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.

Patient Safety

Patient Safety Curriculum 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 & Michael 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. Nasib R. 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. De Maio

Knight B. Simpson's Forensic Medicine.

Knight and Pekka. Principles of Forensic Medicine

Forensic Pathology

Forensic pathology 2nd edition by V.J. De Maio 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 pediatrics medicine

Islamiyat

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

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

