

AVICENNA MEDICAL & DENTAL COLLEGE



STUDY GUIDE
2026

Cardiovascular II
BLOCK 9 - MODULE 20



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

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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 & Mission



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
D	CVS	Cerebrovascular system
	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
E	DVT	Deep Vein Thrombosis
	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
F	ER	Emergency Room
	F	Foundation

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	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
G	FVC	Forced Vital Capacity
	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

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	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
P	Orth	Orthopaedic
	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

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	Ph	Pharmacology
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	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
S	RNA	Ribonucleic Acid
	RTA	Road Traffic Accident
	S	Surgery
	S.pneumonia	Streptococcus pneumoniae
	SA	Sinoatrial
	SCC	Squamous-cell carcinoma
	Se	Sexology
	Sec	Section
	SIDS	Sudden Infant Death Syndrome
T	SLE	Systemic Lupus Erythematosus
	SOP	Standard Operating Procedure
	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

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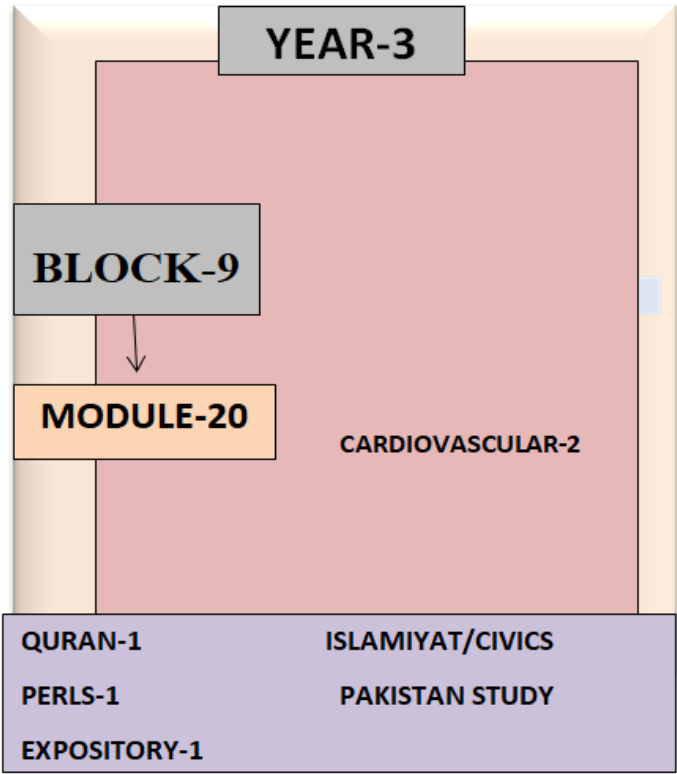
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	Th	Thanatology
	TLC	Thin Layer Chromatography
	TNF	Tumor Necrotic Factor
	TNM	Tumor Necrotic Factor
	TOF	Tetralogy of Fallot
	Tox	Toxicology
	Tr	Traumatology
U	TSI	Triple Sugar Iron
	USG	Ultrasonography
	UTI	Urinary Tract Infections
V	UV	Ultraviolet
	VAP	Ventilator-Associated Pneumonia
	Vd	Volume of Distribution
	VEGF	Vascular Endothelial Growth Factor
W	VSD	ventricvular septal defect
	W. bancroft	Wuchereria bancroft
	WBCs	White Blood Cells
	WHO	World Health Organization
Z	ZN Staining	Ziehl-Neelsen Staining

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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.

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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.

- Skillful / Care Provider.
- Knowledgeable / Decision Maker.
- Community Health Promoter / Community Leader.
- Critical Thinker / Communicator
- Professional / Lifelong learner.
- Scholar / Researcher
- Leader/ Role Model / Manager

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Introduction to Module

- The Cardiovascular System (CVS 2) Module is designed to provide an understanding of cardiovascular diseases (CVDs), which are a leading cause of global morbidity and mortality.
- This module is critical at this stage of medical education as it integrates foundational knowledge from basic sciences—such as anatomy, physiology, and pathology—with clinical application in general medicine, surgery, cardiology, pharmacology, and vascular surgery.
- The module emphasizes the pathophysiology, clinical manifestations, diagnostic approaches, and management strategies for common and critical cardiovascular conditions, including coronary artery disease, valvular heart disease, aneurysms, cardiomyopathies, congenital heart diseases, and vascular disorders.

SUBJECTS INTEGRATED IN THE MODULE

1. General Medicine
2. General Surgery
3. Pathology
4. Pharmacology
5. Cardiology
6. Vascular Surgery
7. Pediatrics
8. Biochemistry
9. Anatomy

Module Committee

Name	Designation	Department
Prof. Dr. Gulfreen Waheed	Principal & Director	Medical Education
Dr. Saba Iqbal	Associate Director	Medical Education
Dr. Syed Hussain Raza	Assistant Professor	Medical Education
Dr. Javaid Shabkhez Rab	Coordinator	Medical Education
Dr. Salar Arsalan	Demonstrator	Medical Education

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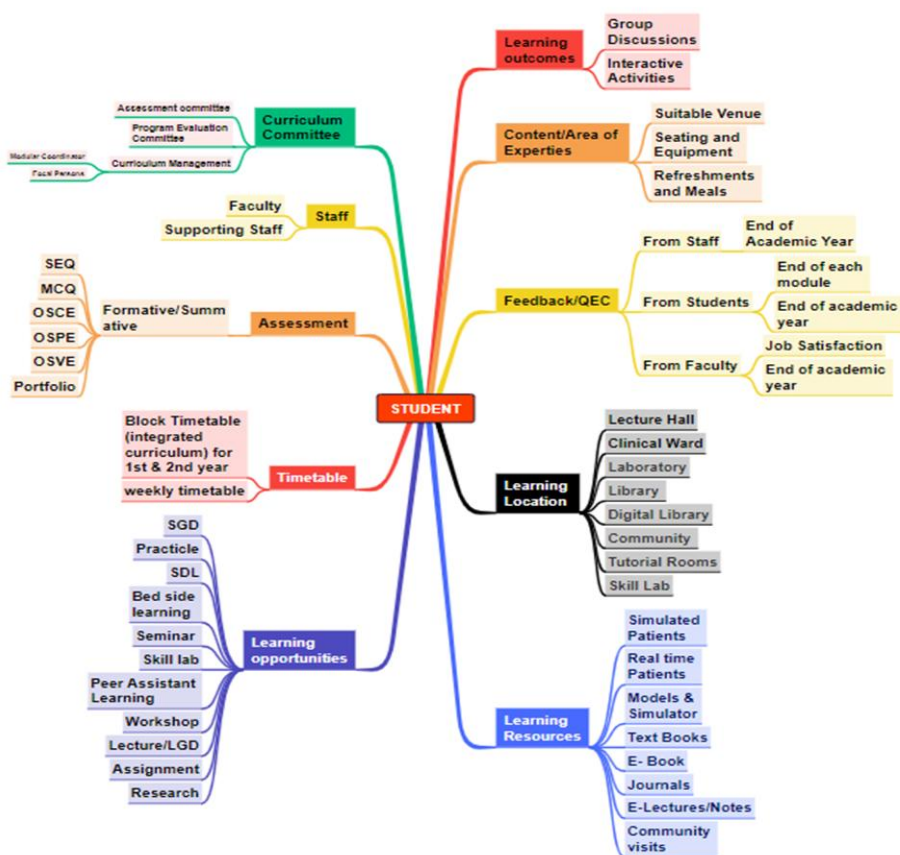
Dr. Huma Fatima	Demonstrator	Medical Education
Dr. Ijlal	Head	Assessment Cell
Mr. Adeel	Head	Student Affairs
Prof. Dr. Saeed Afzal	Head	Pathology
Dr. Majid	Focal Person	Pathology
Prof. Dr. Asma Saeed	Head	Pharmacology
Dr. Azka	Focal Person	Pharmacology
Prof. Dr. Rana Muhammad Akhtar Khan	Head	Community Medicine
Prof. Dr. Muhammad Usman Sheikh	Focal Person	Community Medicine
Prof. Dr. Zainab	Head	Forensic Medicine
Prof. Dr. Anwar Sibtain	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

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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:



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Academic Calender:

Automa Medical & Dental College Calendar 2025 3rd Year MBBS																											
January 2025							February 2025							March 2025							April 2025						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat
				1	2	3	1	2	3	4	5	6	7	1	2	3	4	5	6	7							
4	5	6	7	8	9	10	8	9	10	11	12	13	14	8	9	10	11	12	13	14							
11	12	13	14	15	16	17	15	16	17	18	19	20	21	15	16	17	18	19	20	21							
18	19	20	21	22	23	24	22	23	24	25	26	27	28	22	23	24	25	26	27	28							
25	26	27	28	29	30	31																					
May 2025							June 2025							July 2025							August 2025						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat
Week-04							Week-05							Week-06							Week-07						
5	6	7	8	9	10	11	3	4	5	6	7	8	9	Week-08							Week-09						
12	13	14	15	16	17	18	10	11	12	13	14	15	16	Week-10							17	18	19	20	21	22	23
19	20	21	22	23	24	25	Week-11							Week-12							24	25	26	27	28	29	30
26	27	28	29	30			Ed week							Week-13							31						
September 2025							October 2025							November 2025							December 2025						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat
Week-14							Week-15							Week-16							Week-17						
5	6	7	8	9	10	11	Week-18							Week-19							Week-20						
12	13	14	15	16	17	18	Week-19							Week-21							Week-22						
19	20	21	22	23	24	25	Week-20							Week-23							Week-24						
26	27	28	29	30	31		Week-21							Week-25							Week-26						
January 2026							February 2026							March 2026							April 2026						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat
Week-27							Week-28							Week-29							Week-30						
3	4	5	6	7	8	9	7	8	9	10	11	12	13	7	8	9	10	11	12	13	Week-31						
10	11	12	13	14	15	16	14	15	16	17	18	19	20	14	15	16	17	18	19	20	Week-32						
17	18	19	20	21	22	23	21	22	23	24	25	26	27	21	22	23	24	25	26	27	Week-33						
24	25	26	27	28	29	30	28							28	29	30	31				Week-34						
31																											

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Timetable

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AVICENNA MEDICAL & DENTAL COLLEGE								
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TIME TABLE Week 24		M-23 3rd Year MBBS	SESSION 2025-2026					BLOCK 9
DATE	DAY							MODULE-20
21-Sep	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
		Block 8 Exam (Written)						
22-Sep	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
		Block 8 Exam (Ospe/ Viva)						
23-Sep	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 CARDIOLOGY	LECTURE MEDICINE	LECTURE PHARMACOLOGY	Break	PRACTICAL		Clinical Rotation-CFRC
24-Sep	THU	8.00-9.00	9.00-10.00	10.00-11.00		11.30-12.30	12.30-1.30	1.30-2.30 2.30-3.30
		LECTURE SURGERY	LECTURE FOR.MEDICINE	LECTURE COMMUNITY MEDICINE		LECTURE PHARMACOLOGY	LECTURE PATHOLOGY	PRACTICAL
25-Sep	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 MEDICINE	LECTURE CARDIOLOGY	LECTURE COMMUNITY MEDICINE	LECTURE PATHOLOGY	LECTURE PHARMACOLOGY	JUMMA BREAK	PRACTICAL

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AVICENNA MEDICAL & DENTAL COLLEGE									
AVICENNA MEDICAL & DENTAL COLLEGE									
TIME TABLE Week 25		M-23 3rd Year MBBS	SESSION 2025-2026					BLOCK 9	
DATE	DAY							MODULE-20	
		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
28-Sep	MON	LECTURE CARDIOLOGY	LECTURE SURGERY	LECTURE PHARMACOLOGY	Break	TUTORIAL		PRACTICAL	Clinical Rotation-CFRC
29-Sep	TUE	LECTURE COMMUNITY MEDICINE	LECTURE PATHOLOGY	LECTURE CARDIOLOGY		TUTORIAL		PRACTICAL	Clinical Rotation-CFRC
30-Sep	WED	LECTURE PATHOLOGY	LECTURE PHARMACOLOGY	LECTURE MEDICINE		LECTURE COMMUNITY MEDICINE		LECTURE SURGERY	Clinical Rotation-CFRC
1-Oct	THU	LECTURE FOR.MEDICINE	LECTURE CARDIOLOGY	LECTURE PATHOLOGY		LECTURE SURGERY		LECTURE MEDICINE	TUTORIAL PRACTICAL
2-Oct	FRI	LECTURE MEDICINE	LECTURE CARDIOLOGY	LECTURE PHARMACOLOGY		LECTURE CARDIOLOGY	JUMMA BREAK		EW

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AVICENNA MEDICAL & DENTAL COLLEGE									
TIME TABLE Week 26		M-23 3rd Year MBBS	SESSION 2025-2026					BLOCK 9	
DATE	DAY							MODULE-20	
5-Oct	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	
		LECTURE SURGERY	PERL's RESEARCH: Biostatistician Practical)	LECTURE PHARMACOLOGY	Break	TUTORIAL	PRACTICAL	Clinical Rotation-CFRC	
6-Oct	TUE	8.00-9.00	9.00-10.00	10.00-11.00		11.30-12.30	12.30-1.30	1:30-3.30	
		LECTURE CARDIOLOGY	LECTURE PATHOLOGY	LECTURE MEDICINE		TUTORIAL	PRACTICAL	Clinical Rotation-CFRC	
7-Oct	WED	8.00-9.00	9.00-10.00	10.00-11.00		11.30-12.30	12.30-1.30	1:30-3.30	
		LECTURE PHARMACOLOGY	LECTURE CARDIOLOGY	LECTURE COMMUNITY MEDICINE		LECTURE PATHOLOGY	LECTURE MEDICINE	Clinical Rotation-CFRC	
8-Oct	THU	8.00-9.00	9.00-10.00	10.00-11.00		11.30-12.30	12.30-1.30	1.30-2.30	2.30-3.30
		LECTURE FOR.MEDICINE	LECTURE CARDIOLOGY	LECTURE MEDICINE		LECTURE CARDIOLOGY	LECTURE PHARMACOLOGY	TUTORIAL	PRACTICAL
9-Oct	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 PATHOLOGY	LECTURE FOR.MEDICINE	LECTURE CARDIOLOGY	LECTURE PHARMACOLOGY	LECTURE MEDICINE	JUMMA BREAK	PERLs	

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Allocation of Hours

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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	Asses ment	Total		
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										
BLOCK-7	1	4	1	1	7	1	2	2	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				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														1			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			1	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	
BLOCK-9	21	9	2	2	2			3	1	1					2	2	2					1	2											3.5	2		34.5		
	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					1	1		1								2.5		9	34.5			
	24	2	1.8		3	1.8		1	1.9		2			1		2	1	2	1																	1.5		34.5	
	25	4	1	1	3	1	1	1	1	1	2			3	2	3	2	5	2																		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					1						3			1.5	1	5	34.5
	32	2	1.1					1	3	2.4	1	5	1	5		2		2		1		1											5			34.5			
	33		1					3	2		6		5	5		2		2		1		1											5			34.5			
	34	1		1		1.1		4	2.4	1	5	1	5			2		2		1		1											1				6	34.5	
	35	2	1.1		1			3	2.4		2		5		1	2	1	2		1	1	1											3				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	Expo sitory Writin g	Asses ment			

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Modular Outcomes

Module Name Cardiovascular II

Block 9 Module 20

- Explain the underlying pathophysiological mechanisms of cardiovascular diseases and correlate them with clinical signs and symptoms.
- Apply concepts from general medicine, surgery, cardiology, pharmacology, pathology, and vascular surgery to understand and manage cardiovascular diseases.
- Recognize and diagnose common and critical cardiovascular disorders using clinical features, physical examination, and diagnostic tools such as ECG, echocardiography, and laboratory investigations.
- Develop comprehensive, evidence-based management strategies, including medical, pharmacological, and surgical interventions, for treating cardiovascular diseases.
- Competently interpret diagnostic studies (e.g., ECG, echocardiography, and imaging) and use them to guide patient care decisions.
- Understand the role of various pharmacological agents in the prevention, treatment, and management of cardiovascular conditions and complications.

Learning Objectives

GENERAL MEDICINE		
		TOTAL HOURS = 10

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CODE	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC
CV2-M-001	Explain the etiology and pathogenesis of rheumatic fever. Describe the Jones Criteria and its significance in the diagnosis of rheumatic fever. Recognize the clinical features and complications of acute rheumatic fever. Discuss the pathological changes associated with rheumatic heart disease. Outline the diagnostic approach, including relevant investigations, for rheumatic fever. Summarize the principles of treatment, secondary prophylaxis, and prevention of rheumatic fever.	Medicine/ Cardiology,	Rheumatic fever

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CV2-M-002	Define cor pulmonale and differentiate it from other causes of right heart failure. Classify cor pulmonale based on onset and underlying etiology. Explain the pathophysiological mechanisms involved in the development of cor pulmonale. Identify the etiological factors contributing to cor pulmonale. Diagnose cor pulmonale based on the characteristic symptoms and clinical signs Describe the diagnostic approach for cor pulmonale. Outline the principles of management and prevention of cor pulmonale.	integrate with Pathology	Cor- pulmonale
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CV2-M-003	Explain the pathophysiology of infective endocarditis. Identify the etiological agents responsible for infective endocarditis. Identify the clinical features and complications associated with infective endocarditis. Discuss the diagnostic approach and outline the principles of management and treatment of infective endocarditis. Describe the strategies for prevention and prophylaxis of infective endocarditis.		Infective endocarditis
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CV2-M-004	Describe the common etiological factors associated with pericarditis. Explain the pathophysiological mechanisms underlying pericardial inflammation. Identify the clinical manifestations and characteristic signs of acute pericarditis. Discuss the diagnostic approaches, including relevant clinical, laboratory, and imaging findings. Explain the possible complications of acute and chronic pericarditis. Outline the management plan for patients with acute pericarditis. Discuss the preventive measures and prognosis of pericarditis.		Pericarditis
PHARMACOLOGY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 14	
		DISCIPLINE	TOPIC

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CV2- Ph- 001	Classify antihypertensive drugs.	Pharmacology	Anti- hypertensive
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	Describe their mechanisms of action, clinical uses, adverse effects, drug-interactions and contraindications. Identify the compensatory responses to antihypertensive drugs. Explain pharmacological considerations taken in hypertensive emergencies, malignant hypertension, IHDs, cardiac failure, cardiomyopathies, coarctation of aorta, diabetes mellitus, chronic renal diseases, and pregnancy.		
CV2- Ph- 002	Explain strategies used in pharmacological treatment of angina. Classify anti-anginal drugs Describe their mechanism of action, uses, adverse effects		Ischemic Heart Diseases

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	Define Coronary Steal Phenomenon.		
CV2- Ph- 003	Classify anti arrhythmic drugs. Describe their mechanism of action, uses, adverse effects, and drug interactions. Explain general strategies used in pharmacological treatment of cardiac arrhythmias.		Cardiac Arrhythmias

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CV2- Ph- 004	Classify drugs used in cardiac failure. Describe their mechanism of action, pharmacological effects, uses, adverse effects, interactions, and contraindications. Describe role of diuretics, renin–angiotensin–aldosterone system inhibitors, beta-blockers, digitalis glycosides, nitrates and hydralazine, ivabradine and their combination, anticoagulation, antiarrhythmic therapy, and statin.		Cardiac Failure
CV2- Ph- 005	Classify anti-hyperlipidemic drugs. Describe their mechanism of action, uses, adverse effects and drug interactions Enlist combination therapies for treatment of hyperlipidemias.		Anti- Hyperlipidemi c / Anti-Dyslipidemias

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CARDIOLOGY		
		TOTAL HOURS = 14

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CODE	SPECIFIC LEARNING OUTCOMES	DISCIPLINE	TOPIC
CV2-M-005	Differentiate stable angina, unstable angina, and myocardial infarction. Describe the symptoms and signs of CAD. Explain the pathophysiology of myocardial ischemia and infarction. List risk factors and common complications of CAD. Describe the role of laboratory tests, ECG, cardiac biomarkers, imaging, and coronary angiography. Outline medical management, PCI, CABG, and primary/secondary prevention strategies.		Coronary Artery Disease (CAD)/ Ischemic heart disease

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CV2-M-006	Diagnose CCF based on clinical presentation. Explain the pathophysiology of left- and right-sided heart failure. List causes and potential complications. Describe the role of investigations such as ECG, chest X-ray, and echocardiography. Outline pharmacological and non-pharmacological treatment strategies.	Cardiology, Integrate with pathology	Congestive Cardiac Failure (CCF)
CV2-M-007	Define and classify hypertension. List risk factors. Explain the pathophysiology of essential and secondary hypertension. Describe treatment and lifestyle modifications. List the potential complications.		Hypertension

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CV2-M-008	Classify arrhythmias. Explain the pathophysiology and causes of arrhythmias. Describe the clinical features and potential complications associated with each type. Interpret findings of arrhythmia on ECG.		Arrhythmias
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	Outline acute management including cardiac arrest scenarios.		
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CV2-M-009	Classify valvular lesions: mitral stenosis/regurgitation, aortic stenosis/regurgitation. Explain the pathophysiology and complications of common valvular diseases. Diagnose based on clinical presentation and investigations. Describe relevant investigations, particularly echocardiography. Outline principles of management including medical therapy and indications for surgical intervention.		Valvular Heart Disease
CV2-M-010	Classify cardiomyopathies: dilated, hypertrophic obstructive, restrictive. Explain basic pathophysiology, etiology, and complications. Describe relevant investigations and general management principles. Discuss the potential complications.		Cardiomyopathies

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CV2-M-011	Define and classify PVD. Explain pathophysiology and risk factors. Describe clinical features including intermittent claudication and limb ischemia. Outline diagnostic approaches including Doppler studies and angiography. Describe general management including lifestyle, pharmacological, and interventional options.		Peripheral Vascular Disease (PVD)
CV2-M-012	Classify congenital heart disease based on cyanotic and non-cyanotic types. List common congenital heart defects (e.g., VSD, ASD, PDA, Tetralogy of Fallot). Explain the pathophysiology and hemodynamic consequences of these defects.		Congenital Heart Disease

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	Describe typical clinical features and presentations associated with common congenital heart defects. Outline basic diagnostic approaches, including echocardiography and relevant investigations.		
CV2-M-013	Identify the normal components of a 12-lead ECG (P wave, QRS complex, T wave, PR interval, QT interval). Identify normal heart rate, rhythm, axis, and intervals. Interpret a normal ECG tracing and confirm normal sinus rhythm.	Cardiology	ECG
PATHOLOGY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 12	
		DISCIPLINE	TOPIC
	Define aneurysm and differentiate between true and false aneurysms.		

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CV2-Pa-001	Classify aneurysms based on their morphology (saccular, fusiform) and etiology (atherosclerotic, mycotic, and congenital).	Integrate with biochemistry	Aneurysms
	Understand the underlying mechanisms leading to aneurysm formation, including vessel wall weakening, genetic factors (e.g., Marfan syndrome, Ehlers-Danlos syndrome), and role of atherosclerosis.		
	Identify the common sites where aneurysms form (e.g., aortic aneurysms, cerebral aneurysms, popliteal aneurysms) and explain why certain areas are more prone to aneurysm development.		
	Discuss the clinical signs and symptoms of aneurysms depending on their location (e.g., abdominal aortic aneurysm, thoracic aortic aneurysm) and size.		

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	Correlate the presentation with possible complications like rupture, dissection, or compression of adjacent structures.		
	List the common diagnostic modalities used in identifying aneurysms (e.g., ultrasound, CT angiography, MRI).		
	Describe the complications of aneurysm		
	Discuss the management of aneurysm		
CV2-Pa -	Discuss the chemical and morphological changes observed in myocardial infarction with timelines		Myocardial Infarction

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CV2- Pa - 00 3	Classify vascular tumors Discuss the pathogeneses of vascular tumors Describe the clinical presentations and morphological features of common vascular tumors along with the immunohistochemically markers	Integrate with biochemistry	Vasc ular tumo rs
	Classify cardiac tumors and differentiate between primary and secondary (metastatic) cardiac tumors. Enlist the	Integrate with histology	

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CV2-Pa-004	syndromic association of cardiac tumors		Cardiac tumors
	Outline the Principles of Management for Cardiac Tumors	Integrate with surgery	
GENERAL SURGERY/VASCULAR SURGERY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 10	
		DISCIPLINE	TOPIC
CV2-S-001	Explain the causes of acute limb ischemia. Diagnose based on the typical clinical presentation.		Acute Limb Ischemia

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	Differentiate acute limb ischemia from other causes of limb pain and pallor. Select appropriate investigations to confirm diagnosis. Summarize immediate and definitive management strategies. Discuss potential complications if untreated.		
CV 2 - S - 0 0 2	Describe and classify gangrene. List the causes of gangrene. Identify characteristic signs and symptoms. Distinguish gangrene from other causes of tissue necrosis. Identify investigations useful for assessment. Outline management principles including supportive and surgical care.		Gangrene

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	Explain possible complications and outcomes.		
CV2-S-003	Identify hallmark clinical features of varicose veins. Differentiate from other causes of lower limb swelling. List appropriate diagnostic methods. Summarize management strategies including lifestyle, compression, and surgical options. Discuss potential complications, including ulceration and thrombophlebitis.		Varicose Veins

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CV 2 - S - 0 0 4	Describe underlying mechanism of development of DVT.	Deep Vein Thrombosis (DVT)
	Diagnose DVT based on clinical signs and symptoms.	
	Differentiate DVT from other causes of leg swelling and pain.	
	Select investigations for diagnosis, including Doppler and D-dimer.	
	Summarize management approaches, including anticoagulation and prophylaxis.	
	Discuss complications, including pulmonary embolism.	

PHARMACOLOGY	

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CODE	SPECIFIC LEARNING OUTCOMES
CV2- Ph- 006	Analyze and interpret drugs (acetylcholine, atropine adrenaline, propranolol) on animal through online videos / simulations / graphs / practical performance.
	Analyze and interpret different concentrations of acetylcholine on frog's heart through online videos / simulations / graphs / practical performance.
	Prepare normal saline, dextrose saline. Prepare of 1000 ml of O.R.S. in water.
	Prescription writing of the following conditions: hypertension (mild to moderate, hypertensive crisis/malignant hypertension), acute and chronic angina, left ventricular failure.

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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.

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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

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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.

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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.

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		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.

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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.

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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.

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- 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.

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

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

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Assessment Schedule

Avicenna Medical & Dental College 3rd Year MBBS (M-23) Test Schedule Block-9						
We ek	Date	Day	Subject	Test	Topic	Reference
25th	29-Sep-26	Tue	All subjects	Lecture	Lecture time divided	
26th	Whole Week		Pathology/ Pharmacology/ Forensic Med	Tutorial Test		
27th	13-Oct-26	Tue	Integrated	Module-20 Exam		
				OSPE+VIVA		
28th	Whole Week		Community Med/ Pharmacology/ Forensic Med	Tutorial Test		
29th	Whole Week		Pathology/ Pharmacology/ Community Med	Tutorial Test		
30th	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	

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

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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

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▲ 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. Mowdat H.Rana, 3rd Edition

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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.

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 ▲

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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

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Hutchison's Clinical Methods by Michael Swash

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Radiology

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

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Elsevier Science Limited; 2003.

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Forensic Medicine

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Knight's Forensic Pathology by Barnard Knight 3rd edition

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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. De Maio

Knight B. Simpson's Forensic Medicine.

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Knight and Pekka. Principles of Forensic Medicine

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Forensic Pathology

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

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Washington DC

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Toxicology

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

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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.

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

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