

AVICENNA MEDICAL & DENTAL COLLEGE



STUDY GUIDE

2026

NEUROSCIENCES-II

BLOCK- 11 MODULE-27



Program: MBBS Integrated Curriculum
Year: 4th Professional Year
Batch No: M-24
Session: 2025-2026

Table of Contents

About Avicenna Medical College	3
Message from the Principal.....	3
Message from the Chairman	4
Vision & Mission	5
List of Abbreviations	5
Introduction to the Study Guide	10
Objectives of the Study Guide	10
7-Star Doctor Competencies (PMDC)	11
Introduction to Module-.....	12
Module Committee	12
Curriculum Map	15
Academic Calendar	17
Time Table:.....	18
Allocation of Hours	23
MODULE OUTCOMES	24
Learning Objectives.....	25
Operational Definition	38
Assessment Policy.....	40
Assessment Criteria and Weighting	41
Assessment Procedures.....	42
Appeal Process	42
Attendance Requirement & Internal Assessment Criteria	42
Assessment Guidelines	43
Assessment Schedule:	44
Table of Specification	53
Recommended Books & Reading Resources.....	76
Infrastructure Resources	79

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 Colleg

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

Vision & Mission



Avicenna Medical & Dental College



Vision

The vision of **Avicenna Medical & Dental College** is to

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
B	AUC	Area under the curve
	AV	Atrioventricular
	B	Biochemistry
	BhS	Behavioral Sciences
C	BHU	Basic Health Unit
	BSL	Biological Safety Level
	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
	NSAIDs	Non-steroidal Anti-Inflammatory Drugs
O	O	Ophthalmology
	OA	Osteoarthritis
	OPC	Organophosphate
	OPV	Oral poliovirus vaccine
	Or	Orientation
	Orth	Orthopaedic
P	P	Physiology
	P.jiroveci	Pneumocystis jiroveci
	Pa	Pathology
	PAD	Pathology
	PAF	Platelet activating factor
	PBL	Problem Based Learning
	PCH	Psychiatry
	PCR	Polymerase Chain Reaction
	PDA	Patent Ductus Arteriosus
	PDGF	Platelet derived growth factor
	Pe	Pediatrics
	PEM	Protein Energy Malnutrition
	PERLs	Professionalism, Ethics, Research, Leadership
	PET	Positron Emission Tomography
	Ph	Pharmacology
	Ph	Pharmacology
	PI	Personal Identity
	PID	Pelvic inflammatory disease
	PIs	Protease 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	Ventricular septal defect
W	W. bancrofti	Wuchereria bancrofti
	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.

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

Introduction to Module-

Building upon the foundational understanding developed in Neurosciences Module I (covered in Block 6), which focused on the basic sciences of CNS, Neurosciences Module II extends this knowledge toward clinical application. This module emphasizes neurology, pharmacology, pathology, and the clinical aspects of neurological disorders, enabling students to connect underlying mechanisms with clinical presentation and management. By integrating basic concepts with pharmacological and therapeutic approaches, the module promotes deeper comprehension of disease processes, rational drug use, and patient-

centered care. It also encourages the development of clinical reasoning and critical thinking by linking structure, function, and dysfunction within the nervous system. Overall, Neurosciences Module II serves as a bridge between foundational sciences and clinical practice, ensuring vertical and horizontal integration across disciplines while preparing students for future clinical rotations and decision-making in neurological care.

Module Committee

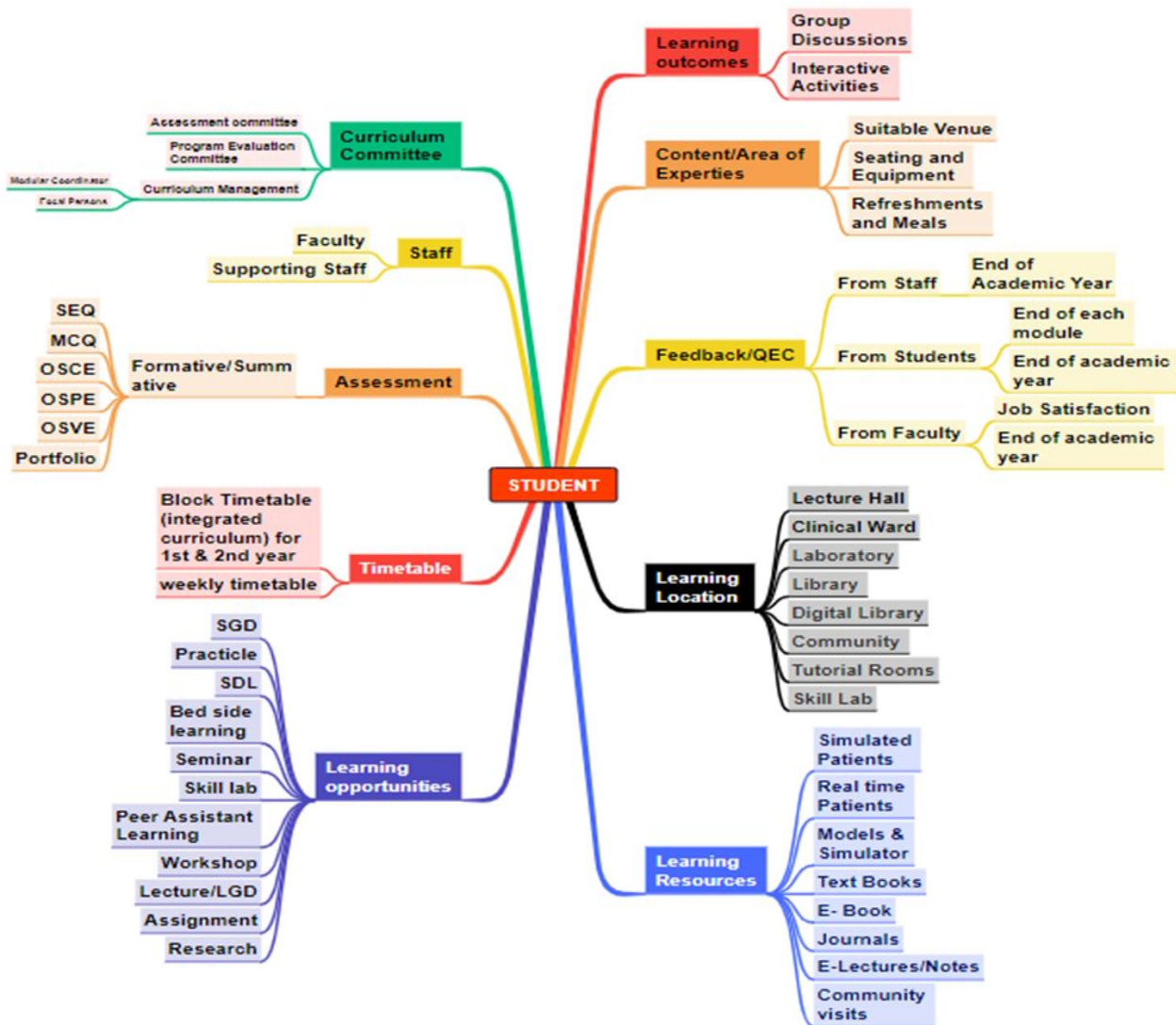
Name	Designation	Department
Prof. Dr. Gulfreen Waheed	Principal & Director DME	Medical Education
Dr. Saba Iqbal	Associate Professor	Medical Education
Dr. Syed Hussain Raza Zaidi	Assistant Professor	Medical Education
Dr. Ijlal Zehra	HOD	Assessment Cell
Dr. Javaid Shabkhez Rab	Coordinator	Medical Education
Dr. Huma Fatima	Demonstrator	Medical Education

Mr. Adeel	Incharge	Student Affairs
Prof. Dr. Saeed Afzal	HOD	Pathology
Dr. Nabila Akram	Focal Person	Pathology
Prof. Dr. Asma Saeed	HOD	Pharmacology
Dr. Azka	Focal Person	Pharmacology
Prof. Dr. Rana Akhtar	HOD	Community Medicine
Prof. Dr. Usman Sheikh	Focal Person	Community Medicine
Dr. Fatima	Focal Person	General Surgery
Prof. Dr. Muzammil	HOD	Medicine Unit-1

Dr. Imran Sheikh	Focal Person	General Medicine
Dr. Fauzia Raza	Focal Person	Pulmonology
Dr. Mobeen	Focal Person	Cardiology
Dr. Farhat Mihas	HOD	Behavioral Sciences
Prof. Dr. Khalid Mehmood	HOD	Ophthalmology
Prof. Dr. Tariq	Focal Person	Ophthalmology
Prof. Rizwan Akbar Bajwa	HOD	Otolaryngology
Dr. Usman Aslam	Focal Person	Otolaryngology
Prof. Faisal Nazeer Hussain	HOD	Orthopedics
Dr. Tariq	Focal Person	Orthopedics
Prof. Dr. Saira Younas	HOD	Dermatology
Dr. Zartaj Liaqat	Focal Person	Dermatology
Prof. Nadia Zahid	HOD	Gynecology & Obstetrics
Dr. Uzma Zia	Focal Person	Gynecology & Obstetrics

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 Calendar

Avicenna Medical & Dental College Calendar Fourth year MBBS 2025-2026																											
January 2026							February 2026							March 2026							SESSION START: 6th						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Gazetted Holidays						
				1	2	3	1				5	6	7	1					5	6	7	i- Kashmir Holiday- ii- Eid-ul-Fitr-15th					
4	5	6	7	8	9	10	8	9	10	11	12	13	14	8	9	10	11	12	13	14	15	iii- Pakistan Day-13rd					
11	12	13	14	15	16	17	15	16	17	18	19	20	21	Spring	15	16	17	18	19	20	21	iv- Labor Holiday-12th					
18	19	20	21	22	23	24	22	23	24	25		27	28		22	23	24	25		27	28	v- Eid- Ul- Adha- 17th					
25	26	27	28	29	30	31									29	30	31					vi- Youm-e-Takbeer					
																						vii- Ashura- 25th &					
April 2026							May 2026							June 2026							viii- Independence						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	ix- Milad un Nabi- 26th Aug. 2026						
			1	2	3	4	Week-04					1	2	Week-8	1	2	3	4	5	6							
												1	2	Week-8			3	4	5	6							
Week-01	5	6	7	8	9	10	Week-05	3	4	5	6	7	8	Week-9	7	8	9	10	11	12	13	x- Qasid-e-Aaram					
Week-02	12	13	14	15	16	17	Week-06	10	11	12	13	14	15	Week-10	14	15	16	17	18	19	20	Vacations					
Week-03	19	20	21	22	23	24	Week-07	17	18	19	20	21	22	Week-11	21	22	23	24	25	26	27	Summer Vacations -					
Week-04	26	27	28	29	30		Eid Week	24	25	26	27	28	29	Week-12	28	29	30					Winter Vacations -					
							31															Events					
July 2026							August 2026							September 2026							Annual Dinner 9th						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	White Coat Ceremony						
			1	2	3	4							1	Week-17	1	2	3	4	5								
Week-12	5	6	7	8	9	10	Summer	2	3	4	5	6	7	8	Week-18	6	7	8	9	10	11	12	Sports Week 2nd -15th				
Week-13	12	13	14	15	16	17	Week-14	9	10	11	12	13	14	15	Week-19	13	14	15	16	17	18	19	Sports Day 16th Oct				
Summer	19	20	21	22	23	24	Week-15	16	17	18	19	20	21	Week-20	20	21	22	23	24	25	26	Wellness Week 14-21					
Summer	26	27	28	29	30	31	Week-16	23	24	25	26	27	28	Week-21	27	28	29	30				Module Exam					
							Week-17	30	31													Module 24 Exam - 21st					
October 2026							November 2026							December 2026							Module 25 Exam -11th						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Module 26 Exam - 20th						
				1	2	3																					
Week-21				1	2	3	Week-26	1	2	3	4	5	6	Week-30	1	2	3	4	5								
Week-22	4	5	6	7	8	9	Week-27	8	9	10	11	12	13	Week-31	6	7	8	9	10	11	12	Module 28 Exam - 1st					
Week-23	11	12	13	14	15	16	Week-28	15	16	17	18	19	20	Week-32	13	14	15	16	17	18	19	Module 29 Exam - 15th					
Week-24				21	22	23	Week-29	22	23	24	25	26	27	Week-33	20	21	22	23	24	25	26	Module 30 Exam - 5th					
EOR-11 TEST	18	19	20	21	22	23	Week-30	29	30													Module 31 Exam - 3rd Dec 2026					
Week-25				28	29	30								Winter	20	21	22	23	24	25							
EOR-11 TEST	25	26	27	28	29	30	Week-31	29	30					Vacations	27	28	29	30	31			Module 32 Exam - 17th Dec 2026					
														Week-33	27	28	29	30				Module 33 Exam - 22 Dec 2026					
January 2027							February 2027							March 2027							Block Exam						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Block 10 Exam - 6th & 7th July 2026						
					1	2	Week-38	1	2	3	4	5	6														
Week-33							31	1	2	3	4	5	6		1	2	3	4	5	6							
Week-34	3	4	5	6	7	8		3	4	5	6	7	8		7	8	9	10	11	12	13	Exam- 9th & 10th Nov					
EOR-12 TEST								7	8	9	10	11	12	13								Exam- 25th & 26th Jan					
Week-35	10	11	12	13	14	15	Week-40	14	15	16	17	18	19	20	14	15	16	17	18	19	20						
EOR-12 TEST								21	22	23	24	25	26	27								Send-Up					
Week-36	17	18	19	20	21	22	Week-41	21	22	23	24	25	26	27	21	22	23	24	25	26	27						
																						Send-Up-Block: 10 Exam- 1st February					
Week-37	24	25	26	27	28	29	30	28						28	29	30	31										

Time Table:

AVICENNA MEDICAL & DENTAL COLLEGE Block-11 (Module 17)									
TIME TABLE M-22		4th YEAR MBBS	SESSION 2025-2026						Week-12
DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-12.30	12.30-1.30	1.30-2.30	2.30-3.30
29-Jun-26	MON	Module 26 Exam							
30-Jun-26	TUE	Lecture Pathology Topic Acute viral, lymphocytic, and purulent meningitis. Facilitator Dr. Hira Tariq <u>LECTURE HALL 4</u>	Lecture Pharmacology Topic Anti-epileptics. Facilitator Dr. Aisha Khan <u>LECTURE HALL 4</u>	Lecture Urology Topic Obstructive Uropathy and Hydronephrosis. Facilitator Dr. Hassan Raza <u>LECTURE HALL 4</u>	BREAK	Lecture Neurology Topic Meningitis. Facilitator Dr. Hossain <u>LECTURE HALL 4</u>	Lecture Eye Topic Lens (Anatomy/Pathophysiology) Facilitator Prof. Khalid <u>LECTURE HALL 4</u>	Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)	
1-Jul-26	WED	Lecture Psychiatry Topic Bio-psycho-social model of health Facilitator Dr. Farhat <u>LECTURE HALL 4</u>	Lecture Ent Topic Examination Facilitator Dr. Usman <u>LECTURE HALL 4</u>	Lecture Pathology Topic Define and exhibit the major types of neurodegenerative disorders affecting the central nervous system. Facilitator Dr. Nadia Salam <u>LECTURE HALL 4</u>		CLINICAL ROTATION / CLINICAL SKILLS		Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)	
2-Jul-26	THU	Lecture Eye Topic Cataract Facilitator Prof. Khalid <u>LECTURE HALL 4</u>	Lecture Psychiatry Topic Sensation, perception, attention, and concentration Facilitator Dr. Farhat <u>LECTURE HALL 4</u>	Lecture Neurology Topic Examination Facilitator Dr. Hassan <u>LECTURE HALL 4</u>		CLINICAL ROTATION / CLINICAL SKILLS		Beh. Sciences Tutoria Pathology Tutoria COM. Medicine Tutoria	
3-Jul-26	FRI	Lecture Pathology Topic CNS tumors Facilitator Prof. Saad Afzal <u>LECTURE HALL 4</u>	Beh. Sciences Tutoria Pathology Tutoria COM. Medicine Tutoria		CLINICAL ROTATION / CLINICAL SKILLS		JUMA BREAK	<u>PERL</u> Topic <u>Consent and patient autonomy in ENT</u> case Facilitator Dr. Faah <u>LECTURE HALL 4</u>	

AVICENNA MEDICAL & DENTAL COLLEGE Block-11 (Module 27)									
TIME TABLE M-22		4th YEAR MBBS	SESSION 2025-2026						Week-13
DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-12.30	12.30-1.30	1.30-2.30	2.30-3.30
6-Jul-26	MON	Block-10 Exam Theory							
7-Jul-26	TUE	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
		Block-10 Exam Orpe/Viva							
8-Jul-26	WED	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-1.30		1.30-2.30	2.30-3.30
		Lecture Psychiatry Topic Memory Facilitator Dr Farhat <u>LECTURE HALL 4</u>	Lecture Ent Topic Anatomy of Nose & PNS Facilitator Prof. Rirwan Bajwa <u>LECTURE HALL 4</u>	Lecture Eye Topic Secondary Cataract Facilitator Prof khalid <u>LECTURE HALL 4</u>		<u>CLINICAL ROTATION / CLINICAL SKILLS</u>		Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)	
9-Jul-26	THU	8.00-9.00	9.00-10.00	10.00-11.00	BREAK	11.30-1.30		1.30-2.30	2.30-3.30
		Lecture Pharmacology Topic Alzheimer's disease Facilitator Dr. Asma Saeed <u>LECTURE HALL 4</u>	Lecture Psychiatry Topic Sensation, perception, attention, and concentration Facilitator Dr Farhat <u>LECTURE HALL 4</u>	Lecture Neurology Topic Viral and non-viral causes of encephalitis. Facilitator Dr. Imran <u>LECTURE HALL 4</u>		<u>CLINICAL ROTATION / CLINICAL SKILLS</u>		Beh. Sciences Tutoria Pathology Tutoria COM. Medicine Tutoria	
10-Jul-26	FRI	8.00-9.00	9.00-10.00	10.00-11.00		11.00-1.00		1.00-2.00	2.00-3.30
		Lecture Pathology Topic Brain tumors. Facilitator Prof. Saeed Afzal <u>LECTURE HALL 4</u>	Beh. Sciences Tutoria Pathology Tutoria COM. Medicine Tutoria			<u>CLINICAL ROTATION / CLINICAL SKILLS</u>		<u>JUMA BREAK</u>	<u>PERL</u> Topic Principles of autonomy Facilitator Dr. Zaib <u>LECTURE HALL 4</u>

AVICENNA MEDICAL & DENTAL COLLEGE Block-11 (Module 27)									
TIME TABLE M-22		4th YEAR MBBS	SESSION 2025-2026						Week-14
DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-12.30	12.30-1.30	1.30-2.30	2.30-3.30
10-Aug-26	MON	Lecture Neurology Topic Ischemic stroke. Facilitator Prof. Muzamul <u>LECTURE HALL 4</u>	Lecture Psychiatry Topic Personality Facilitator Dr Farhat <u>LECTURE HALL 4</u>	Lecture Pharmacology Topic Anti-Parkinson drugs. Facilitator Dr. Arka Khan <u>LECTURE HALL 4</u>	BREAK	Lecture Urology Topic Urolithiasis Facilitator Dr.Manzoor Malik <u>LECTURE HALL 4</u>	Lecture Pharmacology Topic Anti-Parkinson drugs. Facilitator Dr. Asma Saeed <u>LECTURE HALL 4</u>	Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)	
11-Aug-26	TUE	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 Pathology Topic Neurodegenerative disorders Facilitator Dr. Nadia Salam <u>LECTURE HALL 4</u>	Lecture Pharmacology Topic Drugs used in the management of movement disorders Facilitator Dr. Arka Khan <u>LECTURE HALL 4</u>	Lecture Urology Topic Cystitis and Prostatitis Facilitator Dr.Hassan Raza <u>LECTURE HALL 4</u>		Lecture Neurology Topic Subarachnoid and intracerebral hemorrhage Facilitator Prof. Muzamul <u>LECTURE HALL 4</u>	Lecture Eye Topic Congenital cataract Facilitator Prof.khalid <u>LECTURE HALL 4</u>	Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)	
12-Aug-26	WED	8.00-9.00	9.00-10.00	10.00-11.00		11.30-1.30		1.30-2.30	2.30-3.30
		Lecture Psychiatry Topic IQ and EQ Facilitator Dr Farhat <u>LECTURE HALL 4</u>	Lecture Ent Topic Anatomy of Nose & PNS Facilitator Dr. Kaheem <u>LECTURE HALL 4</u>	Lecture Eye Topic Cataract Surgery Facilitator Prof.Khalid <u>LECTURE HALL 4</u>		<u>CLINICAL ROTATION / CLINICAL SKILLS</u>		Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)	
13-Aug-26	THU	8.00-9.00	9.00-10.00	10.00-11.00		11.30-1.30		1.30-2.30	2.30-3.30
		Grand Test Pathology Topic Neurosciences II (Topics covered in lectures) Facilitator Dr. Nadia Salam	Lecture Psychiatry Topic Mood and affect. Facilitator Dr Mudassar <u>LECTURE HALL 4</u>	Lecture Neurology Topic Epilepsy. Facilitator Prof. Amina <u>LECTURE HALL 4</u>	<u>CLINICAL ROTATION / CLINICAL SKILLS</u>		Beh. Sciences Tutoria Pathology Tutoria COM. Medicine Tutoria		
14-Jun-26	FRI	8.00-9.00	9.00-10.00	10.00-11.00	11.00-1.00		1.00-2.00	2.00-3.30	
		Independence Day							

AVICENNA MEDICAL & DENTAL COLLEGE Block-II (Module 27)											
TIME TABLE M-22		4th YEAR MBBS	SESSION 2025-2026						Week-15		
DATE	DAY	8.00-9.00	9.00-10.00	10.00-11.00	11.00-11.30	11.30-12.30	12.30-1:30	1.30-2.30	2.30-3.30		
17-Aug-26	MON	Lecture Neurology Topic Alzheimer's disease. Facilitator Prof. Amina <u>LECTURE HALL 4</u>	Lecture Psychiatry Topic Emotions and Motivation Facilitator Dr Farhat <u>LECTURE HALL 4</u>	Lecture Pharmacology Topic Anti-migraine drugs. Facilitator Dr. Asma Saeed <u>LECTURE HALL 4</u>	BREAK	Lecture Urology Topic Hematuria Facilitator Dr. Manzoor Malik <u>LECTURE HALL 4</u>	Lecture Pharmacology Topic Local anesthetic agents Facilitator Dr. Aska Khan <u>LECTURE HALL 4</u>	Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)			
18-Aug-26	TUE	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 Pathology Topic Parkinson's disease. Facilitator Dr. Nadia Salam <u>LECTURE HALL 4</u>	Lecture Pharmacology Topic General anesthetic agents Facilitator Dr. Aska Khan <u>LECTURE HALL 4</u>	Lecture Surgery Topic Revision Facilitator Dr. Usman Khan <u>LECTURE HALL 4</u>		Lecture Neurology Topic Parkinson's disease. Facilitator Prof. Waheed <u>LECTURE HALL 4</u>	Lecture Eye Topic Complications of cataract surgery Facilitator Prof khalid <u>LECTURE HALL 4</u>	Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)			
19-Aug-26	WED	8.00-9.00	9.00-10.00	10.00-11.00		11.30-1.30		1.30-2.30	2.30-3.30		
		Lecture Psychiatry Topic Coping skills Facilitator Dr Farhat <u>LECTURE HALL 4</u>	Lecture Ent Topic Physiology of Nose Facilitator Dr. Anam anif <u>LECTURE HALL 4</u>	Lecture Pathology Topic Poliomyelitis Facilitator Dr. Majid Rauf <u>LECTURE HALL 4</u>		<u>CLINICAL ROTATION / CLINICAL SKILLS</u>		Pathology Practical (Batch A) Beh. Sciences Tutorial (Batch B) Research IT Lab work (Batch C)			
20-Aug-26	THU	8.00-9.00	9.00-10.00	10.00-11.00		11.30-1.30					1.30-2.30
		Module 27 Exam									
21-Aug-26	FRI	8.00-9.00	9.00-10.00	10.00-11.00	11.00-1.00		1.00-2.00	2.00-3.30			
		Lecture Pathology Topic Guillain-Barre Syndrome Facilitator Dr. Nadia Salam <u>LECTURE HALL 4</u>	Beh. Sciences Tutoria Pathology Tutoria COM. Medicine Tutoria		<u>CLINICAL ROTATION / CLINICAL SKILLS</u>		<u>JUMA BREAK</u>	PERL Topic Principles of autonomy Facilitator Dr. Zaib <u>LECTURE HALL 4</u>			

Allocation of Hours

AVICENNA MEDICAL COLLEGE, LAHORE

4th YEAR MBBS (2025-26)

	EYE			ENT			COMMUNITY MEDICINE				PHARMA		PATHOLOGY			Surgery		Medicine		Family Medicine				Gyn		Pae		Derma		Urology		Beh.		Neu		Nep		PERL				Total	Assesment	GRAND Total			
Week	Lec	CR	CBL	Lec	CR	CBL	Lec	Tut	CR	Flcl	Lec	Tut	Lec	Prac	Tut	Lec	CR	Lec	CR	Lec	Tut	CR	CBL	Lec	CR	CR	Lec	CR	Lec	CR	Lec	Tut	CR	Lec	Lac	Pro	Ethl	Researc	Leac								
1		1		2	1		4	2	1				3	2	1		1	1	3	2	1			1										1				27		27	valida						
2	2	2	1		2	1	4		1	5			3	2	1	1	1	1	3	2	1			1									1			2		34		34							
3	2	2	1		2	1		3		1	5	1	2	2		1		2	1	2	2	1			1							1			2		33	1	34								
4	2	2	1		2	1		3	2	1			4	2	2	1		4	1	2	2	1			1								1				33	1	34								
5	2	2	1		2	1		4	2	1		1	1	2	2	2		2	1	4	2	1			1								1				33	1	34								
6	2	2	1		2	1		4	2	1		1	2	2	2			1	1	2	2	1			1												28		28	valida							
7	2	2	1		2	1					1		3	2		2		3	1	1	2	1			1	1							1		2		27	7	34								
8	2	2	1		3	1				2		1	3	2		3		4	1	2		1	2		1	1							1		2		33	1	34								
9	1	1		1	1		3	2				1	3	2		2		2	1	1		1							1					1		2		27	7	34							
10	2	2	1	1	3	1	1		2		1		1	2	2	2		4	1	3		1				1		1						1		2		33	1	34							
11	3	1	2	3	1	2			2				1	2				4	1	1										1						2		27	7	34							
12	1	1			1				2			2	2	2		1		2										1	1		1	1				2		20	14	34							
13	1	1		1	1				2		1		2	2		1		2										1	2		1	1				2		21		21	valida						
14	2	2	1		2	1					2		2	2	2	2		2										1	3	2	1	4		2		2		33	1	34							
15	2	2	1	1	1	1	1				3	2	1		2	1		2										1	2	2	1	2		1			27	7	34								
16	2	2	1		2	1					2	2	2	2		1		2										1	1	1	2	1	3			2		28		28	valida						
17	3	1	1	2	1	1					2		2	2	2	1		2										1	1	3	2	1	2		1	2		33	1	34							
18	2	2	1	2	2	1	2				2		1	2		1		2										1	1		2	1	1		1		2		27	1	28	valida					
19	3	1	2	2	1	2					2		2	2	2			2										1	4	2	1		2			2		33	1	34							
20	2	2	1	2	1	1	2						1	2	2	1		2										2	1	5	2	1		2		1	2	33	1	34							
21	3	1		1	1								1	2				2										2	1	3	2	1	4			1	2	27	7	34							
22	2	2	1	2	2	1	2				2	2	2	2	2			2										1	1	2		1	4			2		33	1	34							
23	3	1		4	1						1	2	2	2				2										1	1	2		1	2			2		27	7	34							
24	3	1	2	3	1	2					1	2		2	2	1		2	1									1	1	2		1	2			2	1	33	1	34							
25	3	1	2	3	1	2					1	2	1	2			1	2										1	1						2		2		27	1	28						
26	3	1		3	1						2	1	2		1	1		2																1		2		21	7	28	valida						
27	1	1			1						1	2	3	1			1	3	1									1	1							2	1	20	14	34							
28	3	1		2	1						2	2	3	2	2		1	5	2						2			1	1							1	2	33	1	34							
29	3	1		2	1						2	2	3	2			1	5	2						2	1		2	1							1	2	33	1	34							
30	2	2	1		2	1					2	2	3	2			1	2	2									3	1							2	1	27	7	34							
31	2	2	1		2	1					3	2	3	2			1	2	2						2	1			5	1							2	1	33	1	34						
32	3	1		3	1						2	2	2	2			1	2										4	1								2	1	27	7	34						
33	4	1	2	4	1	2					2	2	1	2			1	3	2						2			1	1								2	1	34		34						
34	3	1	2	5	1	2					1	2	2	2			1	2	2						2			1	1					1			2		33	1	34						
35	4	1	2	4	1	2					2	2	2	2			1	2	1						2	1			1					1			2		33	1	34						
36	2	2	1	2	3	1	2				1	2	1	2				1	1																		2		21	7	28	valida					
37		1			1						1			2																								5	14	19							
	82	37	25	80	37	25	25	20	6	10	47	34	71	71	24	26	11	53	58	25	14	10	12	5	9	3	19	12	11	14	30	16	14	16	17	9	7	4	62	6	1057	130	1187				
AVMC	144			142			61				81	166			37			111				61				5	9	3	31	25				60				16	17	88				1057			
AVMC	144+18=162			142+20=162			61+42+21+105=229				180+21+24=225	231+166+45+64=508			37			108				61+18=79				8	9	3	31	25				19+15+62+7=103													
Subjec	EYE			ENT			Com. Medicine				Pharmacol	Pathology			Surgery			Medicine				Family Medicine					Pae	Dermatol	Urolog		Beh.		Neu	Nep													
PMDC	150			150			200				300	500						75									Pae	Dermatol	Urolog		Beh.		Neu	Nep													

MODULE OUTCOMES

- Explain the pathophysiological basis of common neurological disorders by linking structural and functional alterations in the nervous system to clinical manifestations.
- Describe the pharmacological basis of drugs used in neurological conditions, including their mechanisms of action, therapeutic uses, adverse effects, and rational prescribing principles.
- Integrate knowledge of basic neuroscience with clinical decision-making to interpret signs, symptoms, and investigations relevant to neurological diseases.
- Discuss the principles of multidisciplinary management in neurological disorders, incorporating pharmacological, rehabilitative, and preventive perspectives.
- Counsel patients with neurological diseases with empathy demonstrating effective communication skills.

SUBJECTS INTEGRATED IN THE MODULE

1. Neurology
2. Pathology
3. Pharmacology
4. General Medicine
5. Pediatric Surgery/ Neurosurgery

Learning Objectives

THEORY			
CODE	SPECIFIC LEARNING OUTCOMES	INTEGRATING DISCIPLINE	TOPIC
NS2-Pathology-001	Explain the etiology and pathophysiological mechanisms of acute viral, lymphocytic, and purulent meningitis. Describe the etiology, pathogenesis, and clinical implications of a brain abscess. Discuss the causative factors and pathophysiology of chronic meningitis. Explain the pathogenesis and complications of tuberculous meningitis. Explain the etiology, transmission, and neuropathological changes associated with viral encephalitis.	Pathology/ Microbiology	CNS Infections
NS2-Neurology-	Identify signs and symptoms of meningitis. Enlist the diagnostic approach. Outline medical management plan. Identify the potential complications.	Neurology/ Medicine	Meningitis

0 0 2			
NS2 - N e u - 0 0 3	List the common viral and non-viral causes of encephalitis. Identify the typical clinical presentation. Outline the diagnostic workup. Plan the management strategies Identify short- and long-term complications.	Neurology/ Medicine	Encephalitis
NS2 - N e u - 0 0 4	Define ischemic stroke. Diagnose ischemic stroke based on clinical presentation. Enlist investigations to determine the cause. Describe management including emergency intervention and prevention of ischemic stroke.	Neurology/ Medicine	Ischemic stroke
NS2 - N e u - 0 0 5	Define subarachnoid and intracerebral hemorrhage. Enlist causes and predisposing factors.	Neurology/ Medicine	Subarachnoid and intracerebral hemorrhage

	Identify key clinical manifestations and possible complications. Outline essential investigations with management and preventive measures.		
N S 2 - P S - 0 0 3	Define neural tube defects and hydrocephalus. Classify types. Identify risk factors and clinical features. Outline management plan with early referral.	Pediatric Surgery	Hydrocephalus and spinal malformations
NS2 - N e u - 0 0 4	Define epilepsy. Describe clinical presentations of seizures. Enlist different investigative modalities for diagnosis of epilepsy. Outline the management plan.	Neurology	Epilepsy

N S 2 - P h - 0 0 5	Classify Anti-epileptics. Describe their mechanism of action, uses, adverse effects, drug interactions and contraindications. Enlist differences between sodium Valproate, Phenytoin, Carbamazepine, Gabapentin, Lamotrigine and Ethosuximide. Discuss role of antiseizure and benzodiazepines in essential tremors.	Pharmacology	Anti-epileptics
N S 2 - P a - 0 0 6	Classify central nervous system (CNS) tumors based on the WHO classification. Describe the genetic mutations, pathogenesis, morphology, and clinical manifestations of major primary brain tumors, including gliomas, ependymomas, medulloblastomas, and meningiomas. Discuss the pathogenesis, common primary sites, and clinical features of metastatic brain tumors.	Pathology	CNS tumors
N S 2 - P a - 0	Define and enlist the major types of neurodegenerative disorders affecting the central nervous system.	Pathology	Neurodegenerative diseases

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	Explain the role of abnormal protein aggregation in the pathogenesis of neurodegenerative diseases. Describe the molecular genetics, pathogenic mechanisms, and morphological changes associated with Alzheimer's disease. Identify the clinical features and diagnostic criteria of Alzheimer's disease. Explain the molecular genetics and pathogenesis of Parkinson's disease. Describe the key morphological findings, clinical manifestations, and diagnostic criteria of Parkinson's disease.		
NS2 - Neurology	Describe the etiology and risk factors associated with Alzheimer's disease. Identify the key clinical features and stages of cognitive and behavioral decline. Differentiate Alzheimer's disease from other causes of dementia. Outline the diagnostic approach. Discuss the management strategies. Identify the common complications and their impact on patient quality of life and caregiver burden.	Neurology/ Medicine	Alzheimer's disease

08			
NS2-Ph-009	Classify the drugs used in the management of Alzheimer's disease and other dementias. Explain the mechanism of action, pharmacological effects, therapeutic uses, and adverse effects of cholinesterase inhibitors. Describe the mechanism of action, clinical role, and side effects of NMDA receptor antagonist (Memantine). Discuss the rationale and benefits of combination therapy (cholinesterase inhibitor + memantine) in moderate to severe Alzheimer's disease.	Pharmacology	Pharmacotherapy of Alzheimer's Disease and Dementia

NS2-N e u - 0 1 0	Describe the etiology and risk factors of Parkinson's disease. Diagnose Parkinson's disease based on the cardinal motor and non-motor symptoms. Describe the clinical stages of the disease. Differentiate Parkinson's disease from other parkinsonian syndromes. Outline the important investigations. Describe treatment options and complications.	Neurology/ Medicine	Parkinson's disease
NS2-Ph-011	Classify Anti-Parkinson drugs. Explain the mechanism of action, pharmacological effects, therapeutic uses, adverse effects, drug interactions, and contraindications of anti-Parkinsonian agents. Discuss the rationale, advantages, and disadvantages of combining Carbidopa with Levodopa therapy. Describe the On-Off phenomenon, its underlying mechanisms, and management strategies. Explain the etiology, clinical features, and pharmacological management of drug-induced parkinsonism. Outline the pharmacokinetics and therapeutic approaches for drug-induced and other dyskinesias.	Pharmacology	Anti-Parkinson Drugs

NS2- N e u - 0 1 2	Classify motor neuron diseases. Describe the diagnostic criteria and key clinical features of motor neuron disease. Enlist relevant investigations. Explain supportive and disease-modifying treatment strategies.	Neurolog y/ Medicine	Motor neuro n diseas e
N S 2 - P h - 0 1 3	Classify drugs used in the management of movement disorders (Parkinsonism, Huntington's disease, dystonias, tremors, and drug-induced dyskinesias).	Pharmacol ogy	Pharmacoth erap y of Movement disorders

	Describe the mechanism of action, pharmacological effects, clinical uses, adverse effects, drug interactions, and contraindications of drugs used for hyperkinetic movement disorders. Discuss pharmacological strategies for the management of drug-induced movement disorders, including acute dystonia, akathisia, and parkinsonism. Explain the principles of drug selection, rationale for combination therapy, and the use of newer therapeutic agents in movement disorders.		
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N S 2 - P a - 0 1 4	Explain the pathophysiology of inflammatory neuropathies, including Guillain–Barré Syndrome (Acute Inflammatory Demyelinating Polyneuropathy). Describe the clinical features, pathological changes, and disease progression of Guillain–Barré Syndrome. Explain the pathophysiology and morphological changes of poliomyelitis, including anterior horn cell involvement. Describe the pathogenesis, morphological features, and clinical implications of prion diseases.	Pathology	Guillain–Barré Syndrome, poliomyelitis & prion diseases
NS2- N e u - 0 1 5	Define neuropathy and classify peripheral neuropathies. Identify the clinical features of neuropathies. Explain the functional impact of neuropathies on gait, sensation, and daily activities. Outline the diagnostic approach and management plan.	Neurology/ Medicine	Neuropathies

N S 2 - P a - 0 1 6	Describe the structural and functional differences between Type I and Type II muscle fibers. Explain the pathogenesis, morphological features, and diagnostic criteria of inflammatory myopathies, including dermatomyositis and polymyositis.	Pathology/ Neurology	Myopathies
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	Discuss the etiology, pathophysiology, and histopathological characteristics of inherited skeletal muscle diseases, including Duchenne and Becker muscular dystrophies. Correlate pathological findings with clinical presentation and disease progression in the above disorders.		
NS2- N e u - 0 1 7	Define and classify paraplegia. Differentiate paraplegia from quadriplegia and hemiplegia. Differentiate between upper and lower motor neuron lesions. Identify the key clinical features that help localize the spinal cord lesion. Discuss the management and identify potential complications.	Neurology/ Medicine	Paraplegia

NS2- Neu- - 0 1 8	Describe multiple sclerosis with its types and clinical variants. Explain the etiology, immunopathogenesis, and risk factors associated with multiple sclerosis. Identify the characteristic clinical features. Outline the diagnostic approach. Describe the management strategies.	Neurology/ Medicine	Multiple Sclerosis
N S 2 - Ph- - 0 1 9	Describe the pharmacological classification of anti-migraine drugs. Explain the mechanism of action of triptans and ergot alkaloids in the management of migraine. Describe the pharmacokinetic properties and clinical uses of different triptans and ergot derivatives. Describe the adverse effects, contraindications, and drug interactions.	Pharmacology	Anti-migraine drugs

N S 2 - P h - 0 2 0	Classify local anesthetic agents based on their chemical structure and duration of action. Explain the mechanism of action, pharmacological effects, and clinical applications of local anesthetics. Compare amide and ester local anesthetics in terms of metabolism, stability, and allergic potential. Describe the rationale, benefits, and risks of adding vasoconstrictors to local anesthetic preparations. Identify commonly used agents for short-, intermediate-, and long-duration procedures, including minor and major peripheral nerve blocks. Discuss the adverse effects, contraindications, and significant drug interactions of local anesthetics.	Pharmacology/ Anesthesia	Local Anesthetics
N S 2 - P h - 0 2 1	Classify general anesthetic agents based on their route of administration and duration of action. Describe the clinical uses, adverse effects, contraindications, and major drug interactions of commonly used general anesthetics. Discuss the principles and agents used for the reversal and recovery from anesthesia.	Pharmacology/ Anesthesia	General Anesthetics

NS2- N e u - 0 2 2	Define coma and unconsciousness. Describe the pathophysiology underlying loss of consciousness. Apply the Glasgow Coma Scale for assessment. Outline the diagnostic approach. Discuss the complications, prognosis, and criteria for brain death determination.	Neurology/ Medicine	Coma and unconsciousness
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PRACTICAL / LAB WORK			
CODE	SPECIFIC LEARNING OUTCOMES	INTEGRATING DISCIPLINE	TOPIC
NS2- P a - 0 0 8	Interpret CSF reports, including cell count, protein, glucose, and microbiological findings	Pathology	CSF interpretation
NS2- P a - 0 0 9	Identify characteristic histopathological features of tuberculous meningitis.	Pathology	Tuberculous meningitis
NS2- P	Identify the classical characteristic morphological features of meningioma and glioblastoma.	Pathology	CNS tumors

a - 0 1 0			
N S 2 - R a - 0 0 1	Interpret ultrasound findings to identify features of hydrocephalus.	Radiology	Neuroimaging: hydrocephalus
N S 2 - R a - 0 0 2	Interpret CT and MRI images to identify intracranial hemorrhage, cerebral infarction, and CNS tumors.	Radiology	Neuroimaging: Stroke and CNS tumors

Operational Definition

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	Practical	Hands-on sessions where students apply theoretical knowledge to real-world tasks. This might include lab work, clinical procedures, or simulations. Practical 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
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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

8. Attendance will be recorded regularly and will contribute to the overall internal assessment score.
9. 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

- i. Faculty Responsibility: Faculty members will be responsible for designing and administering the internal assessments in accordance with the course syllabus and this policy.
- ii. 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.
- iii. Feedback: Faculty members will provide timely and constructive feedback to students on their performance.
- iv. Record-Keeping: Faculty members will maintain accurate records of all internal assessments, including marks and feedback.
- v. 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.

1. Written examinations, including multiple-choice and essay questions, will test your grasp of theoretical concepts and subject matter.
2. Practical assessments will require you to demonstrate your clinical skills and ability to apply knowledge in real-world scenarios.
3. Clinical exams will evaluate your communication skills and reasoning abilities through case discussions and problem-solving exercises.
4. 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%	

INTERNAL ASSESSMENT

It shall constitute 20% of the total assessment at the end of the academic year.

	Scoring Parameter	Weightage (Percentage)
Theory 10 %	Attendance	75% attendance -1 % >85% attendance -2 %
	Block Exam	5 %
	Continuous assessment	3 %
Practical 10 %	Attendance	75% attendance -1 % >85% attendance -2 %
	Block Exam (OSCE / OSPE / OSVE / Short case)	5 %
	Portfolio-clinical logbooks (CFRC / PERLs / Clinical Clerkship)	3 %

Assessment Schedule:

Avicenna Medical College

4th Year MBBS – Exam Schedule – 2026/27

Avicenna Medical College
4thYear MBBS
Test Schedule

Week	Date	Day	Subject	Test	Topic	Refernce
SESSION COMMENCEMENT: 6th April 2026						
Week-1	9th Apr-26	THU	Time Divided Lecture			
Week-2	9-Apr-26	THU	Time Divided Lecture			
week 3	23-Apr-26	THU	Community Medicine	Gand Test	BIO STATS (syllabus covered)	k>PARK & NOTES by C. MED FACULTY
week 4	30-Apr-26	THU	Pathology	Gand Test	GIT and Nutrition II (Topics covered in lectures)	Robins pathologic basis of disease 10. ed. Chap 17 by Dr. Nabila Akram
week 4	1-May-26	FRI	LABOUR DAY			
week 5	7-May-26	THU	Family Medicine	Gand Test	All covered topics Headache, Fever, Weightloss, Mental Health and child health	OHBGP 5th edition
Week-6	14-May-26	THU	Time Divided Lecture			

week 7	21-May-26	THU	Module 24 Exam			
Eid- Ul- Adha- 27th May - 29th May, 2026						
week 8	4-Jun-26	THU	Medicine	Gand Test	Small and large intestinal cancers.	Davidson's Principles and Practice of Medicine
week 8	3-Jun-26	WED	EOR-10	Test		
week 8	4-Jun-26	THU	EOR-10	Test		
week 8	5-Jun-26	FRI	EOR-10	Test		
week 9	11-Jun-26	THU	Module 25 EXAM			
week 10	17-Jun-26	WED	EOR-10	Test		
week 10	18-Jun-26	THU	EOR-10	Test		

week 10	19-Jun-26	FRI	EOR-10	Test		
week 10	18-Jun-26	THU	Surgery	Gand Test		
week 11	25-Jun-26	THU	ASHURA			
week 11	26-Jun-26	FRI				
week 12	29-Jun-26	THU	Module 26 EXAM			
week 13	6-Jul-26	MON	Block 10 Exam			
week 13	7-Jul-26	TUE	Block 10 Exam			
Summer Vacations - 11th July - 9th Aug, 2026						
week 14	13-Aug-26	THU	Pathology	Gand Test	Neurosciences II (Topics covered in lectures)	Robins pathologic basis of disease 10th ed. Chap by Dr. Nadia Salam

week 14	14-Aug-26	THU	Independancec Day			
week 15	20-Aug-26		Module 27 Exam			
week 16	25-Aug-26	TUE	EID MILADUN NABI			
week 17	3-Sep-26	THU	Neurology	Gand Test		
week 18	10-Sep-26	THU	PHARMA	Gand Test		
week 19	17-Sep-26	THU	Behavioral Sciences/Sur gery	Gand Test	Behavioral Sciences (Topics covered in lectures)	Beh sciences by M.Rana by Dr Farhat
week 20	24-Sep-26	THU	Urology	Gand Test		
week 21	1-Oct-26	THU	Module 28 Exam			
week 22	8-Oct-26	THU	Nephrology	Gand Test		

week 23	15-Oct-26	THU	Module 29 Exam			
week 24	21-Oct-26	WED	EOR-11	Test		
week 24	22-Oct-26	THU	EOR-11	Test		
week 24	23-Oct-26	FRI	EOR-11	Test		
week 24	22-Oct-26	THU	ENT	Gand Test	NOSE & PNS (ALL MODULE COVERED)	
week 24	21-Oct-26	WED	EOR-11	Test		
week 24	22-Oct-26	THU	EOR-11	Test		
week 24	23-Oct-26	FRI	EOR-11	Test		
week 25	29-Oct-26	THU	Eye	Gand Test	Syllabus covered	

week 26	5-Nov-26	THU	Module 30 Exam			
week 27	9-Nov-26	MON	Block 11 Exam			
week 27	10-Nov-26	TUE	Block 11 Exam			
week 28	19-Nov-26	THU	Pathology	Gand Test	Endocrinology and Reproduction II (Topics covered in lectures)	Robins pathologic basis of disease 10th ed. Chap 21 by Dr. Naeem Ashraf
week 29	26-Nov-26	THU	Medicine	Gand Test		
week 30	3-Dec-26	THU	Module 31 Exam			
week 31	10-Dec-26	THU	Dermatology	Gand Test		
week 32	17-Dec-26	THU	Module 32 Exam			
Winter Vacations - 19th Dec-27th Dec, 2026						

Week-33	31-Dec-26	THU	Time Divided Lecture			
week 34	7-Jan-27	THU	EYE	Gand Test	Syllabus Covered	
week 34	6-Jan-27	WED	EOR-12	Test		
week 34	7-Jan-27	THU	EOR-12	Test		
week 34	8-Jan-27	FRI	EOR-12	Test		
week 35	14-Jan-27	THU	ENT	Gand Test	Throat (All Module Covered)	
week 35	13-Jan-27	WED	EOR-12	Test		
week 35	14-Jan-27	THU	EOR-12	Test		
week 35	15-Jan-27	FRI	EOR-12	Test		

week 36	21-Jan-27	THU	Module 33 Exam
week 36	22-Jan-27	FRI	Prep Leave for Block 12 Exam
week 37	25-Jan-27	Mon	Block 12 Exam
week 37	26-Jan-27	Tue	Block 12 Exam
week 38	1-Feb-27	Mon	<i>Send-up Block-10</i>
week 38	4-Feb-27	Thur	<i>Send-up Block-11</i>
week 39	8-Feb-27	Mon	<i>Send-up Block-12</i>
End Of Session			

Table of Specification

MODULE-27 Neuro Science 2														
Sr#	CODE	SUBJECT	TOPIC	LEARNING OBJECTIVES	KNOWLEDGE Cognitive Domain			SKILL Psychomotor Domain	ATTITUDE Effective Domain	Mode of Information Transfer MIT			TOTAL HOURS	References
					C1	C2	C3			P	A	Lecture (hours)		
1	NS2-Pa-001	Pathology/ Microbiology	CNS Infections	Explain the etiology and pathophysiological mechanisms of acute viral, lymphocytic, and purulent meningitis. Describe the etiology, pathogenesis, and clinical implications of a brain abscess. Discuss the causative factors and pathophysiology of chronic meningitis. Explain the pathogenesis and complications of tuberculous meningitis. Explain the etiology, transmission, and neuropathological changes associated with viral encephalitis.	✓	✓	✓	✓	✓	1				
2	NS2-Neu-002	Neurology/ Medicine	Meningitis	Identify signs and symptoms of meningitis. Enlist the diagnostic approach. Outline medical management plan. Identify the potential complications.	✓	✓	✓	✓	✓	1				
3	NS2-Neu-003		Encephalitis	List the common viral and non-viral causes of encephalitis. Identify the typical clinical presentation. Outline the diagnostic workup. Plan the management strategies Identify short- and long-term complications.	✓	✓	✓	✓	✓	1				
4	NS2-Neu-004		Ischemic stroke	Define ischemic stroke. Diagnose ischemic stroke based on clinical presentation. Enlist investigations to determine the cause. Describe management including emergency intervention and prevention of ischemic stroke.	✓	✓	✓	✓	✓	1				

11	NS2-Neu-008	Neurology/ Medicine	Alzheimer's disease	Describe the etiology and risk factors associated with Alzheimer's disease. Identify the key clinical features and stages of cognitive and behavioral decline. Differentiate Alzheimer's disease from other causes of dementia. Outline the diagnostic approach. Discuss the management strategies. Identify the common complications and their impact on patient quality of life and caregiver burden.	✓	✓	✓	✓	✓	1					
12	NS2-Ph-009	Pharmacology	Pharmacotherapy of Alzheimer's Disease and Dementia	Classify the drugs used in the management of Alzheimer's disease and other dementias. Explain the mechanism of action, pharmacological effects, therapeutic uses, and adverse effects of cholinesterase inhibitors. Describe the mechanism of action, clinical role, and side effects of NMDA receptor antagonist (Memantine). Discuss the rationale and benefits of combination therapy (cholinesterase inhibitor + memantine) in moderate to severe Alzheimer's disease.	✓	✓	✓	✓	✓	1					
13	NS2-Neu-010	Neurology/ Medicine	Parkinson's disease	Describe the etiology and risk factors of Parkinson's disease. Diagnose Parkinson's disease based on the cardinal motor and non-motor symptoms. Describe the clinical stages of the disease. Differentiate Parkinson's disease from other parkinsonian syndromes. Outline the important investigations. Describe treatment options and complications.	✓	✓	✓	✓	✓	1					
14	NS2-Ph-011	Pharmacology	Anti-Parkinson Drugs	Classify Anti-Parkinson drugs. Explain the mechanism of action, pharmacological effects, therapeutic uses, adverse effects, drug interactions, and contraindications of anti-Parkinsonian agents. Discuss the rationale, advantages, and disadvantages of combining Carbidopa with Levodopa therapy. Describe the On-Off phenomenon, its underlying mechanisms, and management strategies. Explain the etiology, clinical features, and pharmacological management of drug-induced parkinsonism. Outline the pharmacokinetics and therapeutic approaches for drug-induced and other	✓	✓	✓	✓	✓	1					
15	NS2-Neu-012	Neurology/ Medicine	Motor neuron disease	Classify motor neuron diseases. Describe the diagnostic criteria and key clinical features of motor neuron disease. Enlist relevant investigations. Explain supportive and disease-modifying treatment strategies.	✓	✓	✓	✓	✓	1					

21	NS2-Neu-018		Multiple Sclerosis	Describe multiple sclerosis with its types and clinical variants. Explain the etiology, immunopathogenesis, and risk factors associated with multiple sclerosis. Identify the characteristic clinical features. Outline the diagnostic approach. Describe the management strategies.	✓	✓	✓	✓	✓	1						
22	NS2-Ph-019	Pharmacology	Anti-migraine drugs	Describe the pharmacological classification of anti-migraine drugs. Explain the mechanism of action of triptans and ergot alkaloids in the management of migraine. Describe the pharmacokinetic properties and clinical uses of different triptans and ergot derivatives. Describe the adverse effects, contraindications, and drug interactions.	✓	✓	✓	✓	✓	1						
23	NS2-Ph-020	Pharmacology/ Anesthesia	Local Anesthetics	Classify local anesthetic agents based on their chemical structure and duration of action. Explain the mechanism of action, pharmacological effects, and clinical applications of local anesthetics. Compare amide and ester local anesthetics in terms of metabolism, stability, and allergic potential. Describe the rationale, benefits, and risks of adding vasoconstrictors to local anesthetic preparations. Identify commonly used agents for short-, intermediate-, and long-duration procedures, including minor and major peripheral nerve blocks. Discuss the adverse effects, contraindications, and	✓	✓	✓	✓	✓	1						
24	NS2-Ph-021		General Anesthetics	Classify general anesthetic agents based on their route of administration and duration of action. Describe the clinical uses, adverse effects, contraindications, and major drug interactions of commonly used general anesthetics. Discuss the principles and agents used for the reversal and recovery from anesthesia.	✓	✓	✓	✓	✓	3						
25	NS2-Neu-022	Neurology/ Medicine	Coma and unconsciousness	Define coma and unconsciousness. Describe the pathophysiology underlying loss of consciousness. Apply the Glasgow Coma Scale for assessment. Outline the diagnostic approach. Discuss the complications, prognosis, and criteria for brain death determination.	✓	✓	✓	✓	✓	1						
PRACTICAL / LAB WORK																
26	NS2-Pa-008		CSF interpretation 01	Interpret CSF reports, including cell count, protein, glucose, and microbiological findings												

27	NS2-Pa-009		Tuberculosis meningitis 01	Identify characteristic histopathological features of tuberculous meningitis.										
28	NS2-Pa-010		CNS tumors 01 Total:03	Identify the classical characteristic morphological features of meningioma and glioblastoma.										
29	NS2-Ra-001		Neuroimaging: hydrocephalus	Interpret ultrasound findings to identify features of hydrocephalus										
30	NS2-Ra-002		Neuroimaging: Stroke and CNS tumors	Interpret CT and MRI images to identify intracranial hemorrhage, cerebral infarction,										
TOTAL										31			31	
MODULE-28 PSYCHIATRY & BEHAVIORAL SCIENCE														
Sr#	CODE	SUBJECT	TOPIC	LEARNING OBJECTIVES	KNOWLEDGE Cognitive Domain			SKILL Psychomotor Domain	ATTITUDE Effective Domain	Mode of Information Transfer MIT			TOTAL HOURS	References
					C1	C2	C3	P	A	Lecture (hours)	Practical (hours)	Clinical Rotation (hours)		
1	PsyBhS1-BhS-001		Bio-psycho-social model of health	Explain the bio-psycho-social model of health and its application in patient care. Differentiate normalcy versus abnormalcy	✓	✓	✓	✓	✓	1				
2	PsyBhS1-BhS-002		Understanding Behavior	Describe sensation, perception, attention, and concentration, and explain their relevance in clinical practice. Define memory, describe its stages and types, and suggest methods to improve it. Define thinking and describe its types. Define cognition and describe its levels. Discuss problem-solving and decision-making steps, barriers, and strategies in clinical practice.	✓	✓	✓	✓	✓	2		2		

3	PsyBhS1-BhS-003	BEHAVIORAL SCIENCE	Individual differences - Personality & Intelligence	Define personality and its types. Explain developmental theories of personality. Explain defense mechanisms. Explain its significance in clinical practice. Define intelligence and describe its types. Explain the relevance of IQ and EQ in a doctor's professional and personal life. Discuss methods to enhance emotional intelligence (EQ) and intellectual intelligence (IQ).	✓	✓	✓	✓	✓	1					
4	PsyBhS1-BhS-004		Emotions & Motivation	Elaborate emotions and motivation and explain their influence on health and illness behavior. Apply basic motivational strategies to enhance patient adherence and lifestyle modification.	✓	✓	✓	✓	✓	1					
5	PsyBhS1-BhS-005		Stress management	Explain the relationship between stress, stressors, and illness. Define coping skills and describe their role in managing stress. Explain the concepts of adjustment and maladjustment in response to stress.	✓	✓	✓	✓	✓	1		2			
6	PsyBhS1-BhS-006		Life events - Psychodrama	Describe the concept of life events and their significance in daily life. Discuss conflict resolution, crisis intervention, and psychological first aid.	✓	✓	✓	✓	✓	1		2			
7	PsyBhS1-BhS-007		Doctor-Patient Relationship	Discuss the concepts of transference, counter-transference, and boundaries in the doctor-patient relationship. Describe different models of doctor-patient relationship. Identify ethical dilemmas in doctor-patient relationships (e.g., confidentiality, end-of-life care, pharmaceutical interactions). Explain the rights of doctors and patients and discuss their importance in promoting ethical and safe medical practice.	✓	✓	✓	✓	✓	1		2			
8	PsyBhS1-BhS-008		Culture and medical practice	Define attitude, values, beliefs, and myths, and explain their influence on behavior. Explain the impact of social class, stigma, and the sick role on health. Describe health belief models and treatment adherence and their relevance to patient care. Describe cultural competence.	✓	✓	✓	✓	✓	1		2			

9	PsgBhS1 -BhS-009	PSYCHIATRY	Psychological reactions	Explain the process of grief and its impact on patients and families. Explain psychological reactions to illness and hospitalization. Explain strategies to manage them effectively.	✓	✓	✓	✓	✓	1				
10	PsgBhS1 -BhS-010		Sleep and consciousness	Outline the stages of sleep and describe sleep disorders. Discuss non-pharmacological methods for sleep hygiene	✓	✓	✓	✓	✓	1	2			
11	PsgBhS1 -BhS-011		Pain	Define pain and describe its physical and psychological aspects relevant to patient care. Explain subjective factors influencing pain. Manage pain using non-pharmacological interventions.	✓	✓	✓	✓	✓	1	2			
12	PsgBhS1 -BhS-012		Child rearing practices	Define child-rearing practices and their influence on personality development. Explain the effects of child-rearing practices on health and illness.	✓	✓	✓	✓	✓	1				
13	PsgBhS1 -Psy-001	PSYCHIATRY	Introduction to Key Psychiatric Terms	Describe mood and affect. Describe and classify hallucination. Describe and classify delusion. Describe the abnormalities of speech in psychiatric disorders. Describe obsession and compulsion.	✓	✓	✓	✓	✓		2			
14	PsgBhS1 -Psy-002		Non pharmacological interventions in Psychiatry	Classify the types of non-pharmacological interventions. Describe the principles and applications of common psychotherapies. Explain the importance of social and rehabilitative approaches. Discuss the role of somatic therapies and lifestyle modifications in psychiatry.	✓	✓	✓	✓	✓		2			
15	PsgBhS1 -Psy-003		Delirium and dementia	Differentiate between delirium and dementia. Discuss causes and types of dementias. State manifestations and risk associated with dementia. Enumerate mental state examination, and mini mental state examination findings of delirium and dementias. Discuss prognostic factors of memory related disorders. Outline a treatment plan including pharmacological and non-pharmacological interventions.	✓	✓	✓	✓	✓	1	2			

16	PsyBhS1 -Psy-004			Define Generalized anxiety disorder (GAD) and describe common risk factors. Identify typical mental state examination findings of GAD. Differentiate GAD from eustress. Outline pharmacological and psychotherapeutic treatment of GAD. Identify hallmark symptoms of panic disorder based on Mental Status Examination. Differentiate panic attacks from angina, myocardial infarction, and asthma. Describe strategies for supporting patients with panic disorder. Define and classify phobias.	✓	✓	✓	✓	✓	1	2		
17	PsyBhS1 -Ph-001	PHARMACOLOGY	Anxiolytic drugs	Classify anxiolytic drugs. Explain the mechanism of action of different anxiolytic drugs. Discuss the pharmacokinetics and pharmacodynamics of anxiolytics. Identify the clinical indications of anxiolytic drugs. List the contraindications and precautions for the use of anxiolytic drugs. Describe the adverse effects and risks of dependence, tolerance, and withdrawal associated with anxiolytics.	✓	✓	✓	✓	✓	1			
			Sedative-hypnotics	Classify sedative-hypnotic drugs. Explain the mechanism of action of sedative-hypnotics. Describe the pharmacokinetics and pharmacodynamics of commonly used sedative-hypnotics. Identify the clinical indications of sedative-hypnotics. List the contraindications to the use of sedative-hypnotics in clinical practice. Identify adverse effects of sedative-hypnotics.									
18	PsyBhS1 -Psy-005	PSYCHIATRY	Depressive Disorders	Classify depressive disorders. Describe risk factors of depressive disorders. Diagnose moderate depressive disorder on the basis of mental state examination findings. Outline management plan including pharmacological options and psychotherapy.	✓	✓	✓	✓	✓	1	2		
				Describe suicide and deliberate self-harm, including associated factors. Describe management of suicide and deliberate self-harm.	✓	✓	✓	✓	✓	1	2		

19	PsyBhS1-Ph-002	PHARMACOLOGY	Anti-depressants	Classify anti-depressants. Describe their mechanism of action, pharmacological effects, uses, adverse effects, drug interactions and contraindications. Discuss rationale of choosing an antidepressant for a particular condition	✓	✓	✓	✓	✓	1	2		
20	PsyBhS1-Psy-006	PSYCHIATRY	Bipolar affective disorder	Describe Bipolar I and Bipolar II disorders according to standard diagnostic criteria. Differentiate the clinical features of mania and hypomania.	✓	✓	✓	✓	✓	1	2		
				Define and classify somatoform disorders with emphasis on conversion disorder. Identify key clinical features of conversion disorder. Describe principles of management of conversion disorder.							2		
21	PsyBhS1-Psy-009		Trauma- and Stressor-Related Disorders	Explain the characteristic mental state examination (MSE) findings in PTSD. Differentiate PTSD from acute stress disorder. Outline the management plan for PTSD. Define adjustment disorder. Identify the emotional and behavioral symptoms that occur within three months of an identifiable stressor.	✓	✓	✓	✓	✓	1	2		
22	PsyBhS1-Psy-010		Schizophrenia and Psychotic Disorders	Define schizophrenia. Describe the positive and negative symptoms of schizophrenia. Outline the differential diagnosis of schizophrenia. Explain the characteristic mental state examination (MSE) findings in schizophrenia. Outline the management plan to treat a patient of schizophrenia.	✓	✓	✓	✓	✓	1	2		
23	PsyBhS1-Ph-004	PHARMACOLOGY	Antipsychotic Drugs	Classify antipsychotic drugs. Explain the mechanism of action of typical and atypical antipsychotics. Describe the pharmacokinetics and pharmacodynamics of antipsychotic drugs. Identify the clinical indications of antipsychotic drugs. List the	✓	✓	✓	✓	✓	1			
24	PsyBhS1-Psy-011		Personality Disorders I	Define paranoid, schizoid, and schizotypal personality disorders. Describe the characteristic symptoms and behavioral patterns of each disorder. Interpret relevant findings on the mental state examination in these disorders. Differentiate Cluster A disorders from schizoaffective and delusional disorders.	✓	✓	✓	✓	✓	1	2		

25	PsyBhS1- Psy-012	PSYCHIATRY	Personality Disorders II	Define antisocial, histrionic, and narcissistic, anxious dependent, and borderline, avoidant, obsessive compulsive personality disorders. Explain the clinical features and psychopathology of each disorder. Identify mental state examination findings.								2			
26	PsyBhS1- Psy-013		Substance-Related Disorders	Classify commonly abused substances (e.g., alcohol, opioids, cannabis, stimulants, sedatives, caffeine, nicotine). Describe the clinical features and diagnostic criteria of substance-related disorders. Identify signs and symptoms of intoxication and withdrawal for common substances. Explain social, the psychological. Classify CNS stimulants. Explain the mechanism of action. Discuss the clinical indications for the therapeutic use of CNS stimulants. Identify the contraindications stimulant use, common to CNS Describe the signs and symptoms of overdose of CNS stimulants. Summarize the adverse effects.	✓	✓	✓	✓	✓		1	2			
27	PsyBhS1- Ph-005	PHARMACOLOGY	CNS Stimulants	Classify CNS stimulants. Explain the mechanism of action. Discuss the clinical indications for the therapeutic use of CNS stimulants. Identify the contraindications stimulant use, common to CNS Describe the signs and symptoms of overdose of CNS stimulants. Summarize the adverse effects.	✓	✓	✓	✓	✓		1				
28	PsyBhS1- Ph-006		Alcohol	Classify types of alcohol. Describe the mechanism of action, pharmacological effects, uses, adverse effects, drug interactions and contraindications of Ethyl Alcohol. Enlist the enzyme systems involved in ethanol and methanol metabolism. Describe treatment of methanol and ethanol poisoning with alcohol. Describe pharmacological treatment of acute alcohol intoxication, alcohol withdrawal syndrome and Wernicke Korsakoff syndrome Identify the clinical features of the disulfiram-ethanol reaction and list the	✓	✓	✓	✓	✓		1	2			
29	PsyBhS1- Psy-014	PSYCHIATRY	Psychosexual disorders	Define and classify psychosexual disorders Identify key clinical features of psychosexual disorders Describe principles of management of psychosexual disorders	✓	✓	✓	✓	✓		1	2			
30	PsyBhS1- Psy-15		Eating Disorders	Describe the characteristic clinical features of anorexia nervosa. Differentiate anorexia nervosa from hyperthyroidism and depression. Explain the typical mental state examination findings. Outline the management plan to treat a patient diagnosed with anorexia nervosa. Diagnose bulimia nervosa on the basis of signs and symptoms and mental state examination findings. Describe the binge-purge cycle. Outline management strategies, including pharmacotherapy and psychotherapy.	✓	✓	✓	✓	✓		1	2			
31	PsyBhS1- Psy-016		Neurodevelopmental Disorders	Describe the clinical signs and symptoms in children and adolescents with Attention Deficit Hyperactivity Disorder (ADHD). Analyze mental state examination (MSE) findings in individuals with ADHD. Explain the etiological factors contributing to the development of ADHD. Differentiate ADHD from normal childhood behavior. Formulate a management plan to treat individuals with ADHD. Describe the clinical presentation of Autism Spectrum Disorder (ASD) in	✓	✓	✓	✓	✓		1	2			
TOTAL											31	0	50	81	0
MODULE-29 Renal 2															

1	Re2-Pa-001	Pathology	Nephrotic Syndrome	Describe the etiological factors causing nephrotic syndrome (primary and secondary including diabetic nephropathy). Explain the pathogenesis of proteinuria, hypoalbuminemia, and edema. Describe the gross and microscopic changes in glomeruli associated with nephrotic syndrome. Diagnose nephrotic syndrome based on clinical presentation and findings.	✓	✓	✓	✓	✓	1					
2	Re2-Pa-002		Podocytopathies	Explain the etiopathogenesis and morphology of podocytopathies: • Minimal Change Disease • Focal Segmental Glomerulosclerosis (FSGS)	✓	✓	✓	✓	✓	1					
3	Re2-Pa-003		Membranous Nephropathy	Enumerate the etiological factors including idiopathic and secondary causes. Explain the pathogenesis and morphology of membranous nephropathy.											
4	Re2-Neph-004	Nephrology	Nephritic Syndrome	Enumerate the common causes of nephritic syndrome. Explain the pathophysiological mechanisms of glomerular inflammation and injury. Correlate the clinical presentation with underlying morphological changes. Analyze the laboratory findings characteristic of nephritic presentations. Outline the management strategies and potential complications.	✓	✓	✓	✓	✓	1					
5	Re2-Pa-005	Pathology	Post-Streptococcal Glomerulonephritis (PSGN)	Describe the etiology and precipitating infections leading to PSGN. Explain the immunopathogenesis involving immune complex deposition. Identify the gross and microscopic features characteristic of PSGN.	✓	✓	✓	✓	✓	1					
6	Re2-Neph-006	Nephrology/Pathology	IgA Nephropathy (Berger's Disease) and Henoch-Schönlein Purpura (IgA Vasculitis)	Describe the etiological factors and risk associations of IgA-mediated renal disease. Explain the pathogenesis focusing on IgA immune complex deposition in the mesangium and small vessels. Identify the characteristic gross and microscopic changes in renal tissue. Correlate histopathological features with clinical manifestations. Outline the relevant laboratory investigations for diagnosis, monitoring, and follow-up. Discuss the management plan.	✓	✓	✓	✓	✓	1					

7	Re2-Pa-007	Pathology	Rapidly Progressive Glomerulonephritis (RPGN)	Enumerate the etiological and immunological types of RPGN. Explain the pathogenesis of crescent formation and rapid renal failure. Describe the gross and microscopic features of each type.	✓	✓	✓	✓	✓	1							
8	Re2-Pa-008	Nephrology/Pathology	Acute tubular necrosis	Define acute tubular necrosis and differentiate it from other causes of acute kidney injury. Describe the etiological factors of ischemic and nephrotoxic ATN. Explain the pathogenesis and sequence of tubular injury and repair. Describe the gross and microscopic changes in ischemic and nephrotoxic ATN. Correlate pathological changes with clinical features and laboratory findings.	✓	✓	✓	✓	✓	1							
9	Re2-Pa-009	Nephrology	Tubulointerstitial and drug-induced nephritis	<u>Outline</u> Classify tubulointerstitial nephritis (TIN) into acute and chronic forms. Describe the etiological factors, predisposing conditions, and commonly implicated drugs causing renal injury. Explain the pathogenesis and mechanisms of tubular and interstitial injury, including drug-induced nephritis. Correlate pathological changes with clinical presentation and laboratory findings.	✓	✓	✓	✓	✓	1							
10	Re2-Pa-010	Pathology	Polycystic kidney disease	Describe the etiological and genetic factors of polycystic kidney disease. Explain the pathogenesis of cyst formation in PKD. Describe the gross and microscopic morphological features. Correlate pathological features with clinical manifestations. Enumerate the laboratory and imaging investigations used in diagnosis. Outline the principles of management and prognosis.	✓	✓	✓	✓	✓	1							
11	Re2-Neph-001		Acute Renal Failure	Describe the etiology and risk factors of Acute Renal Failure. Explain the underlying mechanism. Identify the clinical features and potential complications. Interpret the laboratory investigations. Outline the management plan. Discuss the role and limitations of diuretics in the management of Acute Renal Failure.	✓	✓	✓	✓	✓	1							

12	Re2-Neph-002	Nephrology	Chronic Renal failure (Chronic Kidney Disease)	Describe the etiology and risk factors of Chronic Renal Failure. Identify the clinical features and systemic manifestations. Interpret the laboratory investigations and diagnostic criteria. Outline management plan.	✓	✓	✓	✓	✓	1						
13	Re2-Neph-003		End-stage renal disease and Dialysis (hemodialysis and peritoneal dialysis)	Describe end-stage renal disease. Discuss the pathophysiology and progression of chronic kidney disease to ESRD. Enumerate the indications for initiating dialysis. Describe types of dialysis. Explain the purpose, and care of an arteriovenous fistula. Discuss the treatment options for ESRD. Identify the complications associated with dialysis and their management principles. Outline the principles of patient education and long-term follow-up in dialysis care.	✓	✓	✓	✓	✓	1						
14	Re2-Neph-004		Diabetic nephropathy	Describe diabetic nephropathy with its clinical significance. Identify the structural and functional renal changes. Enlist the laboratory investigations used for diagnosis and monitoring. Outline the principles of prevention, early detection, and management. Describe the complications and prognosis.	✓	✓	✓	✓	✓	1						
15	Re2-Neph-005		Hypertensive nephrosclerosis	Define hypertensive nephrosclerosis. Differentiate benign and malignant forms. Describe the structural and functional renal changes. Correlate clinical manifestations with renal function impairment. Outline investigations and management plan. Discuss the prognosis and long-term outcomes.	✓	✓	✓	✓	✓	1						
16	Re2-Neph-006		Electrolyte and Acid-Base Disorders	Describe the role of kidneys in electrolyte and acid-base balance regulation. Explain the pathophysiological mechanisms underlying hypo- and hypernatremia, and hypo- and hyperkalemia. Describe the compensatory responses in metabolic acidosis and metabolic alkalosis. Interpret clinical and laboratory findings in common electrolyte and acid-base disorders. Correlate abnormalities in serum electrolytes and arterial blood gases.	✓	✓	✓	✓	✓	1						

17	Re2-Uro-007	Urology/ Surgery	Obstructive Uropathy and Hydronephrosis	Define obstructive uropathy and hydronephrosis. Describe etiology and clinical presentation. Enlist the investigations. Outline management plan. Identify complications.	✓	✓	✓	✓	✓	1									
18	Re2-Uro-008	Urology/ Surgery/ Pediatric Surgery	Urolithiasis	Define urolithiasis and classify urinary stones by composition. Explain the pathogenesis and predisposing factors for stone formation. Describe the clinical presentation and diagnostic evaluation. Discuss the principles of medical and surgical management. Outline preventive strategies and patient education.	✓	✓	✓	✓	✓	1									
19	Re2-Neph-009	Nephrology	Acute and Chronic Pyelonephritis	Identify etiological factors and predisposing conditions of acute and chronic pyelonephritis. Explain the pathogenesis of ascending and hematogenous spread of infection. Correlate pathological features with clinical manifestations and complications. Outline relevant investigations and management plan.	✓	✓	✓	✓	✓	1									
20	Re2-Uro-010	Urology	Cystitis and Prostatitis	Classify urinary tract infections by site and severity. Explain the clinical features of acute cystitis and prostatitis. Discuss diagnostic investigations and interpretation of urine analysis. Outline management principles, antibiotic stewardship, and prevention.	✓	✓	✓	✓	✓	1									
21	Re2-Uro-011	Urology/ Nephrology	Hematuria	Define hematuria and differentiate between microscopic and macroscopic types. Enumerate common causes of hematuria. Describe the diagnostic approach and interpretation of investigations. Correlate clinical features with underlying renal or urological pathology.	✓	✓	✓	✓	✓	1									
22	Re2-Uro-012	Urology	Neurogenic Bladder	Define neurogenic bladder and describe its types based on neurological involvement. Explain the pathophysiology of bladder dysfunction in neurological diseases. Correlate clinical features with the level of neural lesion. Discuss diagnostic methods and management principles, including catheterization and rehabilitation.	✓	✓	✓	✓	✓	1									

23	Re2-Uro-013		Urinary Retention and Incontinence	Define urinary retention and urinary incontinence. Classify types of incontinence based on mechanism. Describe the etiological factors and pathophysiology of each condition. Discuss clinical features, investigations, and management approaches.	✓	✓	✓	✓	✓	1						
24	Re2-Ph-014	Pharmacology	Pharmacotherapy of Urinary Retention	Enumerate the drugs used in the management of urinary retention, including i. α -adrenergic blockers ii. 5- α reductase inhibitors iii. Muscarinic agonists iv. Cholinesterase inhibitors v. Phosphodiesterase inhibitors Explain the mechanism of action, indications, and adverse effects of each drug class in improving bladder emptying or relieving outlet obstruction.	✓	✓	✓	✓	✓	2						
25	Re2-Ph-015		Pharmacotherapy of Urinary Incontinence	Enlist the drugs used in the management of urinary incontinence. Explain the mechanism of action of antimuscarinic agents and β 3-adrenergic agonists in overactive bladder. Describe the role of duloxetine and estrogen in stress urinary incontinence. Outline the use of botulinum toxin in neurogenic detrusor overactivity. State the common adverse effects and contraindications of these drugs. Discuss the rationale for drug selection based on.	✓	✓	✓	✓	✓	1						
26	Re2-Pa-007	Pathology	Prostatic Diseases (BPH, Prostatitis, Prostate Cancer)	Explain the etiology, pathogenesis, and morphology of benign prostatic hyperplasia (BPH), prostatitis, and prostate cancer. Identify the tumor marker for prostate cancer and its use in diagnosis and monitoring.	✓	✓	✓	✓	✓	2						
27	Re2-Uro-008	Urology	Prostatitis, Prostate Cancer)	Describe the anatomy and physiology of the prostate gland. Differentiate between benign and malignant prostatic diseases. Describe clinical features of: • BPH • Prostatitis • Prostate cancer Discuss diagnostic evaluation, including PSA testing and imaging. Outline management plan.	✓	✓	✓	✓	✓	1						
28	Re2-PS-008a	Surgery [Pediatric Surgery]	Circumcision	Enlist contraindications to circumcision. Plan circumcision (methods). Discuss counselling points regarding timing of surgery and follow-up.	✓	✓	✓	✓	✓	1						

29	Re2-Pa-009	Pathology/ Nephrology	Renal Cell Carcinoma (RCC)	Classify renal tumors into benign and malignant types. Describe the etiological factors and risk associations of renal cell carcinoma. Explain the pathogenesis and molecular mechanisms involved in renal tumor development. Describe the gross and microscopic features of renal cell carcinoma. Correlate pathological features with clinical manifestations and complications. Discuss the prognostic factors influencing outcome and survival.	✓	✓	✓	✓	✓	1							
30	Re2-Pa-010		Wilms Tumor (Nephroblastoma)	Define 'Wilms' tumor and describe its epidemiological features. Explain the genetic and developmental basis of its pathogenesis. Describe the gross and microscopic morphological features of 'Wilms' tumor. Correlate the pathological findings with clinical manifestations. Discuss the prognostic factors influencing outcome and survival. Outline the basic principles of diagnosis and management.	✓	✓	✓	✓	✓	1							
31	Re2-Pa-011	Pathology	Urothelial cell carcinoma	Describe the etiology and risk factors of Urothelial cell carcinoma. Explain the pathogenesis and morphological features (gross and microscopic).	✓	✓	✓	✓	✓	1							
32	Re2-Uro-012	Urology		Describe the clinical features and common presentations of Urothelial cell carcinoma Enlist the diagnostic investigations used in the evaluation. Outline management plan and factors affecting prognosis.	✓	✓	✓	✓	✓	1							
33	Re2-Pa-013	Pathology	Testicular tumors	Classify testicular tumors. Describe etiology, pathogenesis, and morphology of germ cell and sex cord tumors of testis. Describe the lab diagnosis of testicular tumors including tumor markers.	✓	✓	✓	✓	✓	1							
34	Re2-Uro-014	Urology	Genitourinary Injuries	Describe the mechanisms and patterns of renal, ureteric, bladder, and urethral trauma. Discuss clinical presentation and diagnostic evaluation. Outline principles of initial management and surgical repair. Identify the potential complications and rehabilitation needs.	✓	✓	✓	✓	✓	1							

35	Re2-Uro-015	Urology	PUJ obstruction and vesicoureteric reflux	Describe the embryological basis and classification of congenital urinary tract anomalies including PUJ obstruction and vesicoureteric reflux. Explain the pathophysiology and potential renal complications. Identify the diagnostic modalities. Outline management plan. Counsel parents regarding prognosis, long-term renal monitoring, and preventive strategies.	✓	✓	✓	✓	✓	1							
36	Re2-PS-016	Surgery [Pediatric Surgery]	Posterior urethral valve	Define Posterior urethral valve. Describe clinical features. Outline investigations and management plan.	✓	✓	✓	✓	✓	1							
37	Re2-PS-017		Hypospadias and epispadias	Define and classify hypospadias and epispadias. Identify associated anomalies. Outline management plan.	✓	✓	✓	✓	✓	1							
38	Re2-PS-018		Undescended testis	Classify the types of Undescended testis. Identify complications. Outline management and timing of surgery and referral.	✓	✓	✓	✓	✓	1							
39	Re2-PS-019		Torsion testis	Describe testicular torsion considering it as surgical emergency. Describe its pathophysiology. Identify the clinical presentation. Outline investigations and management plan including timely referral.	✓	✓	✓	✓	✓	1							
40	Re2-Pa-020	Pathology	Urine Examination 01	Interpret urine analysis report, including protein, RBCs, casts, infection markers, and microscopic examination of urine sediment.	✓	✓	✓	✓	✓			1					
41	Re2-Pa-021		Renal Function Test 01	Interpret renal function tests, including serum creatinine, blood urea, electrolytes, and eGFR.	✓	✓	✓	✓	✓			1					
42	Re2-Pa-022		Glomerulonephritis 01	Identify the classical microscopic features of nephritic diseases (PSGN) and nephrotic diseases (minimal change, membranous, FSGS). (pictorial)	✓	✓	✓	✓	✓			1					
43	Re2-Pa-023		Cystic diseases and renal tumors 01	Identify the classical gross and microscopic features of cystic disease of kidney, renal cell carcinoma, Wilms' tumor, and urothelial neoplasm. (pictorial)	✓	✓	✓	✓	✓			1					

44	Re2-Pa-024		Testicular tumors 01	Identify the classical gross and microscopic features of seminoma, teratoma, and benign prostatic hyperplasia (BPH). (pictorial)	✓	✓	✓	✓	✓			1		
TOTAL										39	0	5	44	Rectangular
MODULE-30 Eye & Ent -2														
Sr#	CODE	SUBJECT	TOPIC	LEARNING OBJECTIVES	KNOWLEDGE Cognitive Domain			SKILL Psychomotor Domain	ATTITUDE Effective Domain	Mode of Information Transfer MIT			TOTAL HOURS	References
					C1	C2	C3			Lecture (hours)	Practical (hours)	Clinical Rotation (hours)		
1	ENT2- Nose-001	ENT/Anatomy/ Physiology	Surgical anatomy and physiology of nose and paranasal sinuses	Identify important structures in the surgical anatomy of the nose that require care during surgery. ENT2- Nose-001 Describe the surgical anatomy of the paranasal sinuses, emphasizing relations with vital structures.	✓	✓	✓	✓	✓	1			2	
				Describe mucociliary clearance and its role in sinus health and postoperative outcomes. Correlate surgical anatomy and physiology with common clinical conditions (e.g., epistaxis, sinusitis) and their surgical management.	✓	✓	✓	✓	✓	1				
2	ENT2- Nose-002		Diseases of the External Nose and Nasal Vestibule	Describe the clinical features, management, and complications of following infections: i. Boil ii. Cellulitis iii. Vestibulitis Diagnose on basis of the clinical features, outline management plan, and discuss the complications of following: i. Foreign bodies in nose ii. Mammets nose iii. Rhinolith	✓	✓	✓	✓	✓	1				
3	ENT2- Nose-003		Snoring and Sleep Apnea	Differentiate between simple snoring and obstructive sleep apnea syndrome (OSAS). Explain the underlying mechanisms and causes. Describe the clinical presentation and complications. Identify the diagnostic methods and investigations. Discuss the various treatment options.	✓	✓	✓	✓	✓	1				

4	ENT2- Nose-004	ENT	Nasal Septum Deformities	Identify the etiology of Deviated Nasal Septum (DNS) and its types. Describe clinical presentation.	✓	✓	✓	✓	✓	1					
				Enlist the surgical procedures to correct DNS. Identify complications of nasal septal surgery. Enlist the causes of Septal Perforation. Describe its clinical presentation. Enlist investigations to rule out cause of septal perforation. Outline the management plan. Enlist the causes of Septal Abscess. Identify its clinical presentation and complications. Outline the treatment of septal abscess.	✓	✓	✓	✓	✓	1					
5	ENT2- Nose-005		Rhinitis (Infective and Non-infective)	Define and classify Rhinitis. Describe clinical features of infective rhinitis with management. Describe the clinical features of following types of non-infective rhinitis and their management: i. Allergic Rhinitis ii. Vasomotor Rhinitis iii. Atrophic Rhinitis iv. Hypertrophic Rhinitis v. Rhinitis Medicamentosa	✓	✓	✓	✓	✓	1 1					
6	ENT2- Nose-006		Infections of the Paranasal Sinuses	Define Sinusitis. Describe clinical presentation, Enlist investigations & Describe the treatment of acute Sinusitis.	✓	✓	✓	✓	✓	1					
				Describe clinical presentation, Enlist investigations & Describe the treatment of chronic Sinusitis.	✓	✓	✓	✓	✓	1 1					
				Enlist the surgical procedures done in case of chronic Sinusitis. i. Cladwell Luos & Inferior Meatal Antrostomy ii. FESS	✓	✓	✓	✓	✓	1 1					
				Identify complications of Sinusitis.	✓	✓	✓	✓	✓	1					
7	ENT2- Nose-007		Nasal Polyps	Define Nasal Polyp. Describe its etiology and clinical features. Differentiate between Antro choanal and ethmoidal polyps. Outline the management plan.	✓	✓	✓	✓	✓	1					
8	ENT2- Nose-008	Epistaxis	Enlist the causes of Epistaxis. Describe its clinical features. Outline initial management and preventive strategies.	✓	✓	✓	✓	✓	1						

13

9	ENT2- Nose-009	ENT/Forensic medicine	Facial Trauma (Maxillofacial)	Identify clinical features of maxillofacial trauma. Enlist necessary investigations. Outline steps for initial management. Discuss the management of the following: i. Fracture nasal bone ii. Mandibular fracture iii. Maxillary bone fracture iv. Zygomatic fracture	✓	✓	✓	✓	✓	1			1	
				v. Orbital blowout fracture Enlist the etiology of CSF Rhinorrhoea. Describe its clinical presentation. Outline investigations and management plan. Describe the medico-legal implications of maxillofacial trauma, including proper documentation, reporting requirements, and preservation of evidence for legal purposes. (Integrate with Forensic Medicine-see Annexure-A)	✓	✓	✓	✓	✓					
10	ENT2- Nose-0010	ENT	Granulomatous Disorders of Nose & Paranasal Sinuses	Describe the clinical features and ENT manifestations of Nasal Tuberculosis. Explain the pathology, clinical presentation, and complications of leprosy involving the nose.										
				Discuss the clinical features, diagnosis, and management of invasive Aspergillosis of the paranasal sinuses. Describe the presentation, rapid progression, and surgical importance of Mucormycosis. Explain the nasal and systemic manifestations of Wegener's granulomatosis and its diagnostic approach. Describe ENT features of Systemic Lupus Erythematosus with emphasis on nasal involvement. Discuss the clinical features and	✓	✓	✓	✓	✓	1 1			2	
11	ENT2- Nose-0011	ENT/Pathology	Sino nasal neoplasm	Describe the pathology, clinical features, and surgical importance of Inverted Papilloma. Explain the clinical presentation, diagnosis, and management principles of Transitional cell carcinoma of the sinonasal region. Correlate the surgical anatomy of the sinonasal region with the spread and complications of these neoplasms.	✓	✓	✓	✓	✓	1 1			2	
12	Eye2-001		Anterior uveitis Unveiled tract Intermediate uveitis	Define uveitis and classify based on anatomical location and etiology. Describe the pathophysiology of uveitis. Identify the key clinical features of uveitis. Differentiate uveitis from other causes of red eye using history and clinical examination. Explain the principles of treatment including	✓	✓	✓	✓	✓	1 1 1		2	5	

13	Eye2-002	Ophthalmology	Pupil	Describe the normal pupillary reactions (direct light reflex, consensual light reflex, and accommodation reflex). Describe abnormal pupillary reactions (Marcus Gunn pupil/RAPD, Argyll Robertson pupil, Adie's pupil and Horner's syndrome with their underlying causes).	✓	✓	✓	✓	✓	1	2	3	Rectangular
14	Eye2-003		Lens	Classify cataract. Describe cataract secondary to systemic diseases. Explain the symptoms, signs, investigations, and management plan for congenital cataract. Diagnose acquired cataract based on symptoms, signs, pathophysiology and investigation findings. Justify selection of treatment options for acquired cataract. Enumerate the per and post-operative complications of cataract surgery Explain congenital cataract secondary to TORCH	✓	✓	✓	✓	✓	1 1 1 1 1	2	7	
15	Eye2-004	Ophthalmology	Glaucoma	Define glaucoma. Classify the different types of glaucoma. Describe the anatomy of the anterior chamber angle and aqueous humor outflow/ Drainage pathways in relation to glaucoma. Explain the etiology and pathophysiology of various types of glaucoma. (open, close, primary, secondary, congenital, acquired) Enumerate the different types of secondary glaucoma. Define glaucoma.	✓	✓	✓	✓	✓	1 1 1 1 1	4	9	
		Ophthalmology/Pharmacology		Classify anti-glaucoma medications. Explain the mechanisms of action of antiglaucoma drugs and their effect on intraocular pressure. Discuss the indications, contraindications, and adverse effects of antiglaucoma medications. Write prescription of glaucoma.(Pharmacology)									
				Define retinitis pigmentosa and describe its pathophysiology. Identify the characteristic signs and symptoms, including night blindness, peripheral field loss, and typical fundus changes (classical triad). Outline the treatment and supportive management options for patients with retinitis pigmentosa. Discuss the important counselling points in retinitis pigmentosa.	✓	✓	✓	✓	✓	1		1	
16	Eye2-005	Ophthalmology	Vitreous	Define retinal detachment and classify its types. Describe the pathophysiology and risk factors for retinal detachment. Recognize the clinical features and warning symptoms of different types of retinal detachments. Outline the diagnostic methods, including direct and indirect fundoscopy/ ophthalmoscopy and imaging including ultrasound B scan and OCT. Explain the principles of management, including medical and surgical.	✓	✓	✓	✓	✓	1	2	3	Rectangular
				Identify the signs and symptoms associated with retinopathy of prematurity. Recognize/ Explain the clinical features, grading and complications of retinopathy of prematurity. Outline the methods for diagnosis and screening protocols in retinopathy of prematurity. Describe the management options, including medical and surgical.									
17	Eye2-006		Refractive errors	Define refractive errors and describe their impact on vision. Differentiate the main types (myopia, hyperopia, astigmatism, and presbyopia). Explain the optical and anatomical basis of each refractive error. Identify key clinical features and diagnostic methods used to detect refractive errors. Outline the main management options, including spectacles, contact lenses, and refractive surgery.	✓	✓	✓	✓	✓	1 1	2	4	
TOTAL										37	16	53	

Recommended Books & Reading Resources

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

Behavioral Sciences

Handbook of Behavioral 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

Textbook 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 Orthopedics 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.

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

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 mealtimes.
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.