AVICENNA MEDICAL & DENTAL COLLEGE

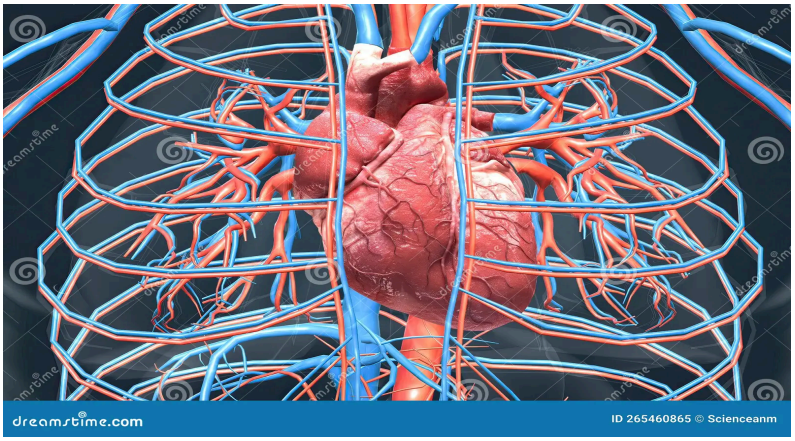
AVICENNA
DENTAL COLLEGE

STUDY GUIDE

2025

Blood & Cardiovascular System

BLOCK 3 - MODULE 7



Program: BDS
Year: 1st Professional Year
Batch No: D-24
Session: 2024-2025

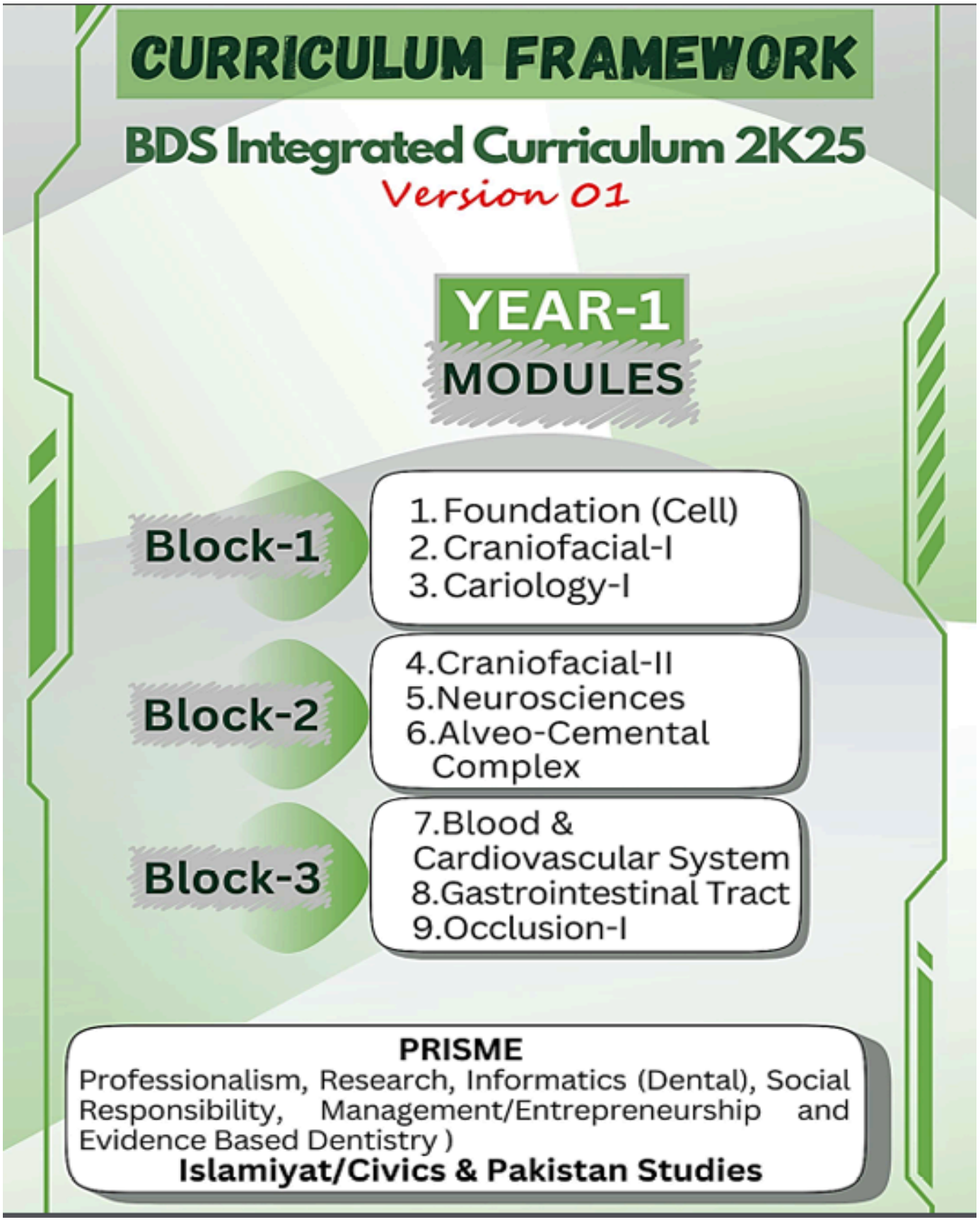
Table of Contents

List of Abbreviations

Abbreviations	Subjects
UHS	University of Health Sciences
BDS	Bachelor of Dental Surgery
PRISME	Professionalism, Research, Informatics, Social Responsibility and Accountability, Management & Entrepreneurship, Ethics Evidence Based Dentistry
WHO	World Health Organization
A	Anatomy
AI	Artificial Intelligence
B	Biochemistry
GDC	General Dental Council
Ph	Pharmacology
P	Physiology
Pa	Pathology
OB	Oral Biology
OP	Oral Pathology
CD	Community Dentistry
OD	Operative Dentistry
AMIA	American Medical Informatics Association
AMEE	Association of Medical Education in Europe
BhS	Behavioral Sciences
CNS	Central Nervous System
GIT	Gastrointestinal Tract
CVS	Cardiovascular System
TMJ	Temporomandibular Joint
CBC	Complete Blood Count
ESR	Erythrocyte Sedimentation Rate
PCR	Polymerase Chain Reaction
ED50	Median Effective Dose
LD50	Median Lethal Dose

TD50	Median Toxic Dose
AUC	Area Under Curve
MCV	Mean Corpuscular Volume
MCH	Mean Corpuscular Hemoglobin
MCHC	Mean Corpuscular Hemoglobin Concentration
Na	Sodium
K	Potassium
DNA	Deoxyribonucleic Acid
TORCH	Toxoplasmosis, Other, Rubella, Cytomegalovirus, Herpes simplex
CF	Craniofacial
CFII	Craniofacial II
Car	Cariology
DEJ	Dentin enamel Junction
HERS	Hertwig's Epithelial Root Sheath
FDI	Fédération Dentaire Internationale
GAGs	Glycosaminoglycans
EFA	Essential Fatty Acids
Hb	Hemoglobin
HbA1c	Glycated Hemoglobin
ATP	Adenosine Triphosphate
RBC	Red Blood Cell
NMJ	Neuromuscular Junction
ID50	Median Infectious Dose
RCTs	Randomized Control Trials

Curriculum Framework



Introduction to the Study Guide

Welcome to the Avicenna Dental College Study Guide!

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

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

Objectives of the Study Guide

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

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

Introduction to Module

- The Blood and Cardiovascular System (CVS) module is a vital component of the Biological Basis of Health & Disease in the dental curriculum. Blood and CVS are essential for maintaining systemic equilibrium and have direct implications for oral health, wound healing, and comprehensive patient care in dentistry.

- It is important to highlight that the structure, function, and clinical aspects of Red Blood Cells (RBCs) were thoroughly covered in the Foundation Module, while the Introduction to Inflammation was previously explored in the Alveolo-cemental Module.

- Inflammation will now be studied in detail in this module, with a focus on cellular and molecular mechanisms, clinical manifestations, and relevance to systemic and oral disease processes.

- This current module builds upon those themes by exploring the remaining components of blood—such as white blood cells, platelets, plasma proteins, immunity, hemostasis, and blood groups—as well as the anatomy and physiology of the heart and vasculature, key pathologies, and relevant pharmacological interventions.

- A unique feature of this block is the addition of upper limb anatomy, specifically tailored to support intravenous cannulation skills.

- This enhancement is aimed at building essential clinical competencies in dental students for managing medical emergencies and improving their understanding of vascular access.

- This module is designed in a fully integrated format, where Anatomy, Biochemistry, Physiology, Pathology & Microbiology, and Pharmacology come together to deliver cohesive and clinically contextual knowledge.

- Clinical Relevance to Dentistry Understanding the Blood and Cardiovascular System is indispensable in dental practice due to its widespread influence on diagnosis, treatment planning, and patient safety. Key relevance areas include:

- Hemostasis and Coagulation: Essential for managing dental extractions, periodontal surgeries, and post-operative care, especially in patients with bleeding disorders.

- Infective Endocarditis: Recognizing cardiac risk factors and implementing prophylactic strategies during invasive procedures is critical.

- Anemia and Systemic Conditions: Oral manifestations of systemic diseases, such as pallor, glossitis, or delayed healing, are frequently encountered in dental settings.

- Hypertension and Cardiovascular Diseases: Common comorbidities that affect the choice of anesthetic agents, treatment timing, and stress management.

- Drug Interactions: Familiarity with cardiovascular pharmacology aids in safely managing patients on anticoagulants, antihypertensives, or antiplatelet agents.

- Inflammatory and Immune Responses: Integral to the pathogenesis of periodontal disease, periapical infections, and oral ulcers.

- The study of anti-inflammatory diseases enhances understanding of chronic immune modulation in oral and systemic health.

- Emergency Preparedness: Knowledge of vascular anatomy, including the upper limb, underpins emergency response skills such as intravenous access, medication administration, and cardiopulmonary resuscitation (CPR).

- This module aims to build a foundation of knowledge that enables students to relate systemic pathophysiology to oral findings and make informed, safe decisions in their future dental practice.

<table>
<tr><th colspan="3">Block 1</th><th colspan="3">Block 2</th><th colspan="3">Block 3</th><th colspan="4">Spirals</th></tr>
<tr><td>Module 1</td><td>Module 2</td><td>Module 3</td><td>Module 4</td><td>Module 5</td><td>Module 6</td><td>Module 7</td><td>Module 8</td><td>Module 9</td><td>Module A</td><td>Module B</td><td>Module C</td><td>Module D</td></tr>
<tr><td>Foundation (Cell)</td><td>Craniofacial I</td><td>Cariology I</td><td>Craniofacial II</td><td>Neurosciences I</td><td>Alveocemental complex</td><td>Blood & Cardiovascular System</td><td>Gastrointestinal Tract</td><td>Occlusion I</td><td>Islamiat</td><td>Pakistan Studies</td><td>PRISME</td><td>Holy Quran</td></tr>
<tr><td>190 Hours</td><td>95 Hours</td><td>72 Hours</td><td>111 Hours</td><td>154 Hours</td><td>48 Hours</td><td>153 Hours</td><td>115 Hours</td><td>34 Hours</td><td>30 Hours</td><td>30 Hours</td><td>60 Hours</td><td>54 Hours</td></tr>
<tr><td>6 Weeks</td><td>3 Weeks</td><td>3 Weeks</td><td>4 Weeks</td><td>6 Weeks</td><td>2 Weeks</td><td>5 Weeks</td><td>4 Weeks</td><td>2 Weeks</td><td colspan="4" rowspan="3">Contact sessions held across the whole academic year</td></tr>
<tr><td colspan="3">12 Weeks</td><td colspan="3">12 Weeks</td><td colspan="3">12 Weeks</td></tr>
<tr><td colspan="9">36 Weeks</td></tr>
</table>

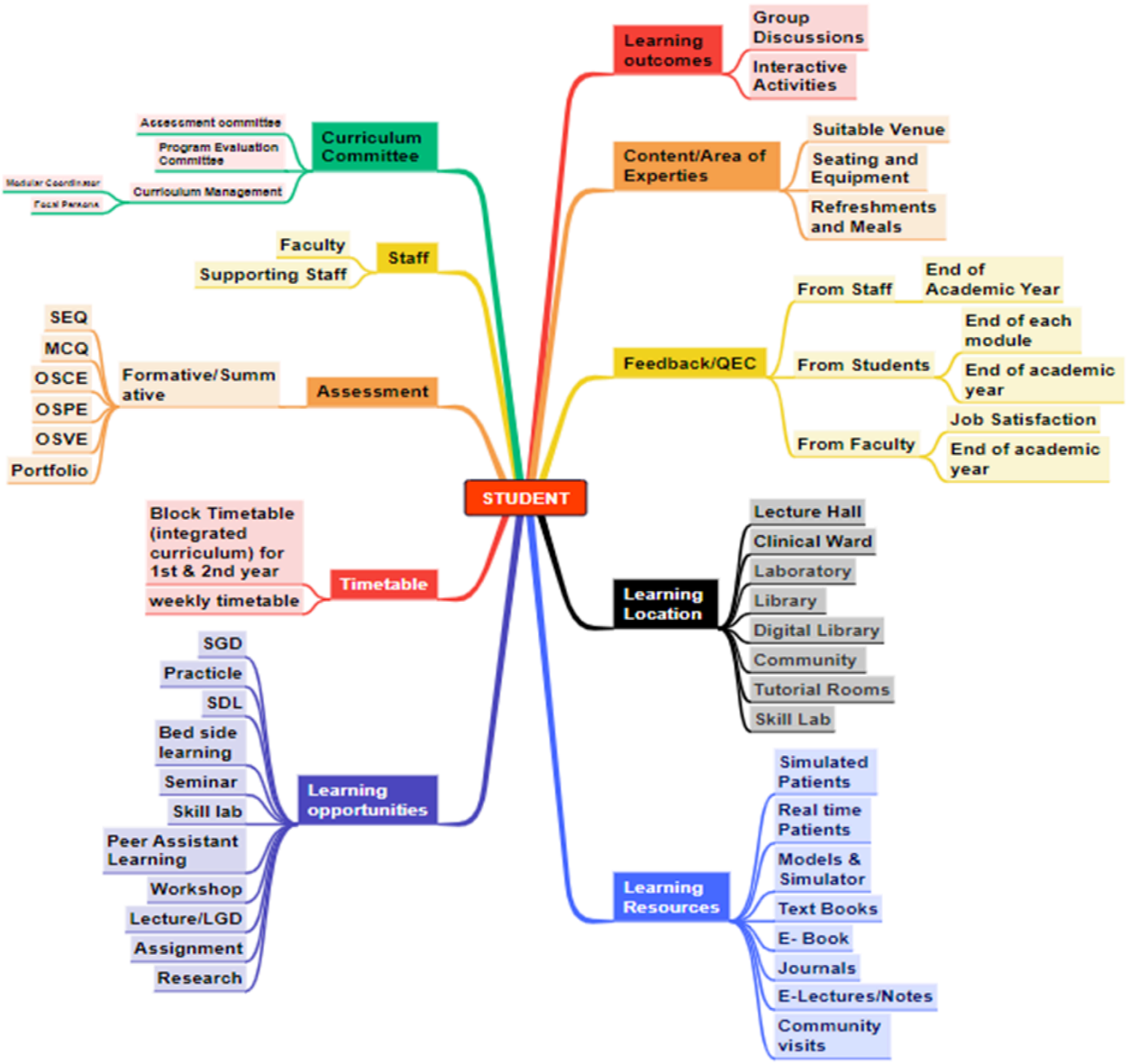
Module Committee

BLOCK 3 – MODULE 7

Module Coordinator		
Physiology - Prof. Dr. Sadia Zafar		
Module Committee Members		
1	**Anatomy**	Dr. Kanwal Khalid
2	**Biochemistry**	Dr. Sadia
3	**Physiology**	Dr. Syedda Amina Rizvi
4	**General Pathology & Microbiology**	Dr Ishrat
5	**Pharmacology**	Dr Rubina Iqbal

Curriculum Map

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



Timetable

Module 7 Timetable BDS 1st Year - D24 Week - 25 27th October 2025 to 1st November 2025								
Day & Time	**8:00 to 9:00**	**9:00 to 10:00**	**10:00 to 11:10**	**11:10 to 11:20**	**11:30 to 12:30**	**12:30 to 1:30**	**1:30 to 2:30**	**2:30 to 3:30**
Monday **27th October 2025**	**BLOCK 2 EXAM** **THEORY** **The duration of each written paper will be 190 minutes (3 hour and 10 minutes).**			**Break**	**PRISME (Dental Education)** **(Theory)** **Topic:** Oriss Code **Facilitator:** Dr Sakir **Dental Lecture Hall - 1**	**Biochemistry** **(Theory)** **Code:** CVS-B-001 **Topic:** Chemistry and classification of amino aci **Facilitator:** Prof Dr Haroon Habib **Dental Lecture Hall - 1**	**Anatomy** **(Theory)** **Code:** CVS-A-001 **Topic:** Circulatory System **Facilitator:** Dr. Kanwal **Dental Lecture Hall - 1**	**General Pathology & Microbiology** **(Theory)** **Code:** CVS-Pa-001 **Topic:** Disorders of WBCs **Facilitator:** Dr. Ujala **Dental Lecture Hall - 1**
Day & Time	**8:00 to 9:00**	**9:00 to 10:00**	**10:00 to 11:00**	**11:00 to 11:30**	**11:30 to 12:30**	**12:30 to 1:30**	**1:30 to 2:30**	**2:30 to 3:30**
Tuesday **28th October 2025**	**BLOCK 2 EXAM** **PRACTICAL** **The duration of each written paper will be 96 minutes (1 hour and 36 minutes).**		**Key Discussion**	**Break**	**Physiology** **(Theory)** **Code:** CVS-P-001 **Topic:** Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation **Facilitator:** Dr. Amina **Dental Lecture Hall - 1**	**Pharmacology** **(Theory)** **Code:** CVS-Ph-001 **Topic:** Anticoagulants **Facilitator:** Dr Rubina iqbal **Dental Lecture Hall - 1**	**Physiology** **(Practical)** **Code:** CVS-P-025 **Topic:** Blood Grouping Awareness in Clinical Dentistry **Facilitator:** Dr. Beenish **Departmental Lab**	**Physiology** **(Practical)** **Code:** CVS-P-025 **Topic:** Blood Grouping Awareness in Clinical Dentistry **Facilitator:** Dr. Omer **Departmental Lab**
Day & Time	**8:00 to 9:00**	**9:00 to 10:00**	**10:00 to 11:00**	**11:00 to 11:30**	**11:30 to 12:30**	**12:30 to 1:30**	**1:30 to 2:30**	**2:30 to 3:30**
Wednesday **29th October 2025**	**Anatomy** **(Theory)** **Code:** CVS-A-001 **Topic:** Circulatory System **Facilitator:** Dr. Kanwal **Dental Lecture Hall - 1**	**Physiology** **(Theory)** **Code:** CVS-P-002 **Topic:** Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation **Facilitator:** Dr. Nida **Dental Lecture Hall - 1**	**Pharmacology** **(Theory)** **Code:** CVS-Ph-001 **Topic:** Anticoagulants anti platelets and irons preps **Facilitator:** Dr Rubina iqbal **Dental Lecture Hall - 1**	**Break**	**Biochemistry** **(Theory)** **Code:** CVS-B-002 **Topic:** Classification of protein **Facilitator:** Dr Yusra **Dental Lecture Hall - 1**	**Physiology** **(Theory)** **Code:** CVS-P-002 **Topic:** Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation **Facilitator:** Dr. Hafsa **Dental Lecture Hall - 1**	**Anatomy** **(Practical)** **Code:** CVS-A-005 **Topic:** Microscopic Anatomy Arteries **Facilitator:** Dr. Sarwat **Departmental Lab**	**Biochemistry** **(Practical)** **Code:** CVS-B-012 **Topic:** Introduction to laboratory technique **Facilitator:** Demonstrator **Dental Lecture Hall - 1**
Thursday **30th October 2025**	**Physiology** **(Theory)** **Code:** CVS-P-002 **Topic:** Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation **Facilitator:** Dr. Amina **Dental Lecture Hall - 1**	**Biochemistry** **(Theory)** **Code:** CVS-B-002 **Topic:** Classification of protein **Facilitator:** Dr Yusra **Dental Lecture Hall - 1**	**Physiology** **(Theory)** **Code:** CVS-P-002 **Topic:** Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation **Facilitator:** Dr. Hafsa **Dental Lecture Hall - 1**	**Break**	**Pharmacology** **(Theory)** **Code:** CVS-Ph-002 **Topic:** Antihypertensive drugs-I ACE inhibitors, AT receptor antagonist, **Facilitator:** Dr Rubina iqbal **Dental Lecture Hall - 1**	**General Pathology & Microbiology** **(Theory)** **Code:** CVS-Pa-002 **Topic:** Disorders of WBCs **Facilitator:** Dr. Ujala **Dental Lecture Hall - 1**	**Physiology** **(Practical)** **Code:** CVS-P-026 **Topic:** Bleeding Time Awareness in Clinical Dentistry **Facilitator:** Dr. Waqas **Departmental Lab**	**Physiology** **(Practical)** **Code:** CVS-P-026 **Topic:** **Bleeding Time Awareness in Clinical Dentistry** **Facilitator:** **Dr. Tahir** **Departmental Lab**
Day & Time	**8:00-9:00**	**9:00-10:00**	**10:00-11:00**	**11:00-12:00**	**12:00-1:00**	**1.00-2:00**	**2:00-3:30**	
Friday **1st November 2025**	**General Pathology & Microbiology** **(Theory)** **Code: CVS-Pa-003** **Topic:** **Immunology** **Facilitator:** **Dr. Maryam Aziz** **Dental Lecture Hall - 1**	**Physiology** **(Theory)** **Code:** CVS-P-002 **Topic:** Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation **Facilitator:** Dr. Hafsa **Dental Lecture Hall - 1**	**Biochemistry** **(Practical)** **Code: CVS-B-001** **Topic:** **Chemistry and classification of amino aci** **Facilitator:** **Prof Dr Haroon Habib** **Departmental Lab**	**Anatomy** **(Theory)** **Code: CVS-A-001** **Topic:** **Circulatory System** **Facilitator:** **Dr. Kanwal** **Dental Lecture Hall - 1**	**Pharmacology** **(Theory)** **Code: CVS-Ph-003** **Topic:** **Antihypertensive drugs-II Sympatholytic drugs, Diuretics, Ca++ blockers** **Facilitator:** **Integerated with oral medicine,medicine and surgery** **Dental Lecture Hall - 1**	**Jummah Break**	**Holy Quran** **(Theory)** **Topic:** **Concept of the day of judgment** **Facilitator:** **Ms Amna** **Dental Lecture Hall - 1**	

Module 7 Timetable BDS 1st Year - D24 Week - 25 3rd November 2025 to 7th November 2025								
Day & Time	**8:00 to 9:00**	**9:00 to 10:00**	**10:00 to 11:00**	**11:00 to 11:30**	**11:30 to 12:30**	**12:30 to 1:30**	**1:30 to 2:30**	**2:30 to 3:30**
Monday **3rd November 2025**	Pharmacology (Theory) Code: CVS-Ph-004 Topic: Anti-anginal drugs Facilitator: Dr. Iqra Ijaz Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-004 Topic: Immunology Facilitator: Dr. Maryam Aziz Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-004 Topic: Resistance of the Body to Infection: II. Immunity and Allergy Facilitator: Dr. Tooba Dental Lecture Hall - 1	Break	Anatomy (Theory) Code: CVS-A 002 Topic: Phlebotomy Facilitator: Prof. Dr. Nahid Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-004 Topic: Resistance of the Body to Infection: II. Immunity and Allergy Facilitator: Dr. Hafsa Dental Lecture Hall - 1	General Pathology & Microbiology (Practical) Code: CVS-Pa-014 Topic: Disorder of WBCs Facilitator: Demonstrator Departmental Lab	Pharmacology (Practical) Code: CVS-Ph-010 Topic: Pharmacologi cal Consideration s in Dental Practice Facilitator: Dr. SABA integration with oral medicine Departmental Lab
Tuesday **4th November 2025**	Biochemistry (Theory) Code: CVS-B-003 Topic: Protein energy malnutrition (PEM Facilitator: Dr Yusra Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-005 Topic: Specific attributes of the B-lymphocytes system-humoral immunity and antibodies Facilitator: Dr. Amina Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-005 Topic: Hypersensitivity reactions Facilitator: Dr. Maryam Aziz Dental Lecture Hall - 1	Break	Physiology (Theory) Code: CVS-P-005 Topic: Specific attributes of the B-lymphocytes system-humoral immunity and antibodies Facilitator: Dr. Amina Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-005 Topic: Drug treatment for heart failure Facilitator: Dr Rubina Iqbal Dental Lecture Hall - 1	Physiology (Practical) Code: CVS-P-027 Topic: Clotting Time Awareness in Clinical Dentistry Facilitator: Dr. Shaista Departmental Lab	Physiology (Practical) Code: CVS-P-027 Topic: Clotting Time Awareness in Clinical Dentistry Facilitator: Dr. Fahad Departmental Lab
Wednesday **5th November 2025**	Anatomy (Theory) Code: CVS-A-001 Topic: Circulatory system Facilitator: Dr. Kanwal Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-005 Topic: Specific attributes of the B-lymphocytes system-humoral immunity and antibodies Facilitator: Dr. Hafsa Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-005 Topic: Drug treatment for heart failure Facilitator: Dr Rubina Iqbal Dental Lecture Hall - 1	Break	Biochemistry (Theory) Code: CVS-B-004 Topic: Conjugated proteins Facilitator: Dr Yusra Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-006 Topic: Blood Types; Transfusion Facilitator: Dr. Nida Dental Lecture Hall - 1	Anatomy (Practical) Code: CVS-A-002 Topic: Phlebotomy Facilitator: Dr. Sarwat Departmental Lab	Biochemistry (Practical) Code: CVS-B-012 Topic: Introduction to laboratory technique Facilitator: Demonstrator Departmental Lab
Thursday **6th November 2025**	Physiology (Theory) Code: CVS-P-006 Topic: Blood Types; Transfusion Facilitator: Dr. Tooba Dental Lecture Hall - 1	Biochemistry (Theory) Code: CVS-B-004 Topic: Conjugated proteins Facilitator: Dr Yusra Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-007 Topic: Hemostasis and Blood Coagulation Facilitator: Prof. Dr. Sadia Dental Lecture Hall - 1	Break	Pharmacology (Theory) Code: CVS-Ph-005 Topic: Drug treatment for heart failure Facilitator: Integrated with oral medicine surgery Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-006 Topic: Blood grouping & complications of blood transfusion Facilitator: Dr. Nabila Dental Lecture Hall - 1	Physiology (Practical) Code: CVS-P-028 Topic: ECG Waveform Recognition Facilitator: Integration with cardiology. Dr. Mubeen Departmental Lab	Physiology (Practical) Code: CVS-P-029 Topic: ECG-Based Heart Rate Calculation Facilitator: Integration with cardiology. Dr. Mubeen Departmental Lab
Day & Time	**8:00-9:00**	**9:00-10:00**	**10:00-11:00**	**11:00-12:00**	**12:00-1:00**	**1.00-2:00**	**2:00-3:30**	
Friday **7th November 2025**	General Pathology & Microbiology (Theory) Code: CVS-Pa-007 Topic: Hemodynamic disorders Facilitator: Dr. Ujala Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-007 Topic: Hemostasis and Blood Coagulation Facilitator: Dr. Amina Dental Lecture Hall - 1	Anatomy (Theory) Code: CVS-A-001 Topic: Circulatory system Facilitator: Dr. Kanwal Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-007 Topic: Hemostasis and Blood Coagulation Facilitator: Dr. Tooba Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-004 Topic: Anti-anginal drugs Facilitator: Dr sidra Dental Lecture Hall - 1	Jummah Break	Holy Quran (Theory) Topic: Concept of Meezan Facilitator: Ms. Amna Dental Lecture Hall - 1	

Module 7 Timetable

BDS 1st Year - D24

Week - 27
10th November 2025 to 14th November 2025

Day & Time	8:00 to 9:00	9:00 to 10:00	10:00 to 11:00	11:00 to 11:30	11:30 to 12:30	12:30 to 1:30	1:30 to 2:30	2:30 to 3:30
Monday 10th November 2025	Pharmacology (Theory) Code: CVS-Ph-007 Topic: Anti Arrhythmic Drugs Facilitator: Dr RUBINA IQBAL Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-007 Topic: Hemodynamic disorders Facilitator: Dr. Ujala Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-007 Topic: Hemostasis and Blood Coagulation Facilitator: Dr. Tooba Dental Lecture Hall - 1	Break	Anatomy (Theory) Code: CVS-A-003 Topic: Phlebotomy Facilitator: Prof. Dr. Nahid Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-007 Topic: Hemostasis and Blood Coagulation Facilitator: Dr. Hafsa Dental Lecture Hall - 1	General Pathology & Microbiology (Practical) Code: CVS-Pa-015 Topic: Immunology Facilitator: Demonstrator Departmental Lab	Pharmacology (Practical) Code: CVS-Ph-010 Topic: Pharmacological Considerations in Dental Practice Facilitator: Dr Fatma Departmental Lab
Tuesday 11th November 2025	Biochemistry (Theory) Code: CVS-B-005,006 Topic: Structural organization of protein,Protein misfoldin Facilitator: Prof Dr Haroon Habib Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-007 Topic: Hemostasis and Blood Coagulation Facilitator: Prof. Dr. Sadia Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-007 Topic: Hemodynamic disorders Facilitator: Dr. Ujala Dental Lecture Hall - 1	Break	Physiology (Theory) Code: CVS-P-008 Topic: Conditions that cause excessive bleeding in humans Facilitator: Dr. Hafsa Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-007 Topic: Anti Arrhythmic drugs Facilitator: Dr RUBINA IQBAL Dental Lecture Hall - 1	Physiology (Practical) Code: CVS-P-030 Topic: Cradiac Examination Basics Facilitator: Dr. Nida Departmental Lab	Physiology (Practical) Code: CVS-P-031 Topic: Cardiac Auscultation Basics Facilitator: Dr. Omer Departmental Lab
Wednesday 12th November 2025	Anatomy (Theory) Code: CVS-A 001 Topic: Circulatory System Facilitator: Dr. Kanwal Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-009 Topic: Cardiac Muscle; The Heart as a Pump and Function of the Heart Valves Facilitator: Dr. Tooba Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-007 Topic: Anti Arrhythmic drugs Facilitator: Integration with oral medicine and maxillofacial Dental Lecture Hall - 1	Break	Biochemistry (Theory) Code: CVS-B-007,008 Topic: Protein Structure and Denaturation, Plasma proteins Facilitator: Prof Dr Sadia Amir Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-009 Topic: Cardiac Muscle; The Heart as a Pump and Function of the Heart Valves Facilitator: Integrated with Anatomy. Prof. Dr. Naheed Dental Lecture Hall - 1	Anatomy (Practical) Code: CVS-A 006 Topic: Microscopic Anatomy Veins Facilitator: Dr. Serwat Departmental Lab	Biochemistry (Practical) Code: CVS-B-012 Topic: Introduction to laboratory technique Facilitator: Demonstrator Departmental Lab
Thursday 13rd November 2025	Physiology (Theory) Code: CVS-P-010 Topic: Rhythmical Excitation of the Heart Facilitator: Dr. Nida Dental Lecture Hall - 1	Biochemistry (Theory) Code: CVS-B-007,008 Topic: Protein Structure and Denaturation, Plasma proteins Facilitator: Prof Dr Sadia Amir Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-010 Topic: Rhythmical Excitation of the Heart Facilitator: Dr. Tooba Dental Lecture Hall - 1	Break	Pharmacology (Theory) Code: CVS-Ph-007 Topic: Anti Arrhythmic drugs Facilitator: Integration with oral medicine and maxillofacial Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-008 Topic: Hemodynamic disorders Facilitator: Dr. Ujala Dental Lecture Hall - 1	Physiology (Practical) Code: CVS-P-032 Topic: Blood Pressure Measurement techniques Facilitator: Dr. Beenish Departmental Lab	Physiology (Practical) Code: CVS-P-032 Topic: Blood Pressure Measurement techniques Facilitator: Dr. Waqas Departmental Lab

Day & Time	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	12:00-1:00	1.00-2:00	2:00-3:30
Friday 14th November 2025	General Pathology & Microbiology (Theory) Code: CVS-Pa-008 Topic: Hemodynamic disorders Facilitator: Dr. Ujala Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-011 Topic: Cardiac Muscle; The heart as a Pump and Function of the Heart Valves Facilitator: Prof. Dr. Shahina Dental Lecture Hall - 1	Anatomy (Theory) Code: CVS-A 001 Topic: Circulatory System Facilitator: Dr. Kanwal Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-011 Topic: Cardiac Muscle; The heart as a Pump and Function of the Heart Valves Facilitator: Dr. Amina Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-007 Topic: Anti Arrhythmic drugs Facilitator: Dr Sidra Dental Lecture Hall - 1	Jummah Break	Holy Quran (Theory) Topic: Divine Revelations Facilitator: Ms. AMNA Dental Lecture Hall - 1

Module 7 Timetable

BDS 1st Year - D24

Week - 28
17th November 2025 to 21st November 2025

Day & Time	8:00 to 9:00	9:00 to 10:00	10:00 to 11:00	11:00 to 11:30	11:30 to 12:30	12:30 to 1:30	1:30 to 2:30	2:30 to 3:30
Monday 17th November 2025	Pharmacology (Theory) Code: CVS-Ph-008 Topic: Antifibrinolytics Facilitator: Dr. IQRA IJAZ Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-008 Topic: Hemodynamic bleeding disorders Facilitator: Dr. Ujala Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-011 Topic: Cardiac Muscle; The heart as a Pump and Function of the Heart Valves Facilitator: Dr. Nida Dental Lecture Hall - 1	Break	Anatomy (Theory) Code: CVS-A-004 Topic: Phlebotomy Facilitator: Prof. Dr. Nahid Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-011 Topic: Cardiac Muscle; The heart as a Pump and Function of the Heart Valves Facilitator: Dr. Hafsa Dental Lecture Hall - 1	General Pathology & Microbiology (Practical) Code: CVS-Pa-016 Topic: Blood grouping & transfusion complications Facilitator: Demonstrator Departmental Lab	Pharmacology (Practical) Code: CVS-Ph-010 Topic: Pharmacologi cal Considerations in Dental Practice integration with Oral Medicine / Medical Emergencies Facilitator: Dr Sara Departmental Lab
Tuesday 18th November 2025	Biochemistry (Theory) Code: CVS-B-010 Topic: Lipid Metabolism Facilitator: Prof Dr Haroon Habib Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-012 Topic: Cardiac Muscle; The heart as a Pump and Function of the Heart Valves Facilitator: Dr. Amina Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-009 Topic: Hemodynamic bleeding disorders Facilitator: Dr. Nabila Dental Lecture Hall - 1	Break	Physiology (Theory) Code: CVS-P-013 Topic: Cardiac Arrhythmias Facilitator: Integrated with cardiology. Prof Naresh/ Dr. Mubeen Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-008 Topic: Antifibrinolytics Facilitator: INTEGERATED WITHOral & maxillofacial surgery Dental Lecture Hall - 1	Physiology (Practical) Code: CVS-P-033 Topic: Postural Influence on Blood Pressure Facilitator: Dr. Shaista Departmental Lab	Physiology (Practical) Code: CVS-P-033 Topic: Postural Influence on Blood Pressure Facilitator: Dr. Tahir Departmental Lab
Wednesday 19th November 2025	Anatomy (Theory) Code: CVS-A-001 Topic: Circulatory system Facilitator: Dr. Kanwal Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-014 Topic: Overview of the Circulation. Nervous Regulation of the Circulation Facilitator: Dr. Tooba Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-008 Topic: Antifibrinolytics Facilitator: Dr. IQRA IJAZ Dental Lecture Hall - 1	Break	General Pathology & Microbiology (Theory) Code: CVS-Pa-010 Topic: Microbiology of blood relevance & implications in dentistry Facilitator: Dr. Nabila Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-014 Topic: Overview of the Circulation. Nervous Regulation of the Circulation Facilitator: Integrated with cardiology. Prof Naresh/ Dr. Mubeen Dental Lecture Hall - 1	Anatomy (Practical) Code: CVS-A-003 Topic: Phlebotomy Facilitator: Dr. Sarwat Departmental Lab	Biochemistry (Practical) Code: CVS-B-012 Topic: Introduction to laboratory technique Facilitator: Demonstrator Departmental Lab
Thursday 20th November 2025	Physiology (Theory) Code: CVS-P-015 Topic: The Microcirculation and Lymphatic System: Capillary Fluid Exchange, Interstitial Fluid, and Lymph Flow Facilitator: Prof. Dr. Shahina Dental Lecture Hall - 1	Biochemistry (Theory) Code: CVS-B-010 Topic: Lipid Metabolism Facilitator: Prof Dr Haroon Habib Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-016 Topic: Local and Humoral Control of Tissue Blood Flow Facilitator: Prof. Dr. Sadia Dental Lecture Hall - 1	Break	Pharmacology (Theory) Code: CVS-Ph-009 Topic: Analgesics Facilitator: Dr. Rubina iqbal Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-011 Topic: Microbiology of blood relevance & implications in dentistry Facilitator: Dr. Hira Dental Lecture Hall - 1	Physiology (Practical) Code: CVS-P-034 Topic: Pulse Examination Awareness Facilitator: Dr. Fahad Departmental Lab	Physiology (Practical) Code: CVS-P-034 Topic: Pulse Examination Awareness Facilitator: Dr. Nida Departmental Lab

Day & Time	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	12:00-1:00	1.00-2:00	2:00-3:30
Friday 21st November 2025	Pharmacology (Theory) Code: CVS-Ph-008 Topic: Antifibrinolytics Facilitator: INTEGERATED WITHOral & maxillofacial surgery Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-016 Topic: Local and Humoral Control of Tissue Blood Flow Facilitator: Dr. Amina Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-011 Topic: Microbiology of blood Facilitator: Dr Hira Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-017 Topic: Clinical methods for measuring systolic and diastolic pressures. Primary (essential) Hypertension Facilitator: Dr. Hafsa Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-008 Topic: Antifibrinolytics Facilitator: INTEGERATED WITHOral & maxillofacial surgery Dental Lecture Hall - 1	Jummah Break	Holy Quran (Theory) Topic: Divine Revelation Facilitator: Ms Amna Dental Lecture Hall - 1

Module 7 Timetable BDS 1st Year - D24 Week - 29 24th November 2025 to 28th November 2025								
Day & Time	**8:00 to 9:00**	**9:00 to 10:00**	**10:00 to 11:00**	**11:00 to 11:30**	**11:30 to 12:30**	**12:30 to 1:30**	**1:30 to 2:30**	**2:30 to 3:30**
Monday **24th November 2025**	Pharmacology (Theory) Code: CVS-Ph-009 Topic: Analgesics Facilitator: Dr. Rubina Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-011 Topic: Microbiology of blood relevance & implications in dentistry Facilitator: Dr. Hira Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-018 Topic: Cardiac output, venous return, and their regulation Facilitator: Prof. Dr. Sadia Dental Lecture Hall - 1	Break	Anatomy (Theory) Code: CVS-A-004 Topic: Phlebotomy Facilitator: Prof. Dr. Nahid Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-019 Topic: Nervous regulation of the circulation and rapid control of arterial pressure Facilitator: Dr. Amina Dental Lecture Hall - 1	General Pathology & Microbiology (Practical) Code: CVS-Pa-017 Topic: Hemodynamics Facilitator: Demonstrator Departmental Lab	Pharmacology (Practical) Code: CVS-Ph-011 Topic: Drug Interactions and Procedural Modifications, intergatred with Oral Medicine / Medical Emergencies Facilitator: Dr. Sidra,Integrated department Departmental Lab
Tuesday **25th November 2025**	Biochemistry (Theory) Code: CVS-B-009 Topic: Immunoglobu lin Classes and Their Function Facilitator: Dr Yusra Leghari Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-019 Topic: Nervous regulation of the circulation and rapid control of arterial pressure Facilitator: Prof. Dr. Shahina Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-011 Topic: Microbiology of blood relevance & implications in dentistry Facilitator: Dr. Hira Dental Lecture Hall - 1	Break	Physiology (Theory) Code: CVS-P-020 Topic: Role of the kidneys in long-term control of arterial pressure Facilitator: Dr. Nida Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-009 Topic: Analgesics Facilitator: Oral medicine Oral & maxillofacial surgeryintegenated Dental Lecture Hall - 1	Physiology (Practical) Code: CVS-P-035 Topic: Basic Life Support (BLS) Introduction Facilitator: Dr. Beenish Departmental Lab	Physiology (Practical) Code: CVS-P-035 Topic: Basic Life Support (BLS) Introduction Facilitator: Integrated with Cardiology. Prof Naresh/ Dr. Mubeen Departmental Lab
Wednesday **26th November 2025**	Anatomy (Theory) Code: CVS-A-001 Topic: Circulatory System Facilitator: Dr. Kanwal Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-021 Topic: Circulatory shock and its treatment Facilitator: Dr. Tooba Dental Lecture Hall - 1	Pharmacology (Theory) Code: CVS-Ph-009 Topic: Analgesics Facilitator: integarated withOral medicine Oral & maxillofacial surgery Dental Lecture Hall - 1	Break	General Pathology & Microbiology (Theory) Code: CVS-Pa-012 Topic: Hemodynamics Facilitator: Dr. Ujala Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-021 Topic: Circulatory shock and its treatment Facilitator: Dr. Hafsa Dental Lecture Hall - 1	Pharmacology (Practical) Code: CVS-Ph-011 Topic: Drug Interactions and Procedural Modifications, intergatredOral Medicine / Medical Emergencies Facilitator: Integrated department Departmental Lab	Biochemistry (Practical) Code: CVS-B-012 Topic: Introduction to laboratory technique Facilitator: Demonstrator Departmental Lab
Thursday **27th November 2025**	Physiology (Theory) Code: CVS-P-021 Topic: Circulatory shock and its treatment Facilitator: Dr. Hafsa Dental Lecture Hall - 1	Biochemistry (Theory) Code: CVS-B-011 Topic: Eicosanoids Facilitator: Dr Sadia Khalil Dental Lecture Hall - 1	Physiology (Theory) Code: CVS-P-023 Topic: The Coronary Circulation and Ischemic Heart Disease Facilitator: Integrated with Cardiology. Prof Naresh/ Dr. Mubeen Dental Lecture Hall - 1	Break	Pharmacology (Theory) Code: CVS-Ph-009 Topic: Analgesics Facilitator: Dr fatma Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: CVS-Pa-013 Topic: Microbiology Facilitator: Dr. Hira Dental Lecture Hall - 1	Physiology (Practical) Code: CVS-P-025 to CVS-P-030 Topic: Blood & CVS Facilitator: Dr. Omer Departmental Lab	Physiology (Practical) Code: CVS-P-031 o CVS-P-035 Topic: Blood & CVS Facilitator: Dr. Waqas Departmental Lab
Day & Time	**8:00-9:00**	**9:00-10:00**	**10:00-11:00**	**11:00-12:00**	**12:00-1:00**	**1.00-2:00**	**2:00-3:30**	
Friday **28th November 2025**	**Assessment Slot**	**Assessment Slot**	**Assessment Slot**	**Assessment Slot**	Physiology (Theory) Code: CVS-P-024 Topic: Heart Valves and heart Sounds Facilitator: Dr. Amina Dental Lecture Hall - 1	Jummah Break	Holy Quran (Theory) Topic: Identification of Holy Quran Facilitator: Ms Amna Dental Lecture Hall - 1	
	Module Exam 9							

Allocation of Hours

1st Year BDS - D24

Block 3 - Module 7

Sr.	Subjects	Theory Hours	Practical Hours	Total Hours
1	Anatomy	13	4	17
2	Biochemistry	13	6	19
3	Physiology	46	18	64
4	General Pathology & Microbiology	20	4	24
5	Pharmacology	24	5	29
TOTAL		116	37	153

Modular Outcomes

Module Name	Modular Outcomes
Block 3 Module 7 Blood & Cardiovascular System	• Blood and Immune System: Describe the composition and functions of blood, including plasma, red and white blood cells, and platelets. • Explain the process of hematopoiesis and the regulation of blood cell production. • Interpret normal and abnormal complete blood count (CBC) and relate findings to clinical conditions. • Discuss the role and types of white blood cells in innate and adaptive immunity. • Explain the physiological mechanisms of hemostasis, coagulation, fibrinolysis, and the role of antifibrinolytic agents in controlling bleeding. • Identify common bleeding and clotting disorders and describe their relevance to dental procedures. Classify blood groups and explain their importance in transfusion medicine and emergency care. • Describe the cellular and molecular basis of inflammation and distinguish between acute and chronic inflammation. Discuss the systemic and oral manifestations of inflammatory and anti-inflammatory diseases. • Correlate laboratory markers of inflammation (e.g., CRP, ESR) with underlying pathology in dental practice. • Identify key pharmacological agents related to the blood and immune systems, including: Antiplatelet and anticoagulant drugs (e.g., aspirin, heparin, warfarin, DOACs) Antifibrinolytics (e.g., tranexamic acid), especially in managing bleeding risks during dental procedures Immunosuppressive agents used in inflammatory and autoimmune conditions Corticosteroids and NSAIDs: their mechanisms, uses, and considerations in dental care Therapies for anemia (e.g., iron, folate, vitamin B12, erythropoietin) Discuss drug-related complications and interactions that may affect dental treatment, particularly in patients receiving systemic therapies affecting hemostasis and immunity. • Describe the gross, microscopic, and functional physiological anatomy of the heart, blood vessels, and lymphatics, with a focus on their relevance to oral tissues. • Explain the physiology of the cardiac cycle, including electrical conduction, heart sounds, and mechanical events. Understand blood pressure regulation and homeostasis, and identify normal and abnormal values. • Discuss the pathophysiology of common cardiovascular diseases, including hypertension, atherosclerosis, and heart failure.

	● Describe dental management considerations for patients with cardiovascular conditions, including antibiotic prophylaxis and emergency response. ● Identify and explain the pharmacological agents used in cardiovascular medicine, including: Antihypertensives (e.g., beta-blockers, ACE inhibitors, calcium channel blockers, diuretics) Antianginal and antiarrhythmic drugs Lipid-lowering agents (e.g., statins) Emergency cardiovascular drugs (e.g., adrenaline, glyceryl trinitrate) Evaluate the dental implications of cardiovascular medications, including side effects such as xerostomia, gingival hyperplasia, and increased bleeding risk. ● Recognize oral manifestations of cardiovascular diseases and correlate them with systemic conditions. ● Demonstrate anatomical knowledge of the upper limb venous system to support the development of intravenous cannulation skills. ● Apply integrated understanding of CVS in interpreting ECG basics, measuring blood pressure, and assessing cardiovascular risks in dental patients. ● Reflect on the significance of cardiovascular health in maintaining oral health and ensuring safe, patient-centered dental care.

Learning Objectives

Session	Section/ class code	Week No	subject	TOTAL HOURS in a week	No of lectures subject wise	Mode of Teaching	Topic	Code	Learning Objective	Hours Duration	Reference	Facilitator
2024-2025		25	Anatomy	1	1	Theory (Lecture)	Circulatory System	CVS-A 001	Classify and exemplify various types of blood vessels	1	General Anatomy By Laiq Hussain Siddiqui 5th Edition	Dr. Kanwal
2024-2025		25	Anatomy	1	2	Theory (Lecture)	Circulatory System	CVS-A 001	Classify and exemplify various types of blood vessels (microscopic structure)	1	Medical Histology By Laiq Hussain Siddiqu	Dr. Kanwal
2024-2025		25	Anatomy	1	1	Practical	Microscopic Anatomy Arteries	CVS-A 005	Identify under light microscope/ draw and label arteries	1	Medical Histology By Laiq Hussain Siddiqu	Dr. Sarwat
2024-2025		25	Physiology	1	1	Theory Lecture	Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation	CVS-P-001	Enumerate the types of white blood cells along with their normal blood count; Discuss their sites of genesis	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina

2024-2025		25	Physiology	1	2	Theory Lecture	Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation	CVS-P-002	Describe the characteristics and functions of Neutrophils. Explain the process of phagocytosis and lysis of invading agent by neutrophils	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Nida
2024-2025		25	Physiology	1	3	Theory Lecture	Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation	CVS-P-002	Explain the process of phagocytosis and lysis of invading agent by macrophages	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa
2024-2025		25	Physiology	1	4	Theory Lecture	Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation	CVS-P-002	Explain the process of Opsonization	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina
2024-2025		25	Physiology	1	5	Theory Lecture	Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and	CVS-P-002	Describe the process of Inflammation, Enlist different lines of defense during	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa

							Inflammation		Inflammation			
2024-2025		25	Physiology	1	1	Practical	Blood Grouping Awareness in Clinical Dentistry	CVS-P-025	Observe the demonstration of blood grouping procedure	1	Zafar Manual of Physiology Vol 1	Dr. Beenish
2024-2025		25	Physiology	1	2	Practical	Blood Grouping Awareness in Clinical Dentistry	CVS-P-025	Explain the clinical relevance of blood grouping in dental practice, including its role in managing medical emergencies	1	Zafar Manual of Physiology Vol 1	Dr. Omer
2024-2025		25	Physiology	1	3	Practical	Bleeding Time Awareness in Clinical Dentistry	CVS-P-026	Observe the demonstration of bleeding time measurement	1	Zafar Manual of Physiology Vol 1	Dr. Waqas
2024-2025		25	Physiology	1	4	Practical	Bleeding Time Awareness in Clinical Dentistry	CVS-P-026	Explain the importance of bleeding time in assessing bleeding risk in dental procedures	1	Zafar Manual of Physiology Vol 1	Dr. Tahir

2024-2025		25	Pharmacology	1	1	Theory Lecture	Anticoagulants	CVS-Ph 001	Classify anti-clotting drugs Compare their usefulness in venous and arterial thrombosis Describe the mechanisms of action, clinical uses and adverse effects of anticoagulants Compare Unfractionated heparin, LMW heparins and oral anticoagulants Compare and contrast the mechanism of action, clinical uses, and toxicities of the oral anticoagulants (warfarin, rivaroxaban, and dabigatran). Explain the pharmacokinetic and pharmacodynamic drug interactions	1	Lippincotts review Pharmacolgy 8th edition	Dr rubina iqbal

									of Warfarin			
2024-2025		25	Pharmacology	1	2	Theory Lecture	Anticoagulants anti plateltes and irons preps	CVS-Ph 001	Describe the mechanisms of action, clinical uses and adverse effects of antiplatelet drugs Illustrate where the 4 major classes of antiplatelet drugs act Differentiate between Clopidogrel and Ticlopidine Discuss the mechanism of action, clinical uses, adverse effects and contraindications of Thrombolytics Tabulate differences between Streptokinase & recombinant tissue plasminogen activators. Classify and give clinical uses of	1	Lippincotts review Pharmacolgy 8th edition	Dr rubina iqbal

									various iron preparations along with their adverse effects.			
2024-2025		25	Pharmacology	1	3	Theory Lecture	Antihypertensive drugs-I ACE inhibitors, AT receptor antagonist, Direct acting vasodilators	CVS-Ph 002	Classify vasodilators on the basis of site, route and mechanism of action. Describe the pharmacokinetic properties and side effects of vasodilators.	1	Lippincotts review Pharmacolgy 8th edition	Dr rubina iqbal
2024-2025		25	Pharmacology	1	4	Theory Lecture	Anti hypertensive drugs-II Sympatholytic drugs, Diuretics, Ca++ blockers	CVS-Ph 003	Classify antihypertensives according to site and mechanism of action. Describe the role of sympatholytic drugs in hypertension.	1	Lippincotts review Pharmacolgy 8th edition	integerated with oral medicine,medicine and surgery
2024-2025		25	Biochemistry	1	1	Theory Lecture	Chemistry and classification of amino aci	CVS-B-001	Define Zwitter ion and isoelectric pH	1	Lippincott 8th edition Page 6-9	Prof Dr Haroon Habib

2024-2025		25	Biochemistry	1	2	Theory Lecture	Classification of protein	CVS-B-002	Define limiting amino acids and provide suitable examples of limiting amino acids	1	Lippincott 8th edition , Lecture notes	Dr Yusra
2024-2025		25	Biochemistry	1	1	Practical	Introduction to laboratory technique	CVS-B-012	Understand the principle, procedure and uses of electrophoresis (demonstration only)	1	Practical Manual	Demonstrator
2024-2025		25	General Pathology & Microbiology	1	1	Theory (Lecture)	Disorders of WBCs	CVS-Pa-001	Define WBC disorder & recognise the cause of leukocytosis	1	Robins 11th Edition	Dr. Ujala
2024-2025		25	General Pathology & Microbiology	1	2	Theory (Lecture)	Disorders of WBCs	CVS-Pa-002	Differentiation between reactive & neoplastic WBC. Explain the pathophysiology of leukaemia	1	Robins 11th Edition	Dr. Ujala
2024-2025		25	PRISME (Dental Education)	1	3	Lecture	Dress Code			1		Dr Salar

2024-2025		26	General Pathology & Microbiology	1	1	Theory (Lecture)	Immunology	CVS-Pa-003	Define clinical aspects of innate & acquired immunity	1	Levinson 19th edition	Dr. Maryam Aziz
2024-2025		25	Physiology	1	1	Theory* (Module 7)	Resistance of the Body to Infection: 1.Leukocytes, Granulocytes, the Monocyte-Macrophage System, and Inflammation	CVS-P-003	Explain the process of Migration of neutrophils from the blood into inflamed tissue. Explain the functions of eosinophils and basophils. Give normal lifespan of white blood cells.	1	Guyton and Hall Textbook of Physiology 14th Edition	Prof. Dr. Shahina
2024-2025		25	Biochemistry	1	1	Theory* (Lecture)	Chemistry And classification of amino aci	CVS-B-001	Define Zwitter ion and isoelectric pH	1	Lippincott 8th edition Page 6-9	Prof Dr Haroon Habib
2024-2025		25	Anatomy	1	1	Theory* (Module 7)	Circulatory System	CVS-A 001	Classify and exemplify various types of blood vessels (microscopic structure)	1	Medical Histology By Laiq Hussain Siddiqu	Dr. Kanwal
2024-2025		25	Holy Quran	1	1	Theory Lecture	Concept of the day of judgment		accountibility in the hereafter	1	notes	Ms Amna

Session	Section/ class code	Week No	subject	TOTAL HOURS in a week	No of lectures subject wise	Mode of Teaching	Topic	Code	Learning Objective	Hours Duration	Reference	Facilitator
2024-2025		26	Anatomy	1	1	Theory (Lecture)	Phlebotomy	CVS-A 002	Describe the boundaries and contents of cubital fossa Describe the clinical significance of cubital fossa: taking blood pressure and collecting blood sample	1	Snell`s Clinical Neuroanatomy Eighth Edition	Prof. Dr. Nahid
2024-2025		26	Anatomy	1	2	Theory (Lecture)	Circulatory system	CVS-A 001	Describe the Blood components Describe the structure of heart wall and functioning of heart	1	General Anatomy By Laiq Hussain Siddiqui 5th Edition	Dr. Kanwal
2024-2025		26	Anatomy	1	1	Practical	Phlebotomy	CVS-A 002	Describe the boundaries and contents of cubital fossa	1	Snell`s Clinical Neuroanatomy Eighth Edition	Dr. Sarwat

2024-2025		26	Physiology	1	1	Theory Lecture	Resistance of the Body to Infection: II. Immunity and Allergy	CVS-P-004	Classify lymphocytes. Classify T lymphocytes and enlist their salient functions.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Tooba
2024-2025		26	Physiology	1	2	Theory Lecture	Resistance of the Body to Infection: II. Immunity and Allergy	CVS-P-004	Define immunity. Describe innate immunity. Describe and classify acquired immunity. Describe passive immunity	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa
2024-2025		26	Physiology	1	3	Theory Lecture	Specific attributes of the B-lymphocytes system-humoral immunity and antibodies	CVS-P-005	Discuss the role of T cells and B cells in acquried immunity. Define plasma cells	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina
2024-2025		26	Physiology	1	4	Theory Lecture	Specific attributes of the B-lymphocytes system-humoral	CVS-P-005	Describe the structure of antigen and immunoglobulin	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina

							immunity and antibodies					
2024-2025		26	Physiology	1	5	Theory Lecture	Specific attributes of the B-lymphocytes system-humoral immunity and antibodies	CVS-P-005	Enlist types of immunoglobulin. Describe the mechanism of direct action of antibodies.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa
2024-2025		26	Physiology	1	6	Theory Lecture	Blood Types; Transfusion	CVS-P-006	Enumerate different blood group types. Explain the basis of ABO and Rh blood system.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Nida
2024-2025		26	Physiology	1	7	Theory Lecture	Blood Types; Transfusion	CVS-P-006	Discuss the features and complications of mismatched blood transfusion reaction. Enlist the hazards of blood transfusion. Discuss the pathophysiology, features and treatment	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Tooba

									of Rh incompatibility			
2024-2025		26	Physiology	1	8	Theory Lecture	Hemostasis and Blood Coagulation	CVS-P-007	Define hemostasis. Enlist and explain the mechanisms that secure hemostasis	1	Guyton and Hall Textbook of Physiology 14th Edition	Prof. Dr. Sadia
2024-2025		26	Physiology	1	1	Practical	Clotting Time Awareness in Clinical Dentistry	CVS-P-027	Observe the demonstration of clotting time measurement	1	Zafar Manual of Physiology Vol 1	Dr. Shaista
2024-2025		26	Physiology	1	2	Practical	Clotting Time Awareness in Clinical Dentistry	CVS-P-027	Explain the relevance of clotting time to safe dental practise	1	Zafar Manual of Physiology Vol 1	Dr. Fahad
2024-2025		26	Physiology	1	3	Practical	ECG Waveform Recognition	CVS-P-028	Observe and identify the normal waveforms and intervals on a sample ECG tracing.	1	Zafar Manual of Physiology Vol 1	Integration with cardiology. Dr. Mubeen
2024-2025		26	Physiology	1	4	Practical	ECG-Based Heart Rate Calculation	CVS-P-029	Calculate heart rate from a provided normal ECG tracing and describe its	1	Zafar Manual of Physiology Vol 1	Integration with cardiology. Dr. Mubeen

									clinical significance			
2024-2025		26	Pharmacology	1	1	Theory Lecture	Anti-anginal drugs	CVS-Ph 004	Classify the drugs used in the management of angina pectoris Describe important pharmacokinetic aspects of nitrates. Explain mechanism of action of nitrates. Give pharmacological basis for the use of nitrates in angina Enumerate adverse and toxic effects of nitrates	1	Lippincotts review Pharmacology 8th edition	Dr. Iqra Ijaz

2024-2025		26	Pharmacology	1	2	Theory Lecture	Drug treatment for heart failure	CVS-Ph 005	Explain briefly the pathophysiology of heart failure. Recall the compensatory mechanisms in a failing heart. Outline a treatment plan for patients with compensated or decompensated CHF.	1	Lippincotts review Pharmacology 8th edition	Dr Rubina Iqbal
2024-2025		26	Pharmacology	1	3	Theory Lecture	Drug treatment for heart failure	CVS-Ph 005	Enlist major drug groups used for management of congestive heart failure. Explain the role of diuretics, angiotensin-converting	1	Lippincotts review Pharmacology 8th edition	Dr Rubina Iqbal

									enzyme inhibitors and beta blockers, in treating patients with congestive heart failure			
2024-2025		26	Pharmacology	1	4	Theory Lecture	Drug treatment for heart failure	CVS-Ph 005	Enlist major drug groups used for management of congestive heart failure. Explain the role of diuretics, angiotensin-converting enzyme inhibitors and beta blockers, in treating patients with congestive heart failure	1	Lippincotts review Pharmacology 8th edition	integrated with oral medicine,surgery

2024-2025		26	Pharmacology	1	5	Theory Tutorial	Anti-anginal drugs	CVS-Ph 004	"Classify the drugs used in the management of angina pectoris Describe important pharmacokinetic aspects of nitrates. Explain mechanism of action of nitrates. Give pharmacological basis for the use of nitrates in angina Enumerate adverse and toxic effects of nitrates"	1	Lippincotts review Pharmacology 8th edition	Dr sidra
2024-2025		26	Pharmacology	1	1	Practical	Pharmacological Considerations in Dental Practice	CVS-Ph 010	Describe the common classes of antihypertensive and	1	Practical notebook	DR SARA integration with oral medicine

									anticoagulant medications and their relevance to dental care.			
2024-2025		26	Biochemistry	1	1	Theory Lecture	Protein energy malnutrition (PEM	CVS-B-003	Understand the nutritional importance of proteins and correlate this information to protein energy malnutrition. Compare and contrast the salient features of kwashiorkor and marasmus	1	Lippincott 8th edition , Lecture notes	Dr Yusra
2024-2025		26	Biochemistry	1	2	Theory Lecture	Conjugated proteins	CVS-B-004	Define conjugated proteins and provide suitable examples of conjugated proteins in the human body (lipoproteins, glycoproteins,	1	Lippincott 8th edition , Lecture notes	Dr Yusra

									nucleoproteins, chromoproteins, and metalloproteins)			
2024-2025		26	Biochemistry	1	1	Practical	Introduction to laboratory technique	CVS-B-012	Understand the principle, procedure and uses of electrophoresis (demonstration only)	1	Practical Manual	Demonstrator
2024-2025		26	General Pathology & Microbiology	1	2	Theory (Lecture)	Immunology	CVS-Pa-004	Type of antibodies- IgG, IgA, IgA, IgM, IgE & IgD	1	Levinson 19th edition	Dr. Maryam Aziz
2024-2025		26	General Pathology & Microbiology	1	3	Theory (Lecture)	Hypersensitivity reactions	CVS-Pa-005	Explain the types & pathogenesis of hypersensitivity reactions (type I-IV) in dental conditions	1	Levinson 19th edition	Dr. Maryam Aziz

2024-2025		27	General Pathology & Microbiology	1	2	Theory (Lecture)	Blood grouping & complications of blood transfusion	CVS-Pa-006	Define the principles of ABO & Rh blood grouping systems	1	Robins 11th Edition	Dr. Nabila
2024-2025		27	General Pathology & Microbiology	1	3	Theory (Lecture)	Hemodynamic disorders	CVS-Pa-007	Define thrombosis, embolism, infarction & haemorrhage	1	Robins 11th Edition	Dr. Ujala
2024-2025		26	General Pathology & Microbiology	1	1	Practical	Disorder of WBCs	CVS-Pa-014	Perform differential WBC count & correlate findings with clinical cases of leukocytosis or leukopenia	1	Pathology	Demonstrator
2024-2025		26	Biochemistry	1	1	Theory* (Module 7)	Protein energy malnutrition (PEM	CVS-B-003	Understand the nutritional importance of proteins and correlate this information to protein energy malnutrition. Compare and contrast the salient features of	1	Lippincott 8th edition , Lecture notes	Dr Sadia Khalil

									kwashiorkor and marasmus			
2024-2025		26	Physiology	1	1	Theory* (Module 7)	Hemostasis and Blood Coagulation	CVS-P-007	Give characteristics and functions of platelets. Mention normal platelet count in blood and life span of platelets.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina
2024-2025		26	Physiology	1	1	Theory* (Module 7)	Hemostasis and Blood Coagulation	CVS-P-007	Explain the steps involved in formation of primary platelet plug to seal small vascular holes.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Tooba
2024-2025		26	Anatomy	1	1	Theory* (Module 7)	Circulatory system	CVS-A 001	Describe the Blood components Describe the structure of heart wall and functioning of heart	1	General Anatomy By Laiq Hussain Siddiqui 5th Edition	Dr. Kanwal
2024-2025		26	Holy Quran	1	1	Theory Lecture	Concept of Meezan		describe the concept of meezan	1		Ms. Amna

Session	Section / class code	Week No	subject	TOTAL HOURS in a week	No of lectures subject wise	Mode of Teaching	Topic	Code	Learning Objective	Hours Duration	Reference	Facilitator
2024-2025		27	Anatomy	1	1	Theory (Lecture)	Phlebotomy	CVS-A 003	Describe the superficial veins, muscles, nerves and vessels of flexor/anterior compartment of forearm Describe the clinical significance of median forearm vein.	1	Snell`s Clinical Neuroanatomy Eighth Edition	Prof. Dr. Nahid
2024-2025		27	Anatomy	1	2	Theory (Lecture)	Circulatory System	CVS-A 001	Describe and exemplify various types of anastomoses Describe three circulatory routes	1	General Anatomy By Laiq Hussain Siddiqui 5th Edition	Dr. Kanwal
2024-2025		27	Anatomy	1	1	Practical	Microscopic Anatomy Veins	CVS-A 006	Identify under light microscope/ draw and label	1	Medical Histology By Laiq Hussain Siddiqu	Dr. Sarwat

									veins and capillaries			
2024-2025		27	Physiology	1	1	Theory Lecture	Hemostasis and Blood Coagulation	CVS-P-007	Define thrombocytopenia. Enlist causes of thrombocytopenia. Explain consequences of thrombocytopenia	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Tooba
2024-2025		27	Physiology	1	2	Theory Lecture	Hemostasis and Blood Coagulation	CVS-P-007	Enlist the clotting factors in blood. Name Vitamin K dependant clotting factors.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa
2024-2025		27	Physiology	1	3	Theory Lecture	Hemostasis and Blood Coagulation	CVS-P-007	Explain the intrinsic and extrinsic clotting pathway. Describe mechanism of clot formation after injury. Name and give mechanism of antigoagulants	1	Guyton and Hall Textbook of Physiology 14th Edition	Prof. Dr. Sadia

									(heparin, oxalate, citrate) used in laboratory			
2024-2025		27	Physiology	1	4	Theory Lecture	Conditions that cause excessive bledding in humans	CVS-P-008	Enlist and explain the conditions that cause excessive bleeding (Vitamina K deficiency, Hemophilia, Thrombocytopenia). Define Prothrombin time and mention its significance	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa
2024-2025		27	Physiology	1	5	Theory Lecture	Cardiac Muscle; The Heart as a Pump and Function of the Heart Valves	CVS-P-009	Explain the physiological anatomy of cardiac muscle	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Tooba
2024-2025		27	Physiology	1	6	Theory Lecture	Cardiac Muscle; The Heart as a Pump and Function of the Heart Valves	CVS-P-009	Draw and explain the conducting system of heart.	1	Guyton and Hall Textbook of Physiology 14th Edition	Integrated with Anatomy. Prof. Dr. Naheed

2024-2025		27	Physiology	1	7	Theory Lecture	Rhythmical Excitation of the Heart	CVS-P-010	Describe and draw the phases of action poential of SA node along with explanation of the mechanism of self excitation/ Auto rhythmicity of SA node	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Nida
2024-2025		27	Physiology	1	8	Theory Lecture	Rhythmical Excitation of the Heart	CVS-P-010	Describe and draw the phases of action potential of ventricle	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Tooba
2024-2025		27	Physiology	1	1	Practical	Cradiac Examination Basics	CVS-P-030	Demonstrate how to locate and palpate the apex beat on a simulation model or peer under supervision.	1	Zafar Manual of Physiology Vol 1	Dr. Nida

2024-2025		27	Physiology	1	2	Practical	Cardiac Auscultation basics	CVS-P-031	Demonstrate the correct method to auscultate the precordium for heart sounds under supervision	1	Zafar Manual of Physiology Vol 1	Dr. Omer
2024-2025		27	Physiology	1	3	Practical	Blood Pressure Measurement techniques	CVS-P-032	Demonstrate blood pressure measurement using palaptory and auscultatory methods in the sitting position under supervision	1	Zafar Manual of Physiology Vol 1	Dr. Beenish
2024-2025		27	Physiology	1	4	Practical	Blood Pressure Measurement techniques	CVS-P-032	Demonstrate blood pressure measurement using palaptory and auscultatory methods in the sitting position under supervision	1	Zafar Manual of Physiology Vol 1	Dr. Waqas

2024-2025		27	Pharmacology	1	1	Theory Lecture	Anti arrhythmic drugs	CVS-Ph 007	Classify anti-arrhythmic drugs. Describe cardiac, noncardiac effects of class I drugs (all subgroups). Enumerate therapeutic uses and major side-effects of all class I antiarrhythmic drugs. Describe the important antiarrhythmic actions of class II drugs. Enumerate clinical indications and side-effects of class II drugs.	1	Lippincotts review Pharmacology 8th edition	Dr RUBIINA IQBAL

2024-2025		27	Pharmacology	1	2	Theory Lecture	Anti arrhythmic drugs	CVS-Ph 007	Explain the actions, uses and side-effects of class III drugs(amiodarone). Describe the actions, uses and adverse effects of calcium channel blockers (class IV drugs). Describe briefly the salient features of adenosine as an antiarrhythmic and its toxicity	1	Lippincotts review Pharmacology 8th edition	Dr RUBINA IQBAL

2024-2025		27	Pharmacology	1	3	Theory Lecture	Anti arrhythmic drugs	CVS-Ph 007	Explain the actions, uses and side-effects of class III drugs(amiodarone). Describe the actions, uses and adverse effects of calcium channel blockers (class IV drugs). Describe briefly the salient features of adenosine as an antiarrhythmic and its toxicity	1	Lippincotts review Pharmacology 8th edition	Integeration with oral medicine and maxilofacial

2024-2025		27	Pharmacology	1	4	Theory Lecture	Anti arrhythmic drugs	CVS-Ph 007	classify anti-arrhythmic drugs. Describe cardiac, noncardiac effects of class I drugs (all subgroups). Enumerate therapeutic uses and major side-effects of all class I antiarrhythmic drugs. Describe the important antiarrhythmic actions of class II drugs. Enumerate clinical indications and side-effects of class II drugs.	1	Lippincotts review Pharmacology 8th edition	Integeration with oral medicine and maxilofacial

2024-2025		27	Pharmacology	1	5	Theory tutorial	Anti arrhythmic drugs	CVS-Ph 007	classify anti-arrhythmic drugs. Describe cardiac, noncardiac effects of class I drugs (all subgroups). Enumerate therapeutic uses and major side-effects of all class I antiarrhythmic drugs. Describe the important antiarrhythmic actions of class II drugs. Enumerate clinical indications and side-effects of class II drugs.	1	Lippincotts review Pharmacology 8th edition	Dr sidra

2024-2025		27	Pharmacology	1	1	Practical	Pharmacological Considerations in Dental Practice	CVS-Ph 010	Describe the common classes of antihypertensive and anticoagulant medications and their relevance to dental care.	1	Practical notebook	Dr Fatma
2024-2025		27	Biochemistry	1	1	Theory Lecture	Structural organization of protein,Protein misfoldin	CVS-B-005,006	Elaborate the role of chaperones in protein folding,riefly describe the consequences of protein misfolding (Alzheimer's disease and prion diseases)	1	Lippincott 8th edition	Prof Dr Haroon Habib
2024-2025		27	Biochemistry	1	2	Theory Lecture	Protein Structure and Denaturation, Plasma proteins	CVS-B-007,008	Differentiate between denaturation and coagulation.Enlist the functions and give the clinical importance of	1	Lippincott 8th edition	Prof Dr Sadia Amir

									plasma proteins (albumin, fibrinogen, and transferrin)			
2024-2025		27	Biochemistry	1	1	Practical	Introduction to laboratory technique	CVS-B-012	Understand the principle, procedure and uses of electrophoresis (demonstration only)	1	Practical Manual	Demonstrator
2024-2025		27	General Pathology & Microbiology	1	4	Theory (Lecture)	Hemodynamic disorders	CVS-Pa-007	Describe the types of thrombosis including arterial & Venus impact on dental procedures	1	Robins 11th Edition	Dr. Ujala
2024-2025		28	General Pathology & Microbiology	1	2	Theory (Lecture)	Hemodynamic disorders	CVS-Pa-007	Discuss pathophysiology of thrombosis	1	Robins 11th Edition	Dr. Ujala
2024-2025		28	General Pathology & Microbiology	1	2	Theory (Lecture)	Hemodynamic disorders	CVS-Pa-008	Explain embolism	1	Robins 11th Edition	Dr. Ujala

2024-2025		28	General Pathology & Microbiology	1	4	Theory (Lecture)	Hemodynamic disorders	CVS-Pa-008	Describe the pathophysiology of infarction, focusing on ischemia & necrosis	1	Robins 11th Edition	Dr. Ujala
2024-2025		27	General Pathology & Microbiology	1	1	Practical	Immunology	CVS-Pa-015	Demonstrate skin prick testing for type-1 hypersensitivity reaction	1	Pathology	Demonstrator
2024-2025		27	Biochemistry	1	2	Theory* (Module 7)	Protein Structure and Denaturation, Plasma proteins	CVS-B-007,008	Differentiate between denaturation and coagulation.Enlist the functions and give the clinical importance of plasma proteins (albumin, fibrinogen, and transferrin)	1	Lippincott 8th edition	Prof Dr Sadia Amir
2024-2025		27	Physiology	1	1	Theory* (Module 7)	Cardiac Muscle; The heart as a Pump and	CVS-P-011	Describe the mechanism of excitation-contraction	1	Guyton and Hall Textbook of Physiology 14th Edition	Prof. Dr. Shahina

							Function of the Heart Valves		coupling in cardiac muscle.			
2024-2025		27	Anatomy	1	1	Theory* (Module 7)	Circulatory System	CVS-A001	Describe and exemplify various types of anastomoses Describe three circulatory routes	1	General Anatomy By Laiq Hussain Siddiqui 5th Edition	Dr. Kanwal
2024-2025		27	Physiology	1	1	Theory* (Module 7)	Cardiac Muscle; The heart as a Pump and Function of the Heart Valves	CVS-P-011	Draw and explain pressure and volume changes of left ventricle during cardiac cycle	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina
2024-2025		27	Holy Quran	1	1	Theory Lecture	Divine Revelations		holy Books	1	notes	Ms AMNA

Session	Section / class code	Week No	subject	TOTAL HOURS in a week	No of lectures subject wise	Mode of Teaching	Topic	Code	Learning Objective	Hours Duration	Reference	Facilitator
2024-2025		28	Anatomy	1	1	Theory (Lecture)	Phlebotomy	CVS-A 004	Describe the superficial veins, muscles, tendons, vessels and nerves of dorsum of hand	1	Snell`s Clinical Neuroanatomy Eighth Edition	Prof. Dr. Nahid
2024-2025		28	Anatomy	1	2	Theory (Lecture)	Circulatory system	CVS-A 001	Define portal system and describe its two varieties Describe the vascular supply of blood vessels	1	General Anatomy By Laiq Hussain Siddiqui 5th Edition	Dr. Kanwal
2024-2025		28	Anatomy	1	1	Practical	Phlebotomy	CVS-A 003	Describe the superficial veins, muscles, nerves and vessels of flexor/anterior compartment of forearm	1	Snell`s Clinical Neuroanatomy Eighth Edition	Dr. Sarwat

2024-2025		28	Physiology	1	1	Theory Lecture	Cardiac Muscle; The heart as a Pump and Function of the Heart Valves	CVS-P-011	Define & give the normal values of the cardiac output, stroke volume, end diastolic volume, end systolic volume and venous return. Describe the Frank Starling mechanism	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Nida
2024-2025		28	Physiology	1	2	Theory Lecture	Cardiac Muscle; The heart as a Pump and Function of the Heart Valves	CVS-P-011	Describe the autonomic regulation of heart pumping. Describe the effect of potassium, calcium ions and temperature on heart function.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa
2024-2025		28	Physiology	1	3	Theory Lecture	Cardiac Muscle; The heart as a Pump and Function of the Heart Valves	CVS-P-012	Define Electrocardiogram. Enlist, draw, and explain the physiological basis & give durations of waves, intervals,	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina

									and segments of normal ECG			
2024-2025		28	Physiology	1	4	Theory Lecture	Cardiac Arrhythmias	CVS-P-013	Define tachycardia and enlist its causes. Define bradycardia and enlist its causes. Define sinus arrhytmia and its physiological basis	1	Guyton and Hall Textbook of Physiology 14th Edition	Integrated with cardiology. Prof Naresh/ Dr. Mubeen
2024-2025		28	Physiology	1	5	Theory Lecture	Overview of the Circulation. Nervous Regulation of the Circulation	CVS-P-014	Explain the functional parts of cicrulation (arteries, arterioles, capillaries, veins, venules)	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Tooba
2024-2025		28	Physiology	1	6	Theory Lecture	Overview of the Circulation. Nervous Regulation of the Circulation	CVS-P-014	Mention the pressures in systemic & pulmonary circulation. Describe nervous regulation of blood vessels and functioning of vasomotor centers. Explain	1	Guyton and Hall Textbook of Physiology 14th Edition	Integrated with cardiology. Prof Naresh/ Dr. Mubeen

									vasovagal syncope			
2024-2025		28	Physiology	1	7	Theory Lecture	The Microcirculation and Lymphatic System: Capillary Fluid Exchange, Interstitial Fluid, and Lymph Flow	CVS-P-015	Identify vessels constituting microcirculation. Enumerate starling forces (hydrostatic and osmotic forces) and explain their roles in capillary filtration and formation of interstitial fluid. Define edeme	1	Guyton and Hall Textbook of Physiology 14th Edition	Prof. Dr. Shahina
2024-2025		28	Physiology	1	8	Theory Lecture	Local and Humoral Control of Tissue Blood Flow	CVS-P-016	Describe local control of blood flow in response to tissue needs. Discuss role of Humoral factors in control of blood flow.	1	Guyton and Hall Textbook of Physiology 14th Edition	Prof. Dr. Sadia
2024-2025		28	Physiology	1	1	Practical	Postural Influence on Blood Pressure	CVS-P-033	Demonstrate the effect of posture on blood pressure measurement under supervision	1	Zafar Manual of Physiology Vol 1	Dr. Shaista

2024-2025		28	Physiology	1	2	Practical	Postural Influence on Blood Pressure	CVS-P-033	Demonstrate the effect of posture on blood pressure measurement under supervision	1	Zafar Manual of Physiology Vol 1	Dr. Tahir
2024-2025		28	Physiology	1	3	Practical	Pulse Examination Awareness	CVS-P-034	Observe and describe the radial pulse of characteristics, including rate, rhythm, and volume under supervision	1	Zafar Manual of Physiology Vol 1	Dr. Fahad
2024-2025		28	Physiology	1	4	Practical	Pulse Examination Awareness	CVS-P-034	Observe and describe the radial pulse of characteristics, including rate, rhythm, and volume under supervision	1	Zafar Manual of Physiology Vol 1	Dr. Nida
2024-2025		28	Pharmacology	1	1	Theory Lecture	Antifibrinolytics	CVS-Ph008	Describe the mechanism of action, indications/clinical uses and adverse effects of	1	Lippincotts review Pharmacology 8th edition	Dr. IQRA IJAZ

									tranexamic acid and aminocaproic acid			
2024-2025		28	Pharmacology	1	2	Theory Lecture	Antifibrinolytics	CVS-Ph 008	Describe the mechanism of action, indications/clinical uses and adverse effects of tranexamic acid and aminocaproic acid	1	Lippincotts review Pharmacology 8th edition	INTEGERATED WITHOral & maxillofacial surgery
2024-2025		28	Pharmacology	1	3	Theory Lecture	Antifibrinolytics	CVS-Ph 008	Describe the mechanism of action, indications/clinical uses and adverse effects of tranexamic acid and aminocaproic acid	1	Lippincotts review Pharmacology 8th edition	DR IQRA IJAZ

2024-2025		28	Pharmacology	1	4	Theory Lecture	Analgesics	CVS-Ph 009	Identify cardiovascular risks associated with NSAID use and briefly explain the underlying pharmacological mechanisms Describe the antiplatelet mechanism of action of low dose aspirin and its role in the prevention of myocardial infarction Differentiate between the use of low-dose and high dose aspirin in cardiovascular vs. anti-inflammatory indications	1	Lippincotts review Pharmacology 8th edition	dr Rubina iqbal

2024-2025		28	Pharmacology	1	5	Theory TURORIAL	Antifibrinolytics	CVS-Ph 008	Describe the mechanism of action, indications/clinical uses and adverse effects of tranexamic acid and aminocaproic acid	1	Lippincotts review Pharmacology 8th edition	INTEGERATED WITHOral & maxillofacial surgery
2024-2025		28	Pharmacology	1	1	Practical	Pharmacological Considerations in Dental Practice integration with Oral Medicine / Medical Emergencies	"CVS-Ph 010 "	"Describe the common classes of antihypertensive and anticoagulant medications and their relevance to dental care."	1	Practical notebook	Dr sara
2024-2025		28	Biochemistry	1	1	Theory Lecture	Lipid Metabolism	CVS-B-010	Explain the process of beta-oxidation of fatty acids and how it contributes to ATP production during sustained, low-intensity exercis	1	Lippincott 8th edition	Prof Dr Haroon Habib

2024-2025		28	Biochemistry	1	2	Theory Lecture	Lipid Metabolism	CVS-B-010	Explain the process of beta-oxidation of fatty acids and how it contributes to ATP production during sustained, low-intensity exercis	1	Lippincott 8th edition	Prof Dr Haroon Habib
2024-2025		28	Biochemistry	1	1	Practical	Introduction to laboratory technique	CVS-B-012	Understand the principle, procedure and uses of electrophoresis (demonstration only)	1	Practical Manual	Demonstrator
2024-2025		27	General Pathology & Microbiology	1	4	Theory (Lecture)	Hemodynamic bleeding disorders	CVS-Pa-008	Describe pathophysiology of infarction	1	Robins 11th Edition	Dr. Ujala
2024-2025		27	General Pathology & Microbiology	1	4	Theory (Lecture)	Hemodynamic bleeding disorders	CVS-Pa-009	Define and classify bleeding disorders	1	Robins 11th Edition	Dr. Nabila
2024-2025		28	General Pathology &	1	2	Theory (Lecture)	Microbiology of blood relevance & implications in dentistry	CVS-Pa-010	Laboratory investigations of bleeding disorders	1	Robbins 11th edition	Dr. Nabila

			Microbiology									
2024-2025		28	General Pathology & Microbiology	1	2	Theory (Lecture)	Microbiology of blood relevance & implications in dentistry	CVS-Pa-011	Recognise oral manifestation of HIV including candidiasis, hairy leukoplakia & periodontal disease	1	Levinson 19th Edition	Dr. Hira
2024-2025		28	General Pathology & Microbiology	1	1	Practical	Blood grouping & transfusion complications	CVS-Pa-016	Perform blood typing & cross matching procedures	1	Pathology	Demonstrator
2024-2025		28	Pharmacology	1	1	Theory* (Module 7)	Antifibrinolytics	CVS-Ph 008	Describe the mechanism of action, indications/clinical uses and adverse effects of tranexamic acid and aminocaproic acid	1	Lippincotts review Pharmacology 8th edition	INTEGERATED WITHOral & maxillofacial surgery

2024-2025		28	Physiology	1	1	Theory* (Module 7)	Local and Humoral Control of Tissue Blood Flow	CVS-P-016	Explain acute mechanism of local blood flow control (tissue metabolism and oxygen/nutrient demand). Describe autoregulation of blood flow during changes in arterial pressure (metabolic and myogenic mechanisms)	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina
2024-2025		28	General Pathology & Microbiology	1	1	Theory lecture	Microbiology of blood	CVS-Pa-011	Streptococcus viridians and staphylococcus aureus	1	Levinson 19th edition	Dr Hira

2024-2025		28	Physiology	1	1	Theory* (Module 7)	Clinical methods for measuring systolic and diastolic pressures. Primary (essential) Hypertension	CVS-P-017	Define blood pressure and its two primary determinants (cardiac output and total peripheral resistance); Define pulse pressure and mean arterial pressure. Give normal blood pressure value and mean arterial pressure value. Define hypertension	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa
2024-2025		28	Holy Quran	1	1	Theory Lecture	Divine Revelation		Explain the divine decree in sending holy books	1	notes	Ms Amna

Session	Section/ class code	Week No	subject	TOTAL HOURS in a week	No of lectures subject wise	Mode of Teaching	Topic	Code	Learning Objective	Hours Duration	Reference	Facilitator
2024-2025		29	Anatomy	1	1	Theory (Lecture)	Phlebotomy	CVS-A 004	Describe the boundaries, contents and clinical importance of anatomical snuff box. Describe the clinical importance of dorsal venous arch, cephalic and basilic veins	1	Snell`s Clinical Neuroanatomy Eighth Edition	Prof. Dr. Nahid
2024-2025		29	Anatomy	1	2	Theory (Lecture)	Circulatory System	CVS-A 001	Describe various components of lymph vascular system	1	General Anatomy By Laiq Hussain Siddiqui 5th Edition	Dr. Kanwal

2024-2025		29	Anatomy	1	1	Practical	Phlebotomy	CVS-A-004	Describe the superficial veins, muscles, tendons, vessels and nerves of dorsum of hand Describe the boundaries, contents and clinical importance of anatomical snuff box.	1	Snell`s Clinical Neuroanatomy Eighth Edition	Dr. Sarwat
2024-2025		29	Physiology	1	1	Theory Lecture	Cardiac output, venous return, and their regulation	CVS-P-018	Define Cardiac output and venous return. Give their normal values. Enlist and explain factors that affect cardiac output and venous return	1	Guyton and Hall Textbook of Physiology 14th Edition	Prof. Dr. Sadia
2024-2025		29	Physiology	1	2	Theory Lecture	Nervous regulation of the circulation and rapid control of arterial pressure	CVS-P-019	Describe role of the nervous system in rapid control of arterial pressure. Enumerate nervous reflex mechanisms for	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina

									regulation of blood pressure.			
2024-2025		29	Physiology	1	3	Theory Lecture	Nervous regulation of the circulation and rapid control of arterial pressure	CVS-P-019	Explain the role of baroreceptors in regulation of arterial blood pressure. Explain the role of chemoreceptors in regulation of arterial blood pressure. Explain CNS ischemic response. Explain Cushing reaction	1	Guyton and Hall Textbook of Physiology 14th Edition	Prof. Dr. Shahina
2024-2025		29	Physiology	1	4	Theory Lecture	Role of the kidneys in long-term control of arterial pressure	CVS-P-020	Describe role of renin angiotensin aldosterone mechanism in blood pressure regulation. Explain stress relaxation and capillary fluid shift. Enlist immediate (seconds to minutes), intermediate (after several minutes) and	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Nida

									long-term mechanism of blood pressure regulation			
2024-2025		29	Physiology	1	5	Theory Lecture	Circulatory shock and its treatment	CVS-P-021	Define and enlist different types of shock, Explain the causes, features, and pathophysiology of hypovolemic/hemorrhagic shock. Explain the causes, features and pathophysiology of neurogenic shock.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Tooba
2024-2025		29	Physiology	1	6	Theory Lecture	Circulatory shock and its treatment	CVS-P-021	Explain the causes and features of anaphylactic shock. Explain cardiogenic shock.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Hafsa
2024-2025		29	Physiology	1	7	Theory Lecture	Circulatory shock and its treatment	CVS-P-021	Explain stages of shock. Enlist & explain compensatory mechanisms	1	Guyton and Hall Textbook of Physiology	Dr. Hafsa

									during non-progressive shock.		14th Edition	
2024-2025		29	Physiology	1	8	Theory Lecture	The Coronary Circulation and Ischemic Heart Disease	CVS-P-023	Define angina pectoris and myocardial infarction	1	Guyton and Hall Textbook of Physiology 14th Edition	Integrated with Cardiology. Prof Naresh/ Dr. Mubeen
2024-2025		29	Physiology	1	9	Theory Lecture	Heart Valves and heart Sounds	CVS-P-024	Enlist the different types of heart sounds and explain the physiological basis of each heart sounds. Enlist the causes of 3rd and 4th heart sounds. Define murmur.	1	Guyton and Hall Textbook of Physiology 14th Edition	Dr. Amina
2024-2025		29	Physiology	1	1	Practical	Basic Life Support (BLS) Introduction	CVS-P-035	Demonstrate the basic steps of cardiopulmonary resuscitation (CPR) on a simulation model under supervision.	1	Zafar Manual of Physiology Vol 1	Dr. Beenish

2024-2025		29	Physiology	1	2	Practical	Basic Life Support (BLS) Introduction	CVS-P-035	Demonstrate the basic steps of cardiopulmonary resuscitation (CPR) on a simulation model under supervision.	1	Zafar Manual of Physiology Vol 1	Integrated with Cardiology. Prof Naresh/ Dr. Mubeen
2024-2025		29	Physiology	1	3	Practical	Blood & CVS	CVS-P-025 to CVS-P-030	OSPE Practise	1	Zafar Manual of Physiology Vol 1	Dr. Omer
2024-2025		29	Physiology	1	4	Practical	Blood & CVS	CVS-P-031 o CVS-P-035	OSPE Practise	1	Zafar Manual of Physiology Vol 1	Dr. Waqas

2024-2025		29	Pharmacology	1	1	Theory Lecture	Analgesics	CVS-Ph 009	Identify cardiovascular risks associated with NSAID use and briefly explain the underlying pharmacological mechanisms Describe the antiplatelet mechanism of action of low dose aspirin and its role in the prevention of myocardial infarction Differentiate between the use of low-dose and high dose aspirin in cardiovascular vs. anti-inflammatory indications	1	Lippincotts review Pharmacology 8th edition	DR rubina

2024-2025		29	Pharmacology	1	2	Theory Lecture	Analgesics	CVS-Ph 009	Identify cardiovascular risks associated with NSAID use and briefly explain the underlying pharmacological mechanisms Describe the antiplatelet mechanism of action of low dose aspirin and its role in the prevention of myocardial infarction Differentiate between the use of low-dose and high dose aspirin in cardiovascular vs. anti-inflammatory indications	1	Lippincotts review Pharmacology 8th edition	Oral medicine Oral & maxillofacial surgeryintegerated

2024-2025		29	Pharmacology	1	3	Theory Lecture	Analgesics	CVS-Ph 009	Identify cardiovascular risks associated with NSAID use and briefly explain the underlying pharmacological mechanisms Describe the antiplatelet mechanism of action of low dose aspirin and its role in the prevention of myocardial infarction Differentiate between the use of low-dose and high dose aspirin in cardiovascular vs. anti-inflammatory indications	1	Lippincotts review Pharmacology 8th edition	integerated withOral medicine Oral & maxillofacial surgery

2024-2025		29	Pharmacology	1	4	Theory Tutorial	Analgesics	CVS-Ph 009	Identify cardiovascular risks associated with NSAID use and briefly explain the underlying pharmacological mechanisms Describe the antiplatelet mechanism of action of low dose aspirin and its role in the prevention of myocardial infarction Differentiate between the use of low-dose and high dose aspirin in cardiovascular vs. anti-inflammatory indications	1	Lippincotts review Pharmacology 8th edition	Dr fatma

2024-2025		29	Pharmacology	1	1	Practical	Drug Interactions and Procedural Modifications, intergatred with Oral Medicine / Medical Emergencies	CVS-Ph 011	Identify potential drug interactions and describe the importance of modifying dental procedures for patients on these medications.	1	Practical notebook	Dr. Sidra,Integrated department
2024-2025		29	Pharmacology	1	2	Practical	Drug Interactions and Procedural Modifications, intergatredOral Medicine / Medical Emergencies	CVS-Ph 011	Identify potential drug interactions and describe the importance of modifying dental procedures for patients on these medications.	1	Practical notebook	Integrated department
2024-2025		29	Biochemistry	1	1	Theory Lecture	Immunoglobulin Classes and Their Function	CVS-B-009	Draw and label the general structure of an antibody. Enlist five major types of immunoglobulins and give functions/significance of each class separately	1	Lippincott 8th edition	Dr Yusra Leghari

2024-2025		29	Biochemistry	1	2	Theory Lecture	Eicosanoids	CVS-B-011	Define eicosanoids. Outline classification and biomedical importance of eicosanoids. Enlist functions of prostaglandins, leukotrienes and thromboxanes. Explain how low-dose aspirin therapy helps in the management of patients with IHD	1	Lippincott 8th edition	Dr Sadia Khalil
2024-2025		29	Biochemistry	1	1	Practical	Introduction to laboratory technique	CVS-B-012	Understand the principle, procedure and uses of electrophoresis (demonstration only)	1	Practical Manual	Demonstrator
2024-2025		28	General Pathology & Microbiology	1	2	Theory (Lecture)	Microbiology of blood relevance & implications in dentistry	CVS-Pa-011	Identify oral ulceration caused by CMV or EBV	1	Levinson 19th Edition	Dr. Hira

2024-2025		28	General Pathology & Microbiology	1	2	Theory (Lecture)	Microbiology of blood relevance & implications in dentistry	CVS-Pa-011	Apply infection control protocols to prevent cross contamination	1	Levinson 19th Edition	Dr. Hira
2024-2025		29	General Pathology & Microbiology	1	3	Theory (Lecture)	Hemodynamics	CVS-Pa-012	Define & classify type of shock	1	Robins 11th Edition	Dr. Ujala
2024-2025		29	General Pathology & Microbiology	1	4	Theory (Lecture)	Microbiology	CVS-Pa-013	Septicemia caused by cardiovascular pathogens	1	Levinson 19th Edition	Dr. Hira
2024-2025		29	General Pathology & Microbiology	1	1	Practical	Hemodynamics	CVS-Pa-017	Interpret lab findings related to coagulation profiles for e.g. INR, PT, aPTT	1	Pathology	Demonstrator
2024-2025		29	Holy Quran	1	1	Theory Lecture	identification of holy Quran		Quran is only preserved n authenticated book	1	notes	Ms Amna

Operational Definitions

Traditional & Innovative Teaching Methodologies

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

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

AVICENNA MEDICAL & DENTAL COLLEGE

Internal Assessment Policy

Introduction

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

Internal Assessment Components

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

1. Attendance

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

2. Continuous Assessment

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

3. Grand Test and Module Exams

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

4. Attitude and Behavior

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

5. Logbook and Portfolio

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

Assessment Criteria and Weighting

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

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

Assessment Procedures

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

Appeal Process

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

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

Attendance Requirement & Internal Assessment Criteria

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

Assessment Guidelines

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

Assessment drives learning! – George E. Millar

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

- Written examinations, including multiple-choice and essay questions, will test your grasp of theoretical concepts and subject matter.
- Practical assessments will require you to demonstrate your clinical skills and ability to apply knowledge in real-world scenarios.
- Clinical exams will evaluate your communication skills and reasoning abilities through case discussions and problem-solving exercises.
- Clinical skills and work-place based assessments will observe your hands-on proficiency and patient management capabilities.

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

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

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

Assessment Schedule

Avicenna Dental College 1st Year BDS Integrated (D24) - Session 2024-2025					
WEEK	**DATE**	**DAY**	**SUBJECT**	**TEST**	**TOPIC / CODE**
Commencement of Classes: 14th April 2025 Monday					
COMMENCEMENT OF MODULE - 1					
1	**14th & 15th April Orientation Day**				
3	**Labour day** **1st May 2025, Thursday**				
3	**2nd May 2025**	**Friday**	**(Oral Biology)** **(Pathology)** **(Behavi.Science)** **(Anatomy)**	GRAND TEST - 1	**Oral Biology:** F-OB-001 / F-OB-001 **Pathology** Cell Injury F-Pa 001 / F-Pa 002 / F-Pa 003 / F-Pa 004 / F-Pa 005 / F-Pa 006 / F-Pa 007 / F-Pa-008 **Behavi.Science:** F-Bhs-001 / F-Bhs-002 / F-Bhs-003 / F-Bhs-004 / F-Bhs-005 **Anatomy:** F-A-001 / F-A-002 / F-A-006 / CF1-A-001 / CF1-A-002
4	**Day off due to precautionary security measures**				
5	**16th May 2025**	**Friday**	**(Biochemistry)** **(Physiology)** **(Pathology)** **(Pharmacology)**	GRAND TEST - 2	**Biochemistry:** F-B-001 / F-B-002 / 003 / 007 / 008 / 005 / 006 **Physiology:** F-P-001 / F-P-002 / F-P-003 / F-P-004 / F-P-005 / F-P-006 (Plasma proteins only) **Pathology:** F-Pa 010 / F-Pa 011 / F-Pa 012 **Pharmacology:** F-PH-001& 002 / F-PH-003& 005 / F-PH-004& 007 / F-PH-008& 006

					Pharmacokinetics and pharmacodynamics
6	**23rd May 2025**	**Friday**	**(Anatomy)** **(Biochemistry)** **(Oral Biology)** **(Community Dentistry)**	GRAND TEST - 3	**Anatomy:** F-A-003 / F-A-004 / F-A-005 / F-A-006 / F-A-007 / CF1-A-003 **Biochemistry:** Insert here F-B-005 / F-B-006 F-B-009,010,012 **Oral Biology:** F-OB-002 / F-OB-006 **Community Dentistry:** Car1-CD-001 / Car1-CD-002 / Car1-CD-003
7	**<u>Youme Takbeer</u> 28th May (Wednesday)**				
COMMENCEMENT OF MODULE - 2					
8	**2nd June 2025**	**Monday**	Anatomy Physiology Biochemistry Oral Biology & Tooth Morphology General Pathology & Microbiology Pharmacology Community Dentistry	**Module - 1 Exam**	Complete Module - 1 Syllabus
<u>Eid-ul-Adha</u> 6th / 7th / 8th & 9th June 2025					
9	**13th June 2025**	**Friday**	Anatomy Oral Biology & Tooth Morphology General Pathology & Microbiology	**Module - 2 Exam**	Complete Module - 2 Syllabus
COMMENCEMENT OF MODULE - 3					
12	**4th July 2025**	**Friday**	Oral Biology &	**Module - 3 Exam**	Complete Module - 3 Syllabus

			Tooth Morphology Biochemistry Community Dentistry Oral Pathology Operative Dentistry		
Ashura 5th & 6th July 2025					
COMMENCEMENT OF MODULE - 4					
14	**14th July 2025**	**Monday**	Anatomy Physiology Biochemistry Oral Biology & Tooth Morphology General Pathology & Microbiology Pharmacology Community Dentistry Oral Pathology Operative Dentistry	**Block 1 Exam (Theory)**	Complete Block 1 Syllabus
14	**15th July 2025**	**Tuesday**		**Block 1 Exam (Practical)**	Complete Block 1 Syllabus
Summer Break 21st July 2025 to 17th August					
16	**29th August 2025**	**Friday**	Oral Biology & Tooth Morphology Anatomy Biochemistry General Pathology & Microbiology Pharmacology Physiology	**Module - 4 Exam**	Complete Module - 4 Syllabus
COMMENCEMENT OF MODULE - 5					
22	**10th October 2025**	**Friday**	Physiology Anatomy Biochemistry Pharmacology General Pathology & Microbiology	**Module - 5 Exam**	Complete Module - 5 Syllabus
COMMENCEMENT OF MODULE - 6					

24	**24th October 2025**	**Friday**	Oral Biology & Tooth Morphology Community Dentistry Dental Radiology (Oral Diagnosis/Oral Medicine) Periodontology General Pathology & Microbiology	**Module - 6 Exam**	Complete Module - 6 Syllabus
COMMENCEMENT OF MODULE - 7					
25	**27th October 2025**	**Monday**	Oral Biology & Tooth Morphology Anatomy Biochemistry General Pathology & Microbiology Pharmacology Physiology Community Dentistry Dental Radiology (Oral Diagnosis/Oral Medicine) Periodontology	**Block 2 Exam (Theory)**	Complete Block 2 Syllabus
25	**28th October 2025**	**Tuesday**		**Block 2 Exam (Practical)**	Complete Block 2 Syllabus
29	**28th November 2025**	**Friday**	Anatomy Biochemistry Physiology General Pathology & Microbiology Pharmacology	**Module - 7 Exam**	Complete Module - 7 Syllabus
COMMENCEMENT OF MODULE - 8					
Winter Break / Quaid E Azam Day 22nd To 26th December 2025					

33	**2nd January 2025**	**Friday**	Anatomy Oral Biology & Tooth Morphology Physiology Biochemistry Pharmacology General Pathology & Microbiology Oral Pathology Community Dentistry	**Module - 8 Exam**	Complete Module - 8 Syllabus
COMMENCEMENT OF MODULE - 9					
35	**16th January 2025**	**Friday**	Oral Biology & Tooth Morphology	**Module - 9 Exam**	Complete Module - 9 Syllabus
36	**19th January 2025**	**Monday**	Anatomy Biochemistry Physiology General Pathology & Microbiology Pharmacology Oral Biology & Tooth Morphology Oral Pathology Community Dentistry	**Block 3 Exam (Theory)**	Complete Block 3 Syllabus
	20th January 2025	**Tuesday**		**Block 3 Exam (Practical)**	Complete Block 3 Syllabus
	23rd January 2025	**Friday**	Islamiat / Pak. Study	**Send Up Islamiat / Pak. Study**	Complete Syllabus
	26th January 2025	**Monday**	Anatomy Physiology Biochemistry Oral Biology & Tooth Morphology General Pathology & Microbiology Pharmacology Community Dentistry Oral Pathology Operative Dentistry	**SENDUP Block 1**	**Block 1** Complete Syllabus

	28th January 2025	**Wednesday**	Anatomy Physiology Biochemistry Oral Biology & Tooth Morphology General Pathology & Microbiology Pharmacology Community Dentistry Oral Pathology Operative Dentistry	**Send Up Block 1 (Practical)**	**Block 1** Complete Syllabus
	30th January 2025	**Friday**	Oral Biology & Tooth Morphology Anatomy Biochemistry General Pathology & Microbiology Pharmacology Physiology Community Dentistry Dental Radiology (Oral Diagnosis/Oral Medicine) Periodontology	**SEND UP Block 2**	**Block 2** Complete Syllabus
	2nd February 2025	**Monday**	Oral Biology & Tooth Morphology Anatomy Biochemistry General Pathology & Microbiology Pharmacology Physiology Community Dentistry Dental Radiology (Oral Diagnosis/Oral Medicine) Periodontology	**Send Up Block 2 (Practical)**	**Block 2** Complete Syllabus
	4th February 2025	**Wednesday**	Anatomy Biochemistry Physiology General Pathology	**Send Up Block 3**	**Block 3** Complete Syllabus

			& Microbiology Pharmacology Oral Biology & Tooth Morphology Oral Pathology Community Dentistry		
	6th February 2025	**Friday**	Anatomy Biochemistry Physiology General Pathology & Microbiology Pharmacology Oral Biology & Tooth Morphology Oral Pathology Community Dentistry	**Send Up Block 3 (Practical)**	**Block 3** Complete Syllabus

Table of Specification

BDS Integrated Curriculum 2K25, 1st Professional Exam							
BLOCK 3 – ASSESSMENT PARAMETERS AND DIVISION OF MARKS							
Subject	**Written Exam**			**Oral/Practical Exam**			
	MCQ (1 mark and I minute each)	**SEQ** (4 marks each and 11 minutes for each SEQ)	**Marks**	**OSPE** (9 Marks Each and 6 minutes each)	**OSCE** (9 Marks Each and 6 minutes each)	**OSVE** (6 Marks Each and 6 minutes each)	**Marks**
Anatomy	10	1	**14**	1	0	1	**15**
Physiology	22	2	**30**	1	1	1	**24**
Biochemistry	6	1	**10**	0	0	1	**6**
Oral Biology	12	1	**16**	3	0	1	**33**
General Pathology & Microbiology	12	2	**20**	2	0	1	**24**
Pharmacology	17	1	**21**	0	0	1	**6**
Community Dentistry	0	1	**4**	0	0	1	**6**
Oral Pathology	1	1	**5**	0	0	1	**6**
Total Questions	**80**	**10**		**7**	**1**	**8**	
Net Total	**80x1=80**	**10x4=40**	**120**	**7x9=63**	**1x9=9**	**8x6=48**	**120**
Internal Assessment Marks*	**30**			**30**			
Grand Total	**150**			**150**			

Table of Specification

Block 3 Internal Assessment for Theory Examination – 30 Marks		
Scoring Parameter	**Percentage Allocation**	**Marks Allocation**
Attendance in lectures*	20%	6
Block Examination (Theory)	50%	15
Continuous Assessment (Class Tests, Mock Exam, Assignments, Attitudes)	30%	9
Total	**100%**	**30**
* Attendance Marks will be according to the following criteria: 1. if 85 % = Eligible 2. if > 90% ≤ 93 % = 3 marks 3. if > 93% ≤ 95 % = 5 marks 3. if > 95% = 6 marks		
Block 3 Internal Assessment for Practical/ Tutorials Examination – 30 Marks		
Scoring Parameter	**Percentage Allocation**	**Marks Allocation**
Attendance in Practicals/ Tutorials*	20%	6
Block Examination (Practical/ Oral Examination)	50%	15
Continuous Assessment/ Log Books-Portfolio for PRISME / Practical Notebooks/ Assignments / Attitudes	30%	9
Total	**100%**	**30**
* Attendance Marks will be according to the following criteria 1. if 80 % = Eligible 2. if > 90% ≤ 93 % = 3 marks 3. if > 93% ≤ 95 % = 5 marks 3. if > 95% = 6 marks		

Block 3: Learning Resources

Subject	Learning Resources
Oral Biology & Tooth Morphology	1. Nanci, A. Ten Cate's Oral Histology, Development, Structure, and Function (10th ed.) 2. Berkovitz, B. K., Holland, G. R., & Moxham, B. J. Oral Anatomy, Histology, and Embryology (5th ed.) 3. Kumar, G. S. Orban's Oral Histology & Embryology (13th ed.) 4. Rajkumar, K. Oral Anatomy, Histology, Physiology & Tooth Morphology (2nd ed.)
Physiology	1. Guyton & Hall. Textbook of Medical Physiology (14th ed.)
Gross Anatomy	1. Snell's Clinical Anatomy by Regions (12th ed.)
Embryology	1. Langman's Medical Embryology
Histology	1. Siddiqui, L. H. Medical Histology: Text and Atlas
Biochemistry	1. Rodwell, V. W., et al. Harper's Illustrated Biochemistry (32nd ed.) 2. Abali, E. E., et al. Lippincott Illustrated Reviews: Biochemistry (8th ed.)
Behavioral Sciences	1. Hand book of Behavioral sciences, by MH Rana, 3rd ed. 2. Humayun A., Herbert M. (2010). Integrating behavioural sciences in healthcare. Islamabad: HEC.

Subject	Learning Resources
Histology	1. Siddiqui, L. H. Medical Histology: Text and Atlas
General Anatomy	1. Siddiqui, L. H. General Anatomy
Biochemistry	1. Rodwell, V. W., et al. Harper's Illustrated Biochemistry (32nd ed.) 2. Abali, E. E., et al. Lippincott Illustrated Reviews: Biochemistry (8th ed.)
Physiology	1. Guyton & Hall. Textbook of Medical Physiology (14th ed.)
Pathology	1. Kumar, V., et al. Robbins & Cotran Pathologic Basis of Disease (10th ed.)
Microbiology	1. Levinson, W. Review of Medical Microbiology & Immunology (18th ed.)
Pharmacology	1. Katzung & Trevor. Pharmacology Examination & Board Review (12th ed.) 2. Whalen, K. Lippincott Illustrated Reviews: Pharmacology (7th ed.)
Behavioral Sciences	1. Hand book of Behavioral sciences, by MH Rana, 3rd ed. 2. Humayun A., Herbert M. (2010). Integrating behavioural sciences in healthcare. Islamabad: HEC.

Resource Type	Learning Resources
Textbooks	1. Fuller, J. L. Concise Dental Anatomy & Morphology (4th ed.) 2. Nelson, S. J. Wheeler's Dental Anatomy, Physiology and Occlusion (1st SAE)
Reference Books	1. Woelfel's Dental Anatomy (Jones & Bartlett Learning) 2. Oral Biology and Tooth Morphology

About Avicenna Medical College

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

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

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

Infrastructure Resources

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

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

7-Star Doctor Competencies (PMDC)

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

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

Message from the Principal

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

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

Message from the Chairman

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

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

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

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

Chairman
Abdul Waheed Sheikh
Avicenna Medical & Dental College

Avicenna Medical & Dental College

Vision

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

Mission

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