

AVICENNA MEDICAL & DENTAL COLLEGE



STUDY GUIDE

2025

Alveocemental Complex

BLOCK 2 - MODULE 6



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

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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

BDS Integrated Curriculum 2K25

Version 01

YEAR-1 MODULES

Block-1

1. Foundation (Cell)
2. Craniofacial-I
3. Cariology-I

Block-2

4. Craniofacial-II
5. Neurosciences
6. Alveo-Cemental Complex

Block-3

7. Blood & Cardiovascular System
8. Gastrointestinal Tract
9. Occlusion-I

PRISME

Professionalism, Research, Informatics (Dental), Social Responsibility, Management/Entrepreneurship and Evidence Based Dentistry)

Islamiyat/Civics & Pakistan Studies

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:

- o 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:

- o 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:

- o Obtain a comprehensive overview of your courses, including detailed subject outlines, objectives, and departmental structures, to streamline your academic planning.

4. Curriculum Framework:

- o Explore the curriculum framework, academic calendar, and schedules for clinical and community rotations, adhering to the structured guidelines of UHS & PMDC.

5. Assessment Preparation:

- o 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:

- o 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:

- o 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 alveo-cemental complex comprises critical structures including the periodontal ligament (PDL), cementum, alveolar bone, gingiva, and the physiological processes of tooth eruption and shedding.
- Understanding these components is essential for dental students to grasp the structural, functional, and dynamic aspects of periodontal health and disease.
- By focusing on these elements collectively, this module provides a comprehensive view of the interrelationship between the periodontal tissues, their roles in maintaining oral health, and their response to pathological changes.
- The alveo-cemental complex module is a vital component of the oral histology curriculum, providing dental students with an in-depth understanding of the tissues that form the periodontium and their functional interrelationships.
- By linking histological features to clinical applications, this module ensures students develop the foundational knowledge required to excel in their dental education and future clinical practice.
- This holistic approach fosters critical thinking and prepares students to diagnose and manage periodontal conditions effectively.

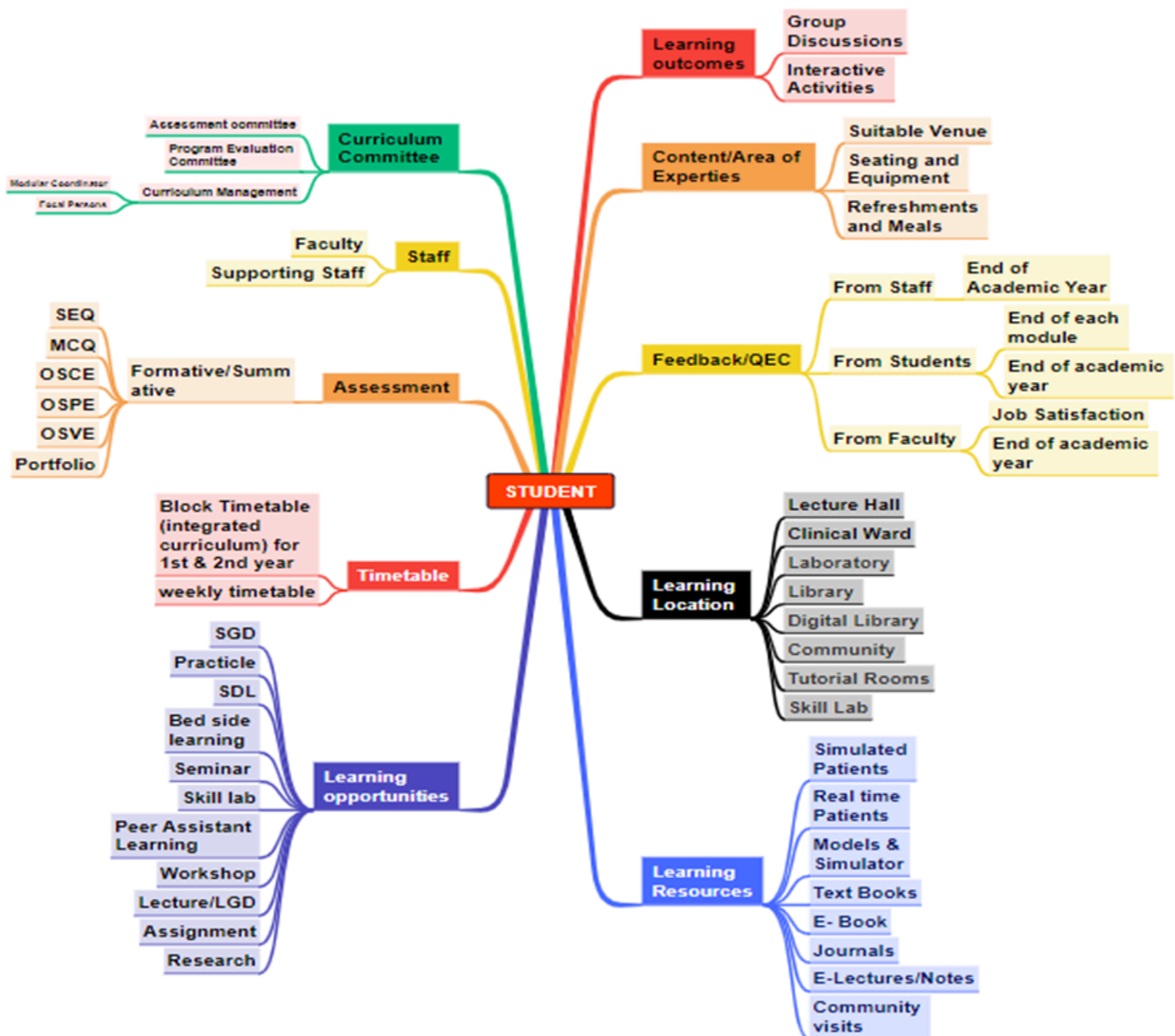
Block 1			Block 2			Block 3			Spirals			
Module 1	Module 2	Module 3	Modue 4	Module 5	Module 6	Module 7	Module 8	Module 9	Module A	Module B	Module C	Mod ule D
Foundat ion (Cell)	Craniofa cial I	Cariolo gy I	Craniof acial II	Neurosci ences I	Alveoce mental complex	Blood & Cardiov ascular System	Gastroin testinal Tract	Occlusi on I	Islamiat	Pakistan Studies	PRISME	Holy Qura n
190 Hours	95 Hours	72 Hours	111 Hours	154 Hours	48 Hours	153 Hours	115 Hours	34 Hours	30 Hours	30 Hours	60 Hours	54 Hour s
6 Weeks	3 Weeks	3 Weeks	4 Weeks	6 Weeks	2 Weeks	5 Weeks	4 Weeks	2 Weeks	Contact sessions held across the whole academic year			
12 Weeks			12 Weeks			12 Weeks						
36 Weeks												

BLOCK 2 – MODULE 6

Module Coordinator		
Oral Biology & Tooth Morphology - Prof. Dr. Raheela Yasmin		
Module Committee Members		
1	Oral Biology & Tooth Morphology	Dr. Sana Chaudhry
2	Community Dentistry	Dr. Momin Ali
3	Dental Radiology (Oral Diagnosis/Oral Medicine)	Dr. Areej
4	Periodontology	Dr. Nazia Kalim
5	General Pathology & Microbiology	Dr. Ishrat

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 6 Timetable								
BDS 1st Year - D24								
Week - 23								
13th October 2025 to 17th October 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 13th October 2025	Community Dentistry (Theory) Code: ALC-CD001 ALC-CD002 Topic: Periodontal Indices Facilitator: Dr. Syeda Tahira Dental Lecture Hall - 1	Oral Biology (Theory) Code: ALC-OB-001 Topic: Periodontium overview Facilitator: Dr. Raheela Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: ALC-Pa-001 & 002 Topic: Acute Inflammation in Dental Condition Facilitator: Dr. Nabeeela Akram Dental Lecture Hall - 1	Break	Oral Biology (Theory) Code: ALC-OB-010 Topic: Types of Cementum, Cellular vs Acellular Cementum Facilitator: Prof. Dr. Sana Dental Lecture Hall - 1	Community Dentistry (Practical) Code: ALC-CD005 Topic: Indices in Community dentistry Facilitator: Dr. Munim Departmental Lab	Oral Biology (Practical) Code: ALC-OB-053 Topic: Periodontal Ligament Cross-Section, Principal fiber Groups Arrangement Facilitator: Dr. Anushey / Dr. Faveeh Departmental Lab	Islamiat (Theory) Topic: Identification of Prayers Facilitator: Ms. Amna Dental Lecture Hall - 1
Tuesday 14th October 2025	Oral Biology (Theory) Code: ALC-OB-011 Topic: Cementum Attachment Apparatus Cementum Resorption and Repair Cementum Clinical Relevance Facilitator: Prof. Dr. Sana Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: ALC-Pa-003 & 004 Topic: Chemical mediator of acute inflammation, Vascular & cellular events in acute inflammation Facilitator: Dr. Nabeeela Akram Dental Lecture Hall - 1	PRISME (Behavioural Sciences) (Theory) Topic: Understanding Social Determinants of Oral Health Facilitator: Dr. Farhat Dental Lecture Hall - 1	Break	PRISME (Community Dentistry) (Theory) Topic: Research Cycle Facilitator: Dr. Lubna Yousof Dental Lecture Hall - 1	Oral Biology (Practical) Code: ALC-OB-055 Topic: Cementoblast Differentiation and HERS Fragmentation Facilitator: Dr. Anushey / Dr. Faveeh Departmental Lab	General Pathology & Microbiology (Practical) Code: ALC-Pa-011 & 012 Topic: Histological identification of acute inflammation, Clinical examination of acute inflammation Facilitator: Demonstrator Departmental Lab	Pakistan Studies (Theory) Topic: Rural Area Problems Facilitator: Ms. Amna Dental Lecture Hall - 1
Wednesday 15th October 2025	Periodontology (Theory) Code: ALC-OP-001, ALC-OP-002, ALC-OP-003 Topic: Periodontal Disease: Terminology and Microbial Factors Facilitator: Dr. Ali Anwer Dental Lecture Hall - 1	PRISME (Dental Education) (Theory) Topic: AI Facilitator: Dr. Salar Dental Lecture Hall - 1	Oral Biology (Theory) Code: ALC-OB-004 Topic: Development of Supporting Tissues Facilitator: Dr. Raheela Dental Lecture Hall - 1	Break	General Pathology & Microbiology (Theory) Code: ALC-Pa-005 Topic: Systemic effects of acute inflammation Facilitator: Dr. Nabeeela Akram Dental Lecture Hall - 1	Oral Medicine (Practical) Code: ALC-DR004 + ALC-DR005 Topic: Normal Periodontal Structures on Radiographs + Alveolar Bone Observation and Level Assessment Facilitator: Dr. Anesj Departmental Lab	Oral Medicine (Practical) Code: ALC-DR006 + ALC-DR007 Topic: Periodontal Ligament Space Identification + Lamina Dura Identification Facilitator: Dr. Anesj Departmental Lab	Islamiat (Theory) Topic: Identification of Prayers Facilitator: Ms. Amna Dental Lecture Hall - 1
Thursday 16th October 2025	Oral Medicine (Theory) Code: ALC-DR001 Topic: Role of Radiology in Periodontal Disease Diagnosis Facilitator: Dr. Rubab Dental Lecture Hall - 1	Oral Biology (Theory) Code: ALC-OB-015 Topic: Alveolar Bone Structure and Function Facilitator: Prof. Dr. Sana Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: ALC-Pa-006 Topic: Microbes causing dental infections Facilitator: Dr. Hira Dental Lecture Hall - 1	Break	Oral Biology (Theory) Code: ALC-OB-015 Topic: Alveolar Bone Structure and Function Facilitator: Prof. Dr. Sana Dental Lecture Hall - 1	Periodontology (Practical) Code: ALC-OP-001, ALC-OP-002, ALC-OP-003, ALC-OP-004, ALC-OP-005, ALC-OP-006, ALC-OP-007, ALC-OP-008 Topic: Periodontal Disease: Terminology and Microbial Factors, Plaque Biofilm & Calculus in Disease, Host Interactions and Periodontal Maintenance Facilitator: Faculty Departmental Lab	Periodontology (Practical) Code: ALC-OP-001, ALC-OP-002, ALC-OP-003, ALC-OP-004, ALC-OP-005, ALC-OP-006, ALC-OP-007, ALC-OP-008 Topic: Periodontal Disease: Terminology and Microbial Factors, Plaque Biofilm & Calculus in Disease, Host Interactions and Periodontal Maintenance Facilitator: Faculty Departmental Lab	Pakistan Studies (Theory) Topic: Current Affairs Facilitator: Ms. Amna Dental Lecture Hall - 1
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 17th October 2025	Community Dentistry (Theory) Code: ALC-CD003 Topic: Gingivitis Indices in Community Health Facilitator: Dr. Syeda Tahira Dental Lecture Hall - 1	Periodontology (Theory) Code: ALC-OP-004, ALC-OP-005, ALC-OP-006, ALC-OP-007, ALC-OP-008 Topic: Plaque Biofilm, Calculus and Host Interactions Facilitator: Dr. Ali Anwer Dental Lecture Hall - 1	Oral Biology (Theory) Code: ALC-OB-015 Topic: Alveolar Bone Structure and Function Facilitator: Prof. Dr. Sana Dental Lecture Hall - 1	Oral Medicine (Theory) Code: ALC-DR002 Topic: Radiographic Features of Health and Disease Facilitator: Dr. Rubab Dental Lecture Hall - 1	Oral Biology (Practical) Code: ALC-OB-036 Topic: Cementoma mal Junction Facilitator: Dr. Anushey / Dr. Faveeh Departmental Lab	Jummah Break	Holy Quran (Theory) Topic: Concept of Doomsday Facilitator: Ms. Amna Dental Lecture Hall - 1	

Module 6 Timetable BDS 1st Year - D24								
Week - 24 20th October 2025 to 24th October 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 20th October 2025	Community Dentistry (Theory) Code: ALC-CD004 Topic: Periodontitis Measurement Methods Facilitator: Dr. Syeda Tahira Dental Lecture Hall - 1	Oral Biology (Theory) Code: ALC-OB-016 Topic: Alveolar Bone Age Changes and Clinical Relevance Facilitator: Prof. Dr Sana Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: ALC-Pa-007 Topic: Morphological patterns of acute inflammation Facilitator: Dr. Nabila Dental Lecture Hall - 1	Break	Oral Biology (Theory) Code: ALC-OB-005 Topic: Periodontal Ligament Structure Periodontal Ligament Fiber Groups Functional Adaptation of Periodontal Ligament Periodontal Ligament Clinical Relevance Facilitator: Dr Raheela Dental Lecture Hall - 1	Community Dentistry (Practical) Code: ALC-CD005 Topic: Indices in Community dentistry Facilitator: DrMomin Departmental Lab	Oral Biology (Practical) Code: ALC-OB-037 Topic: Cellular Cementum Facilitator: Dr Anushey / Dr Faseeh Departmental Lab	Islamiat (Theory) Topic: Obligatory Charity Facilitator: Ms. Amna Dental Lecture Hall - 1
Tuesday 21st October 2025	Oral Biology (Theory) Code: ALC-OB-017 Topic: Gingival Histology Gingival Fibers Gingival Blood and Nerve Supply Gingival Epithelium Dentogingival Junction, Mucogingival Junction Facilitator: Dr Raheela Dental Lecture Hall - 1	General Pathology & Microbiology (Theory) Code: ALC-Pa-008 & 009 Topic: Chronic inflammation, chronic inflammatory cells & mediators Facilitator: Dr. Nabila Dental Lecture Hall - 1	PRISME (Behavioural Sciences) (Theory) Topic: Community Participation, Mutual Respect, and Service Ethics Facilitator: Dr. Nausree Dental Lecture Hall - 1	Break	Community Dentistry (Theory) Code: ALC-CD004 Topic: Periodontitis Measurement Methods Facilitator: Dr. Syeda Tahira Dental Lecture Hall - 1	Oral Biology (Practical) Code: ALC-OB-039 Topic: Anatomical Zones of Gingiva and Gingival fibers Facilitator: Dr Anushey / Dr Faseeh Departmental Lab	General Pathology & Microbiology (Practical) Code: ALC-Pa-013 Topic: Differentiation of granulomatous & non-granulomatous inflammation Facilitator: Demonstrator Departmental Lab	Pakistan Studies (Theory) Topic: costitution of 1973 Facilitator: Ms. Amna Dental Lecture Hall - 1
Wednesday 22nd October 2025	Periodontology (Theory) Code: ALC-OP-009,ALC-OP-010 Topic: Predisposing Factors and Nutritional Aspects in Periodontal Disease Facilitator: Dr. Ali Ameer Dental Lecture Hall - 1	PRISME (Dental Education) (Theory) Topic: Diversity of Inclusion Facilitator: Dr Salar Dental Lecture Hall - 1	Oral Biology (Theory) Code: ALC-OB-017 Topic: Bone Cells and Molecular Regulation Facilitator: Prof. Dr Sana Dental Lecture Hall - 1	Break	General Pathology & Microbiology (Theory) Code: ALC-Pa-010 Topic: Pathogenesis of bacteria Facilitator: Dr. Hira Dental Lecture Hall - 1	Oral Medicine (Practical) Code: ALC-OR008 +ALC-DR009 Topic: Cementoene mel Junction Recognition + Cortical vs. Cancellous Bone Differentiation Facilitator: Dr. Areej Departmental Lab	General Pathology & Microbiology (Practical) Code: ALC-Pa-014 Topic: Clinical identification of chronic inflammation Facilitator: Demonstrator Departmental Lab	Islamiat (Theory) Topic: Importance of zakat Facilitator: Ms. Amna Dental Lecture Hall - 1
Thursday 23rd October 2025	Oral Medicine (Theory) Code: ALC-DR003 Topic: Interpretation of Radiographic Signs in Periodontal Disease Facilitator: Dr. Rubab Dental Lecture Hall - 1	Oral Biology (Theory) Code: ALC-OB-023 Topic: Tooth Eruption Phases Pre-eruptive Tooth Movement Eruptive Tooth Movement Mechanisms Post-eruptive Tooth Movements Facilitator: Integrated with Orthodontics Dental Lecture Hall - 1	General Pathology & Microbiology (Tutorial) Code: ALC-Pa-001 Topic: Acute inflammation Facilitator: Demonstrator Dental Lecture Hall - 1	Break	Oral Biology (Theory) Code: ALC-OB-023 Topic: Tooth Eruption Phases Pre-eruptive Tooth Movement Eruptive Tooth Movement Mechanisms Post-eruptive Tooth Movements Facilitator: Integrated with Orthodontics Dental Lecture Hall - 1	Periodontology (Practical) Code: ALC-OP-009,ALC-OP-010 Topic: Predisposing Factors and Nutritional Aspects in Periodontal Disease Facilitator: Faculty Departmental Lab	Oral Biology (Practical) Code: ALC-OB-038 Topic: Alveolar bone and bundle bone Facilitator: Dr Anushey / Dr Faseeh Departmental Lab	Pakistan Studies (Theory) Topic: Aims of Pakistan Facilitator: Ms. Amna Dental Lecture Hall - 1
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 24th October 2025	Assessment Slot	Assessment Slot	Assessment Slot	Assessment Slot	Oral Biology (Practical) Code: ALC-OB-038 Topic: Alveolar bone and bundle bone Facilitator: Dr Anushey / Dr Faseeh Departmental Lab	Jummah Break	Holy Quran (Theory) Topic: Concept of Doomsday Facilitator: Ms. Amna Dental Lecture Hall - 1	
Module Exam 9								

Allocation of Hours

1st Year BDS - D24

Block 2 - Module 6

Sr.	Subjects	Theory Hours	Practical Hours	Total Hours
1	Oral Biology & Tooth Morphology	13	7	20
2	Community Dentistry	3	2	5
3	Dental Radiology (Oral Diagnosis/Oral Medicine)	3	3	6
4	Periodontology	3	3	6
5	General Pathology & Microbiology	8	3	11
TOTAL		30	18	48

Modular Outcomes

Module Name	Modular Outcomes
Block 2 Module 6 Alveocemental Complex	<ul style="list-style-type: none">• Knowledge-Based Learning Outcomes: Describe the histological features, composition, and structural organization of the periodontal ligament (PDL), cementum, alveolar bone, and gingiva.• Explain the functional roles of each component in the alveo-cemental complex in maintaining tooth support and stability.• Identify the adaptive and regenerative capacities of periodontal tissues, including bone remodeling and cementum deposition.• Skill-Based Learning Outcomes: Analyze histological slides of the PDL, cementum, alveolar bone, and gingiva to identify their structural features and clinical relevance.• Attitude-Based Learning Outcomes: Appreciate the complexity and interdependence of the alveolar cemental complex in maintaining oral health. Demonstrate an understanding of the importance of histological knowledge in diagnosing and managing periodontal and developmental conditions.• Develop an awareness of the role of scientific inquiry in advancing knowledge of periodontal tissue biology and its applications in dentistry.

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
2024-2 025		23	Oral Biology	1	1	Theory (Lecture)	Periodontium overview	ALC-OB - 001	Define the alveolo-cemental complex (periodontium) and explain its role in dental support. Identify its components (cementum, PDL, alveolar bone, gingiva) and their diagrammatic arrangement around the tooth. Recognize and define key terms (e.g., cementoid, Sharpey's fibers, proprioception) related to alveolo-cemental complex	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Raheela
2024-2 025		23	Oral Biology	1	2	Theory (Lecture)	Types of Cementum, Cellular vs Acellular Cementum	ALC-OB -010	Classify and explain the structure of different types of cementum and their properties.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Prof. Dr Sana
2024-2 025		23	Oral Biology	1	3	Theory (Lecture)	Cementum Attachment Apparatus Cementum Resorption and Repair Cementum Clinical Relevance	ALC-OB -011	Describe the role of cementum in the attachment apparatus. Describe resorption and repair of cementum and age changes. Relate the study of cementum with developmental disturbances and clinical implications.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Prof. Dr Sana

2024-2 025		23	Oral Biology	1	4	Theory (Lecture)	Development of Supporting Tissues	ALC-OB -004	Discuss the development of Supporting Tissues	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Raheela
2024-2 025		23	Oral Biology	1	5	Theory (Lecture)	Alveolar Bone Structure and Function	ALC-OB -015	Describe the structure and functions of alveolar bone.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Sana
2024-2 025		23	Oral Biology	1	1	Practical	Periodontal Ligament Cross-Section, Principal fiber Groups Arrangement	ALC-OB - 033	Draw and label the periodontal ligament in a cross-section between teeth. Periodontal Ligament Cross-Section Draw and label the arrangement of principal fiber groups within the periodontium.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Anushey / Dr Faseeh
2024-2 025		23	Oral Biology	1	2	Practical	Cementoblast Differentiation and HERS Fragmentation	ALC-OB - 035	Draw and label the differentiation of cementoblasts from ectomesenchymal cells & the fragmentation of Hertwig's epithelial root sheath.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Anushey / Dr Faseeh
2024-2 025		23	Oral Biology	1	3	Practical	Cementoena mel Junction	ALC-OB - 036	Draw and label the cemento enamel junction.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Anushey / Dr Faseeh

2024-2 025		23	General Pathology & Microbiology	1	1	Theory (Lecture)	Acute Inflammation in Dental Condition	ALC-Pa-001 & 002	Define acute inflammation & enlist stimuli for acute inflammation	1	Robins 11th Edition	Dr. Nabeela Akram
2024-2 025		23	General Pathology & Microbiology	1	2	Theory (Lecture)	Chemical mediator of acute inflammation. Vascular & cellular events in acute inflammation	ALC-Pa-003 & 004	Classify chemical mediator & explain vascular & cellular events in acute inflammation	1	Robins 11th Edition	Dr. Nabeela Akram
2024-2 025		23	General Pathology & Microbiology	1	3	Theory (Lecture)	Systemic effects of acute inflammation	ALC-Pa-005	Describe systemic effects of acute inflammation	1	Robins 11th Edition	Dr. Nabeela Akram
2024-2 025		23	General Pathology & Microbiology	1	4	Theory (Lecture)	Microbes causing dental infections	ALC-Pa-006	Recognise microbes causing acute inflammation in dental infections	1	Levinson 19th Edition	Dr. Hira
2024-2 025		23	General Pathology & Microbiology	1	1	Practical	Histological identification of acute inflammation. Clinical examination of acute inflammation	ALC-Pa-011 & 012	Identify histological slides of acute inflammation & perform clinical examination	1	-	Demonstrator
2024-2 025		23	Community Dentistry	1	1	Theory (Lecture)	Periodontal Indices	ALC-CD 001 ALC-CD 002	Define the key periodontal indices used in epidemiological studies, including indices for gingivitis, periodontitis, and plaque assessment. Explain the principles and methodology for measuring	1	Joseph John	Dr. Syeda Tahira

									periodontal diseases in population-based studies.			
2024-2025		23	Community Dentistry	1	2	Practical	Indices in Community dentistry	ALC-CD 005	CPITN	1	Community and Preventive Dentistry Log Book	Dr.Momin
2024-2025		23	Periodontology	1	1	Theory (Lecture)	Periodontal Disease: Terminology and Microbial Factors	ALC-OP-001 ALC-OP-002 ALC-OP-003	. Define key terminologies related to periodontal diseases: Gingivitis, periodontitis, periodontal pockets, clinical attachment level and periodontal bone loss. . Identify the microbial composition of healthy gingival and periodontal tissues. Explain the role of commensal bacteria in maintaining periodontal homeostasis. . List key bacterial species involved in periodontal disease (e.g., Porphyromonas gingivalis, Tannerella forsythia, Treponema denticola).	1	Carranza 14th Edition	Dr. Ali Anwer

2024-2025		23	Periodontology	1	2	Practical	Periodontal Disease: Terminology and Microbial Factors, Plaque Biofilm & Calculus in Disease, Host Interactions and Periodontal Maintenance	ALC-OP-001, ALC-OP-002, ALC-OP-003, ALC-OP-004, ALC-OP-005, ALC-OP-006, ALC-OP-007, ALC-OP-008	<p>. Define key terminologies related to periodontal diseases: Gingivitis, periodontitis, periodontal pockets, clinical attachment level and periodontal bone loss. . Identify the microbial composition of healthy gingival and periodontal tissues. Explain the role of commensal bacteria in maintaining periodontal homeostasis. . List key bacterial species involved in periodontal disease (e.g., Porphyromonas gingivalis, Tannerella forsythia, Treponema denticola).</p> <p>. Explain how bacterial enzymes, toxins, and metabolic byproducts contribute to tissue destruction . What is Plaque biofilm and how is it form and what is its role in periodontal diseases. . Describe dental plaque biofilm as the major factor contributing to development of periodontal disease, and its relationship with host, genetic and local predisposing factors in exacerbating periodontal conditions. . Demonstrate the adherent nature of plaque and the inability to visualize easily. Describe why it is important to disclose plaque; and demonstrate the need for</p>	1	Carranza 14th Edition	Faculty
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									mechanical plaque removal both by the patient and professionally . Explain the role of dental calculus in periodontal disease, differentiate between supragingival and subgingival calculus, describe the formation, mineralization, and microbial composition of calculus, and explain how calculus acts as a plaque-retentive surface contributing to periodontal disease progression.			
2024-2 025		23	Oral Medicine	1	1	Theory (Lecture)	Role of Radiology in Periodontal Disease Diagnosis	ALC-DR 001	Define the role of radiology in diagnosing and assessing periodontal diseases	1		Dr. Rubab
2024-2 025		23	Oral Medicine	1	1	Practical	Normal Periodontal Structures on Radiographs + Alveolar Bone Observation and Level Assessment	ALC-DR 004 + ALC-DR 005	Identify normal periodontal structures on radiographs (OPG and periapical). Observe alveolar bone and assess bone levels.	1		Dr. Areej

2024-2 025		23	Oral Medicine	1	2	Practical	Periodontal Ligament Space Identification + Lamina Dura Identification	ALC-DR 006 + ALC-DR 007	Identify the periodontal ligament (PDL) space on radiographs. Identify the lamina dura on radiographs	1		Dr. Areej
2024-2 025		23	PRISME (Behavioural Sciences)	1	1	Lecture	Understanding Social Determinants of Oral Health		Define key social determinants affecting oral health. Explain the impact of income, education, and housing on oral hygiene behaviors. Identify social barriers to accessing oral health services. Apply real-world examples showing how non-clinical factors influence oral health behaviors	1		Dr. Farhat
2024-2 025		23	PRISME (Community Dentistry)	1	2	Theory (Lecture)	Research Cycle		Identify and describe key stages of the research cycle	1	Text Book of Preventive & Community Dentistry (S.S Hiremath 2nd Edition)	Dr. Lubna Yousaf
2024-2 025		23	PRISME (Dental Education)	1	3	Lecture	AI			1		Dr Salar
2024-2 025		23	Community Dentistry	1	1	Theory* (Module 6)	Gingivitis Indices in Community Health	ALC-CD 003	Describe various indices used for measuring gingivitis (e.g., Löe & Silness Gingival Index) and their significance in assessing community oral health.	1	Joseph John	Dr. Syeda Tahira

2024-2 025		23	Periodontology	1	1	Theory* (Module 6)	Plaque Biofilm, Calculus and Host Interactions	ALC-OP -004, ALC-OP -005,AL C-OP-0 06 ,ALC-OP -007, ALC-OP -008	<p>. Explain how bacterial enzymes, toxins, and metabolic byproducts contribute to tissue destruction . What is Plaque biofilm and how is it form and what is its role in periodontal diseases. . Describe dental plaque biofilm as the major factor contributing to development of periodontal disease, and its relationship with host, genetic and local predisposing factors in exacerbating periodontal conditions. . Demonstrate the adherent nature of plaque and the inability to visualize easily. Describe why it is important to disclose plaque; and demonstrate the need for mechanical plaque removal both by the patient and professionally . Explain the role of dental calculus in periodontal disease, differentiate between supragingival and subgingival calculus, describe the formation, mineralization, and microbial composition of calculus, and explain how calculus acts as a plaque-retentive surface contributing to periodontal disease progression. .</p>	1	Carranza 14th Edition	Dr. Ali Anwer
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2024-2 025		23	Oral Medicine	1	1	Theory* (Module 6)	Radiographic Features of Health and Disease	ALC-DR 002	Explain the radiographic features of healthy periodontium and pathological changes seen in gingivitis and periodontitis	1		Dr Rubab
2024-2 025		23	Oral Biology	1	1	Theory* (Module 6)	Alveolar Bone Structure and Function	ALC-OB -015	Describe Alveolar Bone Structure and Function	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Sana
2024-2 025		23	Holy Quran	1	1	Theory Lecture	concep of doomsday		describe the dooms day	1	Notes	Ms Amna
2024-2 025		23	Islamiyat	1	1	Theory (Lecture)	Identification of Prayers		identify the conditions in which relaxation in prayers allowese.g during travel	1	Notes	Ms Amna
2024-2 025		23	Islamiyat	1	2	Theory (Lecture)	Identification of Prayers		identify the conditions in which relaxation in prayers allows e.g during operation		Notes	Ms Amna
2024-2 025		23	Pak Studies	1	1	Theory (Lecture)	Rural Area Problems		Describe the problems which Rural area face	1	Notes	Ms Amna
2024-2 025		23	Pak Studies	1	2	Theory (Lecture)	Current Affairs		Describe the current affair of Pakistan	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		24	Oral Biology	1	1	Theory (Lecture)	Alveolar Bone Age Changes and Clinical Relevance	ALC-OB-016	Elaborate its changes with age and its clinical considerations.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Sana
2024-2025		24	Oral Biology	1	2	Theory (Lecture)	Periodontal Ligament Structure Periodontal Ligament Fiber Groups Functional Adaptation of Periodontal Ligament Periodontal Ligament Clinical Relevance	ALC-OB-005	Enlist the structure and function of the periodontal ligament. Describe the different groups of fibers in the periodontal ligament. Describe the adaptation of the periodontal ligament to the functional demands. Relate the study of the periodontal ligament with developmental disturbances and clinical implications.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Raheela
2024-2025		24	Oral Biology	1	3	Theory (Lecture)	Gingival Histology Gingival Fibers Gingival Blood and Nerve Supply Gingival Epithelium Dentogingival	ALC-OB-017	Describe the histological aspects of gingiva. Enumerate gingival fibers & their functions. Tabulate blood and nerve supply of gingiva Describe the structural and	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Raheela

							Junction, Mucogingival Junction		functional characteristics of different areas of Gingival epithelium Explain the structure of dentogingival junction. Explain the structure of mucogingival junction.			
2024-20 25		24	Oral Biology	1	4	Theory (Lecture)	Bone Cells and Molecular Regulation	ALC-OB- 017	Describe the histology of bone cells and their molecular regulation.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Sana
2024-20 25		24	Oral Biology	1	5	Theory (Lecture)	Tooth Eruption Phases Pre-eruptive Tooth Movement Eruptive Tooth Movement Mechanisms Post-eruptive Tooth Movements	ALC-OB- 023	Explain orthodontic tooth movement. Orthodontic Tooth Movement Describe the investing layer associated with the crowns of unerupted teeth.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Integrated with Orthodontics
2024-20 25		24	Oral Biology	1	1	Practical	Cellular Cementum	ALC-OB- 037	Draw and label cellular cementum.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Anushey / Dr Faseeh
2024-20 25		24	Oral Biology	1	2	Practical	Anatomical Zones of Gingiva and Gingival fibers	ALC-OB- 039	Draw and label different anatomical zones of gingiva; mucocutaneous junction, mucogingival junction, dentogingival junction & gingival group of fibers (gingival	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Anushey / Dr Faseeh

									ligament).			
2024-2025		24	Oral Biology	1	3	Practical	Alveolar bone and bundle bone	ALC-OB-038	Draw and label alveolar bone and bundle bone.	1	Ten Cate's Oral Histology: Development, Structure, and Function	Dr Anushey / Dr Faseeh
2024-2025		24	General Pathology & Microbiology	1	1	Theory (Lecture)	Morphological patterns of acute inflammation	ALC-Pa-007	Analyse morphological patterns of acute inflammation	1	Robins 11th Edition	Dr. Nabila
2024-2025		24	General Pathology & Microbiology	1	2	Theory (Lecture)	Chronic inflammation, chronic inflammatory cells & mediators	ALC-Pa-008 & 009	Define chronic inflammation. Identify chronic inflammatory cells	1	Robins 11th Edition	Dr. Nabila
2024-2025		24	General Pathology & Microbiology	1	3	Theory (Lecture)	Pathogenesis of bacteria	ALC-Pa-010	Discuss porphyromonas & fusobacterium with its pathogenesis	1	Levinson 19th Edition	Dr. Hira
2024-2025		24	General Pathology & Microbiology	1	4	Tutorial	Acute inflammation	ALC-Pa-001	Define acute inflammation	1	Robins 11th Edition	Demonstrator
2024-2025		24	General Pathology & Microbiology	1	1	Practical	Differentiation of granulomatous & non-granulomatous inflammation	ALC-Pa-013	Distinguish between granulomatous & non-granulomatous inflammation in histological slides	1	Pathology	Demonstrator
2024-2025		24	General Pathology & Microbiology	1	2	Practical	Clinical identification of chronic inflammation	ALC-Pa-014	Identify clinical signs of chronic inflammation	1	Pathology	Demonstrator

2024-20 25		24	Community Dentistry	1	1	Theory (Lecture)	Periodontitis Measurement Methods	ALC-CD00 4	Discuss the different periodontitis measurement methods, including the Community Periodontal Index (CPI) and clinical attachment loss (CAL).	1	Joseph John	Dr. Syeda Tahira
2024-20 25		24	Community Dentistry	1	2	Practical	Indices in Community dentistry	ALC-CD00 5	CPITN	1	Community and Preventive Dentistry Log Book	Dr.Momin
2024-20 25		24	Periodontolo gy	1	1	Theory (Lecture)	Predisposing Factors and Nutritional Aspects in Periodontal Disease	ALC-OP-0 09 ALC-OP-0 10	<p>. Enlist other predisposing factors (other than calculus) that predispose to plaque formation and consequent periodontal disease like gingivitis.</p> <p>. Describe the etiology and pathogenesis of scurvy with emphasis on the biochemical role of Vitamin C in collagen synthesis and its clinical implications on periodontal tissue integrity</p>	1	Carranza 14th Edition	Dr. Ali Anwer

2024-2025		24	Periodontology	1	2	Practical	Predisposing Factors and Nutritional Aspects in Periodontal Disease	ALC-OP-009 ALC-OP-010	<p>. Should know other predisposing factors (other than calculus) that predispose to plaque formation and consequent periodontal disease like gingivitis.</p> <p>. Should be able to describe the etiology and pathogenesis of scurvy with emphasis on the biochemical role of Vitamin C in collagen synthesis and its clinical implications on periodontal tissue integrity</p>	1	Carranza 14th Edition	Faculty
2024-2025		24	Oral Medicine	1	1	Theory (Lecture)	Interpretation of Radiographic Signs in Periodontal Disease	ALC-DR003	Interpret key radiographic signs of periodontal disease, including crestal bone loss, widening of the periodontal ligament space, and calculus deposits.	1		Dr. Rubab
2024-2025		24	Oral Medicine	1	1	Practical	Cemento-enamel Junction Recognition + Cortical vs. Cancellous Bone Differentiation	ALC-DR008 +ALC-DR009	Recognize the cemento-enamel junction (CEJ) on radiographs. Differentiate between cortical and cancellous bone on radiographs	1		Dr. Areej

2024-20 25		24	PRISME (Behavioural Sciences)	1	1	Lecture	Community Participation, Mutual Respect, and Service Ethics		Discuss the importance of mutual respect in community engagement. Describe ethical practices for health promotion in dentistry. Explain informed consent in the context of community dental outreach. Assess the role of cultural sensitivity in ethical community and dental services	1		Dr. Naurose
2024-20 25		24	PRISME (Community Dentistry)	1	2	Theory (Lecture)	Literature Review I IMRAD article: Resource: How to critically appraise a research paper (Derek Alderson)		Identify the structure of research article (IMRAD) Critically review scientific papers (Observational Studies only). Identify problem and gap in scientific literature	1	Text Book of Preventive & Community Dentistry (S.S Hiremath 2nd Edition	Dr.Lubna Yousaf
2024-20 25		24	PRISME (Dental Education)	1	3	Lecture	Diversity of Inclusion			1		Dr Salar
2024-20 25		24	Holy Quran	1	1	Theory Lecture	Concept of Doomsday		describe the doomsday and its various stage	1	Notes	Ms Amna
2024-20 25		24	Islamiyat	1	1	Theory (Lecture)	Obligatory Charity		Zakkat	1	Notes	Ms Amna
2024-20 25		24	Islamiyat	1	2	Theory (Lecture)	Importance of zakkat		Identify the importance of zakkat	1	Notes	Ms Amna
2024-20 25		24	Pak Studies	1	1	Theory (Lecture)	costitution of 1973		describe the basic point of constitution of 1973	1	Notes	Ms Amna

2024-20 25		24	Pak Studies	1	2	Theory (Lecture)	Aims of Pakistan		describe the aims and beleifs of Pakistan	1	Notes	Ms Amna
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Operational Definitions

Traditional & Innovative Teaching Methodologies

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

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

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>Younge 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	Block 1 Exam (Theory)	Complete Block 1 Syllabus
14	15th July 2025	Tuesday	General Pathology & Microbiology Pharmacology Community Dentistry Oral Pathology Operative Dentistry	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	Block 2 Exam (Theory)	Complete Block 2 Syllabus
25	28th October 2025	Tuesday	Community Dentistry Dental Radiology (Oral Diagnosis/Oral Medicine) Periodontology	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	Block 3 Exam (Theory)	Complete Block 3 Syllabus
	20th January 2025	Tuesday	Pharmacology Oral Biology & Tooth Morphology Oral Pathology Community Dentistry	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 2 - ASSESSMENT PARAMETERS AND DIVISION OF MARKS							
Subject	Written Exam			Oral/Practical Exam			
	MCQ (1 mark and 1 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	18	2	26	1	0	1	15
Physiology	14	2	22	0	1	1	15
Biochemistry	6	1	10	0	0	1	6
Oral Biology	14	2	22	2	0	1	24
General Pathology & Microbiology	12	1	16	1	0	1	15
Pharmacology	9	1	13	0	0	1	6
Community Dentistry/ Dental Radiology	3	0	3	1	1	1	24
Oral Pathology-Periodontology	4	1	8	1	0	1	15
Total Questions	80	10		6	2	8	
Net Total	80x1=80	10x4=40	120	6x9=54	2x9=18	8x6=48	120
Internal Assessment Marks*	30			30			
Grand Total	150			150			

Table of Specification

Block 2 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 $> 90\% \leq 93\%$ = 3 marks 3. if $> 93\% \leq 95\%$ = 5 marks 3. if $> 95\%$ = 6 marks		
Block 2 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 85 % = Eligible 2. if $> 90\% \leq 93\%$ = 3 marks 3. if $> 93\% \leq 95\%$ = 5 marks 3. if $> 95\%$ = 6 marks		

Recommended Books & Reading Resources

Block 2: Learning Resources

Subject	Learning Resources
Physiology	1. Guyton & Hall. Textbook of Medical Physiology (14th ed.).
Anatomy	1. Snell's: Neuroanatomy 2. General Anatomy by Laiq Hussain Siddiqui
Histology	1. Medical Histology: Text and Atlas by Laiq Hussain Siddiqui
Biochemistry	1. Harper's Illustrated Biochemistry (32nd ed.) by Rodwell et al. 2. Lippincott Illustrated Reviews: Biochemistry (8th ed.) by Abali et al.
Pathology & Microbiology	1. Robbins & Cotran Pathologic Basis of Disease 2. Review of Medical Microbiology and Immunology by Levinson
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
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.)
Gross Anatomy	1. Snell's Clinical Anatomy by Regions (12th ed.)
Physiology	1. Guyton & Hall. Textbook of Medical Physiology (14th ed.)
Biochemistry	1. Harper's Illustrated Biochemistry (32nd ed.) by Rodwell et al. 2. Lippincott Illustrated Reviews: Biochemistry (8th ed.) by Abali et al.
Microbiology	1. Levinson, W. Review of Medical Microbiology and Immunology (16th ed.)
Pharmacology	1. Vanderah, T. W. Katzung's Basic & Clinical Pharmacology (16th 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.

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About Avicenna Medical College

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

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

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

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	<p>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</p> <p>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.</p> <p>Two 50- inch LCD screens provide students an opportunity to get entertained during their meal times.</p>
8.	Gymnasium & Sports	<p>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.</p> <p>The gym itself is fully equipped with modern machinery both for students and faculty.</p>
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. Gulfreem 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.