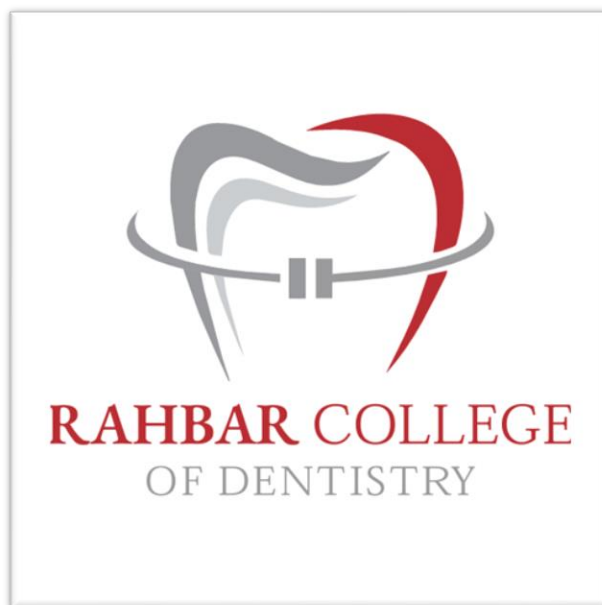




BDS INTEGRATED CURRICULUM
2k25 Version 2.0

1st Year BDS
Session 25-26

Block-1
Study Guide

Module 1	Module 2	Module 3
Foundation I	Craniofacial I	Cariology I



TABLE OF CONTENTS

MISSION AND VISION OF UHS	3
MISSION AND VISION OF RCoD.....	3
LIST OF ABBREVIATIONS	4
CURRICULUM FRAMEWORK.....	6
PRINCIPAL MESSAGE	7
STUDY GUIDE COMPILATION.....	8
ACADEMIC SCHEDULE BLOCK-1	9
TIME TABLE.....	10
Block Coordinators/ Subject in Charges.....	11
Module no. 1.....	12
Module no. 2.....	24
Module no. 3.....	33
PRISME	41
CFRC	44
The Holy Quran.....	46
Islamiyat & Pakistan Studies.....	54
CIVICS.....	57
Teaching Methodologies.....	62
ASSESSMENT	66
Learning Resources	72
LEARNING RESOURCES.....	72



MISSION AND VISION OF UHS

Vision Statement:

UHS is a leading university aiming to keep its graduates apt with the ever-emerging global health challenges, evolving educational methodologies and emerging technological advancements to maintain its distinguishable position as a medical university.

Mission Statement:

UHS shall continue to strive for producing a human resource par at excellence to cater for the health needs of the people of Punjab and Pakistan.

MISSION AND VISION OF RCoD

Vision Statement:

To be a leading institution, producing globally competent health professionals through multidisciplinary integrated teaching to advance oral healthcare services and tackle local and global challenges with excellence in education, research, and innovation.

Mission Statement:

To train health professional students in an innovative educational environment, through revolutionary dental education, focusing on state-of-the-art clinical skills, patient care, national community health services, global research and technological advancements, to produce competent caregivers and life-long learners.

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
Enr	Endocrinology
HR	Hepatorenal
GDC	General Dental Council
Ph	Pharmacology
P	Physiology
Pa	Pathology
PD	Prosthodontics
OB	Oral Biology
OP	Oral Pathology
CD	Community Dentistry
OD	Operative Dentistry
OM	Oral Medicine
ALC	Alveo-Cemental Complex
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
DR	Dental Radiology

DEPARTMENT OF DENTAL EDUCATION

DM	Dental Materials
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
NS	Neurosciences
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 Dentaria 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 2.0

Year-1

Modules

Block-1

1. Foundation-1
2. Craniofacial-1
3. Cariology-1

Block-2

4. Foundation-2
5. Craniofacial-2
6. Neurosciences-1
7. Alveo-Cemental Complex-1

Block-3

8. Blood & Cardiovascular system-1
9. Gastrointestinal Tract
10. Occlusion-1

PRISME Year 1

Professionalism, Research, Informatics (dental), Social Responsibility, Management/ Entrepreneurship & Evidence based Dentistry

CFRC Year 1

Clinical Foundation Rotation Clerkships

Islamiyat/Civis & Pakistan Studies

DEPARTMENT OF DENTAL EDUCATION

PRINCIPAL MESSAGE



At RCoD, our mission is to create a supportive and innovative learning environment where students can excel academically, professionally, and personally. Through rigorous academic programs, hands-on clinical experiences, and opportunities for cutting-edge research, we empower our students to become compassionate and skilled dental professionals ready to address the diverse needs of our global community.

Beyond educating dental experts, we aim to nurture qualities of compassion, integrity, and a commitment to lifelong learning in our students.

Warm regards
Principal
Rahbar College of Dentistry
Prof. Dr. Muhammad Nasir Saleem



STUDY GUIDE COMPILATION

This study guide has been thoughtfully compiled by the **Department of Dental Education** to support and enhance the academic preparation of our students. Every effort has been made to ensure that the content is comprehensive, accurate, and aligned with the curriculum requirements.

Compiled by:
 Dr. Afifa Zafar Mian
 Demonstrator
 Department of Dental Education



ACADEMIC SCHEDULE BLOCK-1

Block-1 Start Date	2 nd March 2026
Mid – Block Exam	13 th - 14 th April 2026
Block-1 Exam	27 th and 29 th May 2026
Block-1 Ends Date	29 th May 2026

TIME TABLE

First Year BDS 2k25 Block-1 Time Table									
Rahbar College of Dentistry, Lahore									
Day	8:00 - 8:50am	8:50-09:40am	09:40-10:30am	10:30am -11:20am	11:20am -12:10pm	Break 12:10-12:30pm	12:30 -1:20pm	1:20-2:10pm	2:10-3:00pm
Monday	Biochemistry <i>Interactive Lecture</i>	Physiology <i>Interactive Lecture</i>	Anatomy <i>Interactive Lecture</i>	Oral Biology <i>Interactive Lecture/CBD</i>	Oral Biology <i>Interactive Lecture</i>	Break	Pharmacology <i>Interactive Lecture</i>	G. Pathology <i>Interactive Lecture</i>	PRISME <i>Lecture</i>
Tuesday	Islamiyat <i>Interactive Lecture</i>	Anatomy <i>Interactive Lecture</i>	Oral Biology <i>Interactive Lecture</i>	Oral Biology <i>Interactive Lecture</i>	Research <i>Interactive Lecture</i>		Anatomy <i>Interactive Lecture</i>	Biochemistry <i>Interactive Lecture</i>	Operative/Oral Path <i>Lecture</i>
Wednesday	Community Dentistry <i>Interactive Lecture</i>	Biochemistry <i>Interactive Lecture</i>	Oral Biology <i>Interactive Lecture</i>	Oral Biology <i>Interactive Lecture/Integrated Session</i>	Anatomy <i>Interactive Lecture</i>		Oral Pathology <i>Interactive Lecture</i>	Anatomy <i>Interactive Lecture</i>	Pak Studies <i>Lecture</i>
Thursday	Oral Biology <i>Practical</i>	Oral Biology <i>Practical</i>	Anatomy <i>Interactive Lecture</i>	Biochemistry <i>Interactive Lecture</i>	Community Dentistry <i>Interactive Lecture</i>		CFRC Clinical foundation Rotation clerkships		Anatomy <i>Interactive lecture</i>
Friday	8:00 - 8:50am	8:50-09:40am	09:40-10:30am	10:30am -11:20am	11:20am -12:10pm	12:10- 1:00pm	Break 1:00- 2:00pm	2:00-3:00pm	
	Physiology <i>Interactive Lecture</i>	Anatomy <i>Interactive Lecture</i>	Pharmacology <i>Interactive Lecture</i>	Biochemistry <i>Interactive Lecture/Practical</i>	Biochemistry <i>Interactive Lecture/Practical</i>	Behavioural Sciences <i>Interactive Lecture</i>	Break	Integrated Session	
All lectures will be held in Lecture hall 1									
For SGD Group A Roll no 1 to 25 and Group 2 Roll no. 26 to 50.									
Integrated session will be held every 3 or 4 week as required.									

Block Coordinators/ Subject in Charges

Coordinators

HOD Oral Biology/ Year Coordinator	Prof. Dr. Asad Mehmood
HOD Biochemistry / Practical Exam Coordinator	Prof. Dr. Afshan Zareen Bilal

Block-1 Subject In-charges

HOD Operative Dentistry/ Principal	Prof. Dr. Muhammad Nasir Saleem
HOD Community Dentistry	Prof Dr. Fahad Mehtab Ud Din Dogar
HOD Anatomy	Prof. Dr. Attiya Mubarak
HOD Oral Biology	Prof. Dr. Asad Mehmood
HOD Physiology	Prof. Dr. Saima Rizwan
HOD Biochemistry	Prof. Dr. Afshan Zareen Bilal
HOD Pharmacology	Prof. Ahmad Alamgir
HOD Oral Pathology	Prof. Dr. M. Behzad Salahuddin
HOD General Pathology	Dr. Maria Noor (Focal Person)
HOD Islamiyat/ Quran/ Pak Studies	Mrs. Areeba Altaf
PRISME Domain Professionalism, Social Science Domain Research Domain Management & Entrepreneurship Domain Informatics	Dr. Sadia Imran Cheema Prof Dr. Hina Zafar Raja Prof Dr. Fahad Mehtab Talal Ahmad, Umer Bhatti



RAHBAR COLLEGE
OF DENTISTRY

Module no. 1

FOUNDATION-1



MODULE RATIONALE

The Foundation I module establishes the basic scientific framework necessary for understanding the structure and function of the human body in health and disease, with relevance to dental practice. It introduces students to the core principles of anatomy, histology, physiology, biochemistry, and oral biology, providing an integrated view of how the human body is organized and maintained.

Students also gain an early appreciation of pathology and community dentistry, fostering an understanding of disease processes and preventive strategies from a population perspective. By building connections between foundational biomedical sciences and their clinical applications, the module prepares students to approach oral health within the broader context of general health, patient care, and community well-being.

MODULE OUTCOMES

- Describe the normal structure and function of the human body, with emphasis on head and neck anatomy and oral tissues.
- Explain the basic physiological mechanisms that maintain homeostasis and support body function relevant to dental practice.
- Correlate biochemical structures and pathways with cellular functions, emphasizing their role in oral and systemic health.
- Identify microscopic features of cells, tissues, and organs, and relate them to their physiological and functional significance.
- Recognize the basic mechanisms of cell injury, necrosis, and apoptosis as foundations for understanding disease processes.
- Apply fundamental knowledge of community and preventive dentistry to concepts of health promotion and disease prevention at both individual and population levels.
- Integrate concepts from basic medical sciences to explain the relationship between general body function and oral health.
- Demonstrate professional attitudes and curiosity toward scientific learning, teamwork, and ethical conduct in foundational medical and dental sciences.

SUBJECTS INTEGRATED IN THE MODULE

- **Anatomy**
- **Physiology**
- **Biochemistry**
- **Oral Biology & Tooth Morphology**
- **Community & Preventive Dentistry**
- **General Pathology & Microbiology**
- **Pharmacology & Therapeutics**

THEORY				
GENERAL ANATOMY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-A-001	Define the various branches of Anatomy.	Introduction to Human Anatomy: Definitions, Terminology, and Planes	LGIS/SGD	MCQS
	Describe the anatomical position, anatomical planes of the body, and anatomical terms related to position, movement, and laterality.			
F1-A-002	Classify bones based on region, size and shape providing examples of each from the head and neck	Osteology	LGIS/SGD	MCQS
	Discuss the structural characteristics of compact and spongy bones			
	Describe the structure of an adult long bone.			
	Define ossification and rule of ossification. Describe the blood supply of various types of long bones			
F1-A-003	Describe the structural classification of Joints (fibrous, cartilaginous and synovial) along with their sub-classifications with examples of each Enlist the general characteristics of synovial joints Enlist the factors stabilizing a synovial joint Describe Hilton's Law	Joints	LGIS/SGD	MCQS
F1-A-004	Discuss and differentiate the gross features of hyaline, elastic and fibrocartilage	Cartilage	LGIS/SGD	MCQS
HISTOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-A-005	List the membranous and non-membranous organelles of the cell, describe their structure, and correlate each with its function	Cell	LGIS/SGD	MCQS
	Describe the structure of different types of cell junctions			
F1-A-006	Classify and exemplify the epithelia with their histological structure, locations, and functions	Epithelia	LGIS/SGD	MCQS
	Describe apical specializations of epithelia (microvilli, stereocilia and cilia) and the basement membrane.			

	Classify and exemplify the exocrine glands on the basis of the shape of secretory portions and ducts, mode of secretion, and type of secretion			
F1-A-007	List the cells of connective tissue with their functions.	Connective Tissue	LGIS/SGD	MCQS
	Describe the composition of the ground substance and the types and structure of fibers in connective tissue.			
	Classify connective tissue and describe its functions and provide relevant examples.			
EMBRYOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-A-008	Briefly describe mitosis and meiosis.	Cell Division and Gametogenesis	LGIS/SGD	MCQS
	Describe oogenesis, spermatogenesis, spermiogenesis, and embryological basis of teratoma.			
F1-A-009	Define fertilization, phases of fertilization, capacitation and acrosomal reaction.	Fertilization and Early Development	LGIS/SGD	MCQS
	Explain outcomes of fertilization.			
	Describe cleavage, morula, blastocyst formation, and implantation.			
F1-A-010	Describe embryonic disc, amniotic cavity, yolk sac, and gastrulation.	Formation of the Embryonic Disc and Germ Layers	LGIS/SGD	MCQS
	Explain gastrulation and derivatives of the three germ layers.			
	Explain derivatives of ectoderm, mesoderm, and endoderm.			
PHYSIOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-P-001	Define homeostasis and explain its importance in maintaining the internal environment.	Homeostasis : Control of Internal Environment	LGIS/SGD	MCQS
	Differentiate between extracellular and intracellular Fluids (with special emphasis on comparing the concentration of sodium, potassium, and calcium ions)			

F1-P-002	Explain the principles of positive, negative, and feed-forward control mechanisms with examples.	Control Systems of the Body	LGIS/SGD	MCQS
F1-P-003	Describe the functions of cell organelles, including nucleus, endoplasmic reticulum, Golgi apparatus, lysosomes, peroxisomes, mitochondria, and ribosomes.	Cell and its Organelles and their Functions	LGIS/SGD	MCQS
	Differentiate between the functions of smooth and rough endoplasmic reticulum			
F1-P-004	Enumerate the components and functions of the cytoskeleton	Cell Structure and Membrane Organization	LGIS/SGD	MCQS
	Describe the structure of the cell membrane and fluid mosaic model.			
F1-P-005	Explain the mechanisms of endocytosis and exocytosis, including pinocytosis and phagocytosis.	Functional Systems of Cell	LGIS/SGD	MCQS
F1-P-006	Describe the mechanisms of simple diffusion, facilitated diffusion, osmosis, and active transport, and ion channels	Transport of Substance through Cell Membrane	LGIS/SGD	MCQS
	Compare features of simple and facilitated diffusion with examples			
	Describe primary and secondary active transport with examples			
F1-P-007	Enlist the composition of blood, its cellular elements, and plasma. (Expanded with hematocrit, PCV, plasma proteins).	Composition and Properties of Blood	LGIS/SGD	MCQS
F1-P-008	Explain the structure, morphology, and lifespan of red blood cells, including factors affecting RBC production and destruction.	Red Blood Cells	LGIS/SGD	MCQS
F1-P-009	Classify anemia; describe mechanisms of iron deficiency anemia, hemolytic anemia, and megaloblastic anemia at a basic level.	Anemias and Polycythemia	LGIS/SGD	MCQS
	Define sickle cell anemia			
	Discuss the effects of anemia on circulation			

	Define and enlist types of polycythemia			
	Discuss the effects of polycythemia on circulation			
F1-P-010	Explain erythropoiesis and regulation by erythropoietin.		LGIS/SGD	MCQS

	Enumerate and elaborate role of factors/nutrients that are required and regulate erythropoiesis	Erythropoiesis and Its Regulation	LGIS/SGD	MCQS
F1-P-011	Define blood indices mentioned as: MCV (mean corpuscular volume), MCH (mean corpuscular hemoglobin), and MCHC (mean corpuscular hemoglobin concentration). Give their normal values & enumerate the conditions in which these values are disturbed	Blood Indices and Diagnostic Interpretation	LGIS/SGD	MCQS

BIOCHEMISTRY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-B-001	Define and classify carbohydrates. Draw the straight chain and pyranose form of D-glucose. Define and quote suitable examples of the followings: - Aldo-keto isomers - D & L isomers (Enantiomers) - Epimers - Alpha and beta Anomers Define and quote suitable examples of: - Reducing sugars - Non-reducing sugars Give sources, structure and importance of glucose, galactose, fructose and ribose. Give normal fasting blood sugar level. Enumerate types of Diabetes mellitus and give cause of hyperglycemia in each type.	Carbohydrates	LGIS/SGD	MCQS

	Describe the formation, hydrolysis, naming and types of glycosidic bond (N and O -glycosidic bonds). Give importance of glycosidic bond.			
	Enumerate sources, linkages and building blocks of maltose, isomaltose, lactose, lactulose and sucrose. Give importance of maltose, iso-maltose, lactose, lactulose and sucrose.			
	Give significance of oligosaccharides in cell membrane.			
	Give sources, structure and importance of dextrans and dextrans.			

	Enlist sources of starch. Elaborate the structure of starch. Give importance of starch in human diet.		LGIS/SGD	MCQS
	Elaborate the structure of glycogen.			
	Give importance of glycogen in human body.			
	Give structure and sources of cellulose.			
	Appraise the role of dietary fiber in health and disease.			
	Elaborate the structure and enlist the functions of Glycosaminoglycans (GAGs).			
	Define glycemic index.			
	Evaluate the effect of various dietary carbohydrates on blood sugar level (BSL) and appraise their clinical significance.			
F1-B-002	Define lipids and give their Classification along with biological importance of main classes	Lipids	LGIS/SGD	MCQS
F1-B-003	Define vitamins and classify vitamins according to their solubility	Vitamins	LGIS/SGD	MCQS
	Describe the biochemical structures of cell membranes	Cell		

F1-B-004	Explain biochemical compartmentalization.		LGIS/SGD	MCQS
F1-B-005	Describe receptors and signal transduction pathways (Gs, Gq).	Signal Transduction Pathways	LGIS/SGD	MCQS

ORAL BIOLOGY & TOOTH MORPHOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-OB-001	Describe the oral tissues including oral mucosa, salivary glands, bones of the jaws, temporomandibular joint, enamel, dentin, cementum, and periodontal ligament.	Structure of Oral Tissues (A Brief Introduction)	LGIS/SGD	MCQS
F1-OB-002	Describe the structure, types, and functions of the cytoskeleton, including microfilaments, intermediate filaments, and microtubules, within oral tissues.	Cytoskeleton	LGIS/SGD	MCQS
F1-OB-003	Describe intercellular junctions, including tight junctions, adherens junctions, desmosomes, gap junctions, and the role of desmosomes and hemidesmosomes in oral epithelium.	Cell Junctions	LGIS/SGD	MCQS

F1-OB-004	Describe the structure, secretory functions, and role of fibroblasts in the maintenance of the extracellular matrix in oral tissues	Fibroblast	LGIS/SGD	MCQS
	Describe briefly collagen synthesis and assembly highlighting its importance in oral connective tissue.			
F1-OB-005	Name the three major functions of the human dentition	Introduction and Nomenclature of dentition	LGIS/SGD	MCQS
	Describe various ways of classifying human dentition.			
	Define the three dentition periods (deciduous, mixed, permanent). Identify each period's approximate time intervals, initiation, and termination events			
	Differentiate primary vs permanent dentition, including timing.			

	Describe the dental Formula for permanent and Deciduous dentition			
	Define "succedaneous" and identify succedaneous teeth			
	Describe the eruption pattern of primary and permanent dentition			
	Demonstrate understanding of various dental numbering systems (e.g., universal, FDI, Palmer).			

PATHOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-Pa-001	Define the terms: pathology, etiology & pathogenesis	Introduction	LGIS/SGD	MCQS
F1-Pa-002	Define cell injury. Differentiate between reversible and irreversible cell injury. Discuss mechanism of cell injury	Cell Injury	LGIS/SGD	MCQS
F1-Pa-003	Define necrosis with examples; classify; describe briefly morphological features of coagulative, liquefactive, caseous, and fat necrosis. give their pathway.	Cell Death	LGIS/SGD	MCQS
	Define apoptosis with examples; describe mechanisms and morphological features. give their pathway.			

COMMUNITY & PREVENTIVE DENTISTRY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-CD-001	Define public health and describe its scope and importance	Introduction to dental public health	LGIS/SGD	MCQS
F1-CD-002	Describe the dimensions of health (physical, mental, social, etc.) and differentiate between illness and diseases.	Concepts of health and diseases	LGIS/SGD	MCQS
F1-CD-003	Differentiate between clinical dentistry and public health dentistry	Public health vs clinical practice	LGIS/SGD	MCQS
F1-CD-004	Describe criteria that make a disease important from a public health perspective	Disease importance in public health	LGIS/SGD	MCQS
F1-CD-005	Explain level of prevention (primordial, primary, secondary, tertiary) with relevant dental examples.	Levels of prevention	LGIS/SGD	MCQS

F1-CD-006	Define and explain the principles of health promotion and disease prevention strategies at individual and community level	Health promotion principles	LGIS/SGD	MCQS
F1CD-007	Apply principles of health promotion and health education to oral and dental health contexts.	Health education and health promotion	LGIS/SGD	MCQS
F1-CD-008	Describe methods of health education and communications in community dentistry; explain their importance and application.	Health education and communication	LGIS/SGD	MCQS
F1-CD-009	Describe school oral health programs and prevention strategies at the community level.	School and community based programs	LGIS/SGD	MCQS

PHARMACOLOGY AND THERAPEUTICS

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-PH-001	Define pharmacology along with major branches and explain its scope, importance and application in dentistry and medicine	General pharmacology	LGIS/SGD	MCQS

	Describe sources of drugs and active principles.			
	Enumerate advantages and disadvantages of various routes of administration.			
F1-PH-002	Define Pharmacokinetics. Briefly explain Mechanisms of Drugs Transport/ Permeation Sources of Drugs/ Active Principles Enumerate advantages and disadvantages of various Routes of drug Administration	Pharmacokinetics & Drug Transport/ Permeation	LGIS/SGD	MCQS
F1-PH-003	Define drug absorption & Bioavailability and factors affecting them. Define and explain Distribution and Volume of Distribution Define and explain Redistribution and Plasma Protein Binding	Drug Absorption & Bioavailability	LGIS/SGD	MCQS
F1-PH-004	Explain the concept of Metabolism & Biotransformation Describe the clinical significance of enzyme induction and enzyme inhibition with their examples	Drug Metabolism & Bio transformation	LGIS/SGD	MCQS

F1-PH-005	Define drug excretion. Enlist routes & processes of drug excretion through the kidneys. Describe factors affecting glomerular filtration & tubular reabsorption. Describe the Clinical Significance of Glomerular Filtration, Active Tubular Secretion and Passive Tubular	Drug excretion & its clinical significance of glomerular filtration	LGIS/SGD	MCQS
F1-PH-006	Describe Reabsorption of Drugs Explain steady state plasma concentration	Drug Reabsorption	LGIS/SGD	MCQS
F1-PH-007	Define & Explain Elimination and Orders of Elimination – First & Zero Order Kinetics with examples Order Kinetics	Drug Elimination	LGIS/SGD	MCQS
F1-PH-008	Define, explain & calculate maintenance dose and loading dose using appropriate formula Maintenance dose	Drug Maintenance	LGIS/SGD	MCQS

PRACTICALS / LAB WORK

HISTOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-A-011	Draw and label light microscopic diagram of epithelia	Epithelium	Demonstration	OSPE / OSVE
F1-A-012	Draw and label light microscopic diagram of different types of Connective Tissue	Connective Tissue	Demonstration	OSPE / OSVE

ORAL BIOLOGY & TOOTH MORPHOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-OB-006	Identify, draw, and label structures of the tooth on models.	Structures of Tooth	Demonstration	OSPE / OSVE
F1-OB-007	Draw & label the diagram of cytoskeletal elements.	Cytoskeleton	Demonstration	OSPE / OSVE
F1-OB-008	Draw & label the diagram of tight junctions, desmosomes, hemidesmosomes, and gap junctions.	Junctions	Demonstration	OSPE / OSVE

PATHOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
F1-Pa-004	Identify necrosis.	Necrosis	Demonstration	OSPE / OSVE



Module no. 2

CRANIOFACIAL - I



DEPARTMENT OF DENTAL EDUCATION

MODULE RATIONALE

The Craniofacial I module lays the foundation for understanding the structural, developmental, and biochemical basis of the craniofacial region. It integrates anatomy, embryology, histology, biochemistry, oral biology, and pathology to help students appreciate how normal development and structure underpin oral and maxillofacial health. By studying the skull, mandible, tooth development, and related anomalies, students gain essential knowledge for clinical dental practice and future modules focusing on oral and systemic diseases.

MODULE OUTCOMES

- Describe the gross anatomy of the skull and mandible, including their foramina, sutures, and applied clinical relevance.
- Explain the embryological processes involved in the formation of the head, neck, skull, meninges, and craniofacial structures.
- Identify and interpret microscopic features of bone, cartilage, muscle, and skin.
- Describe and relate the biochemical pathways of carbohydrates, proteins, and vitamins to cellular function and oral health.
- Explain the stages of tooth development, formation of supporting tissues, and developmental anomalies of the craniofacial region.
- Recognize basic genetic principles, types of mutations, and chromosomal abnormalities relevant to craniofacial development and dental disorders.
- Correlate structural, developmental, and biochemical knowledge with common craniofacial and dental pathologies encountered in clinical practice.

SUBJECTS INTEGRATED IN THE MODULE

1. **Anatomy**
2. **Biochemistry**
3. **Oral Biology & Tooth Morphology**
4. **General Pathology & Microbiology**
5. **Oral Pathology**

THEORY				
GROSS ANATOMY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-A-001	Describe the gross anatomy of the skull, its features, foramina, and applied aspects relevant to head and neck anatomy.	Skull	LGIS/SGD	MCQS
	Describe the features and structures of different views of skull (Anterior, Posterior, Superior, Inferior, Lateral)			
	Discuss the sutures and fontanelles of skull, their age changes and clinical significance.			
CF1-A-002	Describe the bony features of mandible.	Mandible	LGIS/SGD	MCQS
CF1-A-003	Enlist names of the cranial nerves.	Cranial Nerves	LGIS/SGD	MCQS
EMBRYOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-A-004	Describe neurulation, formation of the neural tube, and migration of neural crest cells.	Neurulation and Early Organogenesis	LGIS/SGD	MCQS
	Enlist derivatives of neural crest cells.			
	Describe development of the head and neck region, including contributions of pharyngeal arches, pouches, and cranial nerves.			
	Explain development of the skull and meninges (including craniosynostosis correlation), and vasculogenesis (basic).			
CF1-A-005	Discuss growth and differentiation of the embryonic disc, trophoblast development and anomalies (situs inversus, sirenomelia, holoprosencephaly).	Advanced Development and Anomalies	LGIS/SGD	MCQS
	Describe the embryological basis of hydatidiform mole and its pathological significance.			
	Describe common chromosomal anomalies related to early embryonic development.			

HISTOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-A-006	Describe the microscopic and ultramicroscopic structure of all types of cartilages	Cartilages	LGIS/SGD	MCQS
	Draw and label light microscopic diagram of different types of cartilages			
CF1-A-007	List the bone cells and their origin along with their functions	Bones	LGIS/SGD	MCQS
	Describe the composition of bone matrix (organic, inorganic)			
	Describe the histology of compact and spongy bone			
CF1-A-008	Describe the microscopic structure and ultramicroscopic structure of skeletal, cardiac, and smooth muscles	Muscles	LGIS/SGD	MCQS
CF1-A-009	Describe the layers and microscopic structure of the epidermis and dermis of the skin.	Skin	LGIS/SGD	MCQS

BIOCHEMISTRY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-B-001	Differentiate between anabolism and catabolism, and list the metabolic pathways associated with each process.	Overview of Metabolism	LGIS/SGD	MCQS
CF1-B-002	Explain metabolism: glycolysis and TCA cycle (steps, regulation, energetics).	Carbohydrate Metabolism	LGIS/SGD	MCQS
	Differentiate aerobic and anaerobic glycolysis.			
	Describe the transport systems for glucose entry into cells, including sodium- and ATP-independent (GLUTs) and sodium- and ATPdependent cotransport.			

CF1-B-003	Define amino acids and classify standard amino acids according to side chain and nutritional importance.	Amino Acids: Structure, Classification, and Properties	LGIS/SGD	MCQS
CF1-B-004	Explain the levels of protein organization (primary, secondary, tertiary, and quaternary structures) and their relevance to protein function.		LGIS/SGD	MCQS

CF1-B-005	Define conjugated proteins and provide suitable examples of conjugated proteins in the human body (lipoproteins, glycoproteins, nucleoproteins, chromoproteins, and metalloproteins).	Protein Structure and Function	LGIS/SGD	MCQS
	Elaborate the role of chaperones in protein folding.			
	Differentiate between denaturation and coagulation.			
	Define limiting amino acids and provide suitable examples of limiting amino acids.			
	Understand the nutritional importance of proteins and correlate this information to protein energy malnutrition.			
	Compare and contrast the salient features of kwashiorkor and marasmus.			
CF1-B-005	Explain enzyme structure, classification with examples, properties, mechanisms of action, kinetics, regulation, and inhibitors.	Enzymes: Structure, Classification, Mechanism, and Regulation	LGIS/SGD	MCQS
	Add diagnostic and therapeutic roles of enzymes (ALT, AST, CK-MB, ALP, LDH).			
CF1-B-006	Describe vitamins (B1, B2, B3, B5, B7), their active forms, sources, RDA, biochemical roles, and deficiency manifestations.	Vitamins	LGIS/SGD	MCQS

ORAL BIOLOGY & TOOTH MORPHOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-OB-001	Describe the primary epithelial band and explain its role in the initiation of tooth development.	Early Tooth Development	LGIS/SGD	MCQS

	Explain the mechanisms involved in initiation of tooth			
	Describe the process of regionalization of the oral epithelium and its significance in tooth development.			
	Explain the instructive signals for patterning and odontogenic potential			
CF1-OB-002	Explain the hard tissue formation through histodifferentiation	Tooth Development	LGIS/SGD	MCQS

	Explain nerve and vascular contributions to tooth development during early developmental stages.			
	Describe root development, Hertwig's epithelial root sheath, and supporting tissues.			
CF1-OB-003	Describe the embryonic development of the face, palate & tongue, contributions of key structures (lateral lingual swellings, tuberculum impar, and copula), muscle derivation, and sensory/motor innervation and Developmental Defects associated with it like Ankyloglossia.	Formation of the Face, Palate and Tongue	LGIS/SGD	MCQS
CF1-OB-004	Describe the role of Meckel's cartilage in mandibular development and the process of intramembranous ossification in forming the mandible and maxilla.	Development of the Mandible and Maxilla	LGIS/SGD	MCQS
	Define jaw size anomalies and their embryological basis and clinical impact (Micrognathia and Macrognathia).			
CF1-OB-005	Describe basic developmental anomalies relevant to craniofacial region (e.g., cleft palate, anomalies of tooth number and size).	Craniofacial anomalies	LGIS/SGD	MCQS

GENERAL PATHOLOGY & MICROBIOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-Pa-001	Define genetic disorders and their causes.	Genetic Disorders: Introduction and causes	LGIS/SGD	MCQS
CF1-Pa-002	Describe types of mutations (point, insertions, deletions).	Types of Mutations	LGIS/SGD	MCQS
CF1-Pa-003	Explain Mendelian principles applied to autosomal and X-linked disorders.	Mendel principles and genetic disorders	LGIS/SGD	MCQS
CF1-Pa-004	Describe genetic testing methods: PCR, sequencing, karyotyping, biochemical tests, prenatal screening.	Genetic testing	LGIS/SGD	MCQS
ORAL PATHOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-OP-001	Discuss the clinical presentation of numerical and structural chromosomal abnormalities	Chromosomal abnormalities	LGIS/SGD	MCQS

PRACTICALS / LAB WORK				
GROSS ANATOMY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-A-010	Demonstrate the ability to accurately orient a dry human skull in normal verticals, occipitalis, frontalis, lateralis, and basalis views; and identify key anatomical and surface landmarks, sutures, and foramina with their content relevant to each view	Skull	Demonstration	OSPE / OSVE
	Identify and describe the anatomical features, boundaries, and foramina of the anterior, middle, and posterior cranial fossae, including the grooves of the dural venous sinuses			
	Identify and enlist all the foramina of the skull along with their neurovascular contents			
CF1-A-011	Identify and locate the major anatomical landmarks, foramina (with their contents), and surface features of the mandible; articulate it the skull	Mandible	Demonstration	OSPE / OSVE
HISTOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
CF1-A-012	Draw and label light microscopic diagram of compact and spongy bones	Bones	Demonstration	OSPE / OSVE
CF1-A-013	Draw and label light microscopic diagram of cartilage	Cartilage	Demonstration	OSPE / OSVE
CF1-A-014	Draw and label light microscopic diagram of muscle	Muscle	Demonstration	OSPE / OSVE
CF1-A-015	Draw and label light microscopic diagram of thick and thin skin	Skin	Demonstration	OSPE / OSVE
ORAL BIOLOGY & TOOTH MORPHOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT

CF1-OB-006	Identify congenital defects (cleft lip/palate, tongue anomalies).	Development of Human embryo with special	Demonstration	OSPE / OSVE
		emphasis on tooth-related structures.		
CF1-OB-007	Draw and label stages of tooth development and root formation.	Tooth & Root Development	Demonstration	OSPE / OSVE



RAHBAR COLLEGE
OF DENTISTRY

Module no. 3
CRAIOLOGY - I



DEPARTMENT OF DENTAL EDUCATION

MODULE RATIONALE

Cariology I introduce students to the biological, structural, biochemical, and behavioral foundations of dental caries. This module integrates oral biology, oral pathology, biochemistry, operative dentistry, community dentistry, and behavioral sciences to help students understand how caries develops, progress, and can be prevented. Through microscopic, radiographic, and practical learning, students explore the interactions between host factors, diet, microorganisms, and behavior, forming the essential groundwork for clinical dental practice and patient-centered preventive care.

MODULE OUTCOMES

- Explain the biochemical basis of dental caries, including carbohydrate metabolism, acid production, and the role of fluoride in caries prevention.
- Describe the structure, composition, and developmental biology of enamel and dentin, and relate these features to caries susceptibility.
- Identify normal and abnormal enamel and dentin structures on slides, models, and radiographs.
- Describe the etiology, microbiology, and histopathology of dental caries and developmental defects such as enamel hypoplasia and amelogenesis imperfecta.
- Explain the types, clinical features, and progression of pit and fissure, smooth surface, and root caries, along with preventive and management approaches.
- Apply the principles of caries prevention at both individual and community levels through dietary counseling, oral hygiene practices, and fluoride use.
- Demonstrate effective communication, empathy, and professionalism while addressing behavioral aspects that influence oral health and patient cooperation.
- Correlate biological and behavioral concepts with preventive strategies to promote oral health across diverse populations.

SUBJECTS INTEGRATED IN THE MODULE

1. **Biochemistry**
2. **Oral Biology & Tooth Morphology**
3. **Oral Pathology**
4. **Operative Dentistry**
5. **Community & Preventive Dentistry**
6. **Psychiatry & Behavioral Sciences**

THEORY				
BIOCHEMISTRY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
Car1-B001	Explain cariogenic potential of carbohydrates.	Biochemical Role of carbohydrates in Dental Caries	LGIS/SGD	MCQS
Car1-B002	Explain biochemical mechanism of fluoride in disrupting bacterial glycolysis and acid production.	Fluoride's Biochemical Mechanism	LGIS/SGD	MCQS
ORAL BIOLOGY & TOOTH MORPHOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
Car1-OB001	Describe physical and chemical properties of enamel; explain their role in caries resistance and susceptibility.	Enamel	LGIS/SGD	MCQS
	Describe structural organization of enamel; identify enamel on radiographs.			
	Explain differentiation and life cycle of ameloblasts			
	Describe amelogenesis stages (pre-secretory, secretory, maturation), Tom's process, and pH regulation.			
	Describe enamel proteins; explain incremental lines, Hunter-Schreger bands, tufts, lamellae, spindles, and gnarled enamel.			
	Explain fluoride effects, enamel etching, age changes and repair			
Car1-OB002	Describe the anatomical surfaces and land marks of both anterior and posterior teeth, including the roots, using standardized dental terminology.	Tooth Morphology	LGIS/SGD	MCQS
	Identify and name tooth surfaces and thirds of tooth surfaces from diagrams or descriptions			
	Differentiate between the crown surfaces of teeth by matching them with their correct general shape (triangular, trapezoidal, or rhomboidal), or by relating the shape to the specific function of the			

	tooth.			
	Identify and name line and point angles, embrasures and curves based on diagrams or descriptions.			
	Define elevations and depressions on the tooth surface.			
	Describe lobes, contact points, embrasures, cervical line, pits, and fissures and relate to caries susceptibility.			
	Describe the components, boundaries and functions of interproximal space and embrasures			
ORAL PATHOLOGY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
Car1-OP001	Describe etiology and pathogenesis of enamel hypoplasia.	Enamel Development al Anomalies	LGIS/SGD	MCQS
	Explain Amelogenesis imperfecta (types, clinical and radiological features).			
Car1-OP002	Describe etiology and pathogenesis of dental caries.	Microbiology and Pathogenesis of Caries	LGIS/SGD	MCQS
	Describe the microbiological aspect of caries; the role and characteristics of cariogenic bacteria.			
	Define plaque and stages of plaque development			
	Describe the changes that develop in enamel of erupted teeth in association with microorganisms.			
	Describe histopathological changes in enamel during dental caries, with emphasis on microbial invasion.			
OPERATIVE DENTISTRY				
CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
Car1-OD001	Describe the anatomy of pits and fissures, explain their role in caries susceptibility, and outline preventive strategies such as sealant application and fluoride use.	Pit and Fissure Caries	LGIS/SGD	MCQS

Car1-OD002	Describe etiology, risk factors, and clinical features of smooth surface caries; explain role of fluoride in prevention.	Smooth Surface Caries	LGIS/SGD	MCQS
Car1-OD003	Describe etiology, clinical features, and progression of root caries.	Root Caries	LGIS/SGD	MCQS
Car1-OD004	Differentiate active caries based on clinical features; explain clinical significance; outline management strategies. identify the factors that promote caries arrest.	Active and Arrested Caries	LGIS/SGD	MCQS
Car1-OD005	Differentiate arrested caries; describe biological processes and contributing factors.		LGIS/SGD	MCQS

COMMUNITY & PREVENTIVE DENTISTRY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
Car1-CD001	Explain the role of diet in dental caries, including the Stephen curve, cariogenic potential of sugars, and dietary modification strategies.	Diet and Dental Caries	LGIS/SGD	MCQS
Car1-CD002	Describe the role of dental biofilm in demineralization and remineralization; explain oral hygiene measures and Keyes' triad in caries prevention.	Dental Biofilm and Caries Prevention	LGIS/SGD	MCQS
Car1-CD003	Explain and apply the principles of dental caries prevention in individual and community settings.	Principles of Caries Prevention	LGIS/SGD	MCQS
Car1-CD004	Explain the role of systemic and topical fluoride in the prevention of dental caries; apply knowledge of community-based preventive measures (e.g., water fluoridation, school programs).	Fluoride and CommunityBased Caries Prevention	LGIS/SGD	MCQS
Car1-CD005	Describe correct toothbrushing and flossing techniques in relation to caries prevention.	Oral Hygiene Practices and Caries Prevention	LGIS/SGD	MCQS

BEHAVIORAL SCIENCES

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
------	----------------------------	-------	-----	----

Car1-BhS-001	Explain the bio-psycho-social model and its relevance to holistic dental care.	Introduction to Behavioral Sciences	LGIS/SGD	MCQS
Car1-BhS-002	Describe how psychology, sociology, and anthropology contribute to understanding oral health behavior.	Determinants of Oral Health Behavior	LGIS/SGD	MCQS
Car1-BhS-003	Differentiate between normal and abnormal behavior and discuss their implications for dental care.	Understanding Human Behavior	LGIS/SGD	MCQS
Car1-BhS-004	Recognize the influence of emotions and behavior on patient–dentist interactions and oral health outcomes.	Emotional and Behavioral Factors in Dentistry	LGIS/SGD	MCQS
Car1-BhS-005	Demonstrate effective communication and interpersonal skills in clinical and community dental settings.	Communication Skills	LGIS/SGD	MCQS
Car1-BhS-006	Apply principles of empathy and emotional intelligence in role play.	Emotional Intelligence	LGIS/SGD	MCQS
Car1-BhS-007	Describe ethical principles, professional roles, and responsibilities of a dentist.	Professional Ethics and Responsibilities	LGIS/SGD	MCQS

PRACTICALS / LAB WORK

ORAL BIOLOGY & TOOTH MORPHOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
Car1-OB003	Identify major morphological features of teeth — including the lobes, contact areas, embrasures, height of contour, and the cervical and gingival lines — using models, and anatomical specimens.	Tooth Morphology and Structural Features	Demonstration	OSPE / OSVE
	Locate pits, fissures, and different types of embrasures on teeth through direct inspection of specimens/typodont models/clinical images.			
Car1-OB004	Draw and label lifecycle of ameloblast	Enamel	Demonstration	OSPE / OSVE
	Draw and label Secretory stage ameloblast			
	Draw and label Maturation stage ameloblast			
	Draw and label different histological/organizational features of the enamel (enamel rods, striae of Retzius, Hunter-Schreger bands, gnarled enamel, DEJ, enamel tufts, lamellae, spindles, & neonatal lines.)			

ORAL PATHOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
Car1-OP003	Observe prepared slides of plaque samples.	Microscopic Analysis of Plaque	Demonstration	OSPE / OSVE
Car1-OP004	Identify amelogenesis imperfecta and fluorosis on e-slides.	Radiographic Identification of Tooth Structures and Developmental Anomalies	Demonstration	OSPE / OSVE

OPERATIVE DENTISTRY

CODE	SPECIFIC LEARNING OUTCOMES	TOPIC	MIT	AT
Car1-OD006	Identify fluoride gel and demonstrate application procedure.	Prevention of Dental Caries	Demonstration	OSPE / OSVE



Identify pits, fissures, smooth surface, and root caries on models, or images

Differentiate active versus arrested caries on prepared slides or images



RAHBAR COLLEGE
OF DENTISTRY



DEPARTMENT OF DENTAL EDUCATION

PROFESSIONALISM

Year	Learning Outcomes (LOs)
I	- Recognize attributes of professionalism (respect, integrity, accountability) - Define professionalism in dentistry - Identify unprofessional behaviors - Practice patient-centered communication (role play) - Apply basic reflective practice

RESEARCH

Year	Learning Outcomes (LOs)
I	- Understand fundamentals of academic writing i.e., official applications, letters, report writing, etc. - Define research, inquiry, and evidence-based dentistry - Recognize importance of research in dentistry - Identify forms of scientific writing (editorial, article, review, case report, meta-analysis) - Explain IMRAD structure - Differentiate types of health research (basic, clinical, applied, public health) - Enlist differences between quantitative and qualitative research - Describe basic principles of research ethics

INFORMATICS

Year	Learning Outcomes (LOs)
I	- Practice email etiquette & online communication norms (WhatsApp/Social Media Platforms) - Use Word/Google Docs for academic writing basics - Apply safe internet use, recognize credible vs. unreliable sources

SOCIAL RESPONSIBILITY, CULTURAL SENSITIVITY, ETHICS & JURISPRUDENCE

Year	Learning Objectives
I	- Define social responsibility in dentistry - Describe role of dentist in public health promotion - Identify cultural diversity in Pakistan - Explain principles of ethics (autonomy, beneficence, non-maleficence, justice) - Take a proper dental consent prior to treatment

MANAGEMENT & ENTREPRENEURSHIP

Year	Learning Objectives
I	- Describe the concept of teamwork and its relevance in dental practice. - Observe and explain basic workflow (hierarchy) in academic and lab settings. - Identify and apply simple time management strategies for balancing academic and personal tasks. - Explain and apply 7Cs of communication - Demonstrate responsibility in small assigned academic or group-based tasks.

EVIDENCE BASED DENTISTRY

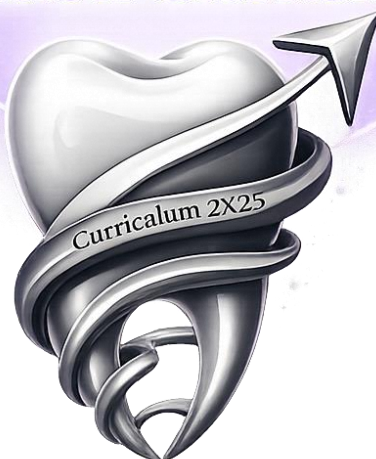
Year	Learning Objectives
I	- Define Evidence-Based Dentistry. - Explain the significance of EBD in clinical decision-making. - Identify the components of EBD: best available evidence, clinical expertise, and patient preferences.



RAHBAR COLLEGE
OF DENTISTRY

C-FRC

Clinical Foundation
Rotation Clerkships



Block I

1.	Hand washing Demonstrate steps of hand washing
2.	Gloving Perform the procedure of wearing gloves
3.	Tooth Brushing Techniques Demonstrate correct toothbrushing techniques in relation to caries prevention.
4.	Flossing Techniques Demonstrate correct flossing techniques in relation to caries prevention.
5.	Communication Skills Demonstrate counseling skills related to oral hygiene.



RAHBAR COLLEGE
OF DENTISTRY

The Holy Quran



DEPARTMENT OF DENTAL EDUCATION

MODULE RATIONALE

The Holy Quran provides wisdom and knowledge to be followed in every applied component of modern civilization covering Ethical, Social, Legal, Financial and Healthcare Domains. The complete Quran encompasses the guidelines, all full of 'Hikmah' (wisdom) to deal with all practical scenarios encountering patients and health professionals. As the Holy Quran is the guiding light for humanity and a way of life for all the believers of one true Allah, therefore, understanding the message of this Holy Book is mandatory for realizing the duties which one has towards other human beings in general and the profession in particular. Holy Quran is a guide for the modern society and scientific development therefore, orbiting around Quranic doctrines and axioms of Hadith, all challenges faced by modern healthcare can be solved. Therefore, this longitudinal curriculum is developed so that all health professionals can get, as enunciated by the Holy Quran itself, "the best of this world as well as the best of the Hereafter".

VISION & MISSION

2.1: Vision: Building the personality and character of health professionals in light of teachings of the Holy Quran and Sunnah, to alleviate human sufferings.

2.2: Mission: Teaching Holy Quran and Sunnah to undergraduate students of Health Sciences, building their personality and character, enabling them to apply these principles in patient care and innovative research.

3. CURRICULUM DESIGN AND ORGANIZATION

3.1: Course Aim: The Holy Quran course aims to imbibe Health profession students with professionalism, general and medical, based on Divine teachings. The professionals thus groomed shall be able to correlate religion with healthcare delivery and modern science with an understanding that evidence-based practice itself originated from the system by which the "Hadith" was preserved after centuries.

3.2: Mode of Delivery: The module will be taught in the form of interactive lectures.

3.3: Learning Experience: Classroom environment will be used.

3.4: Attendance: Eighty five percent (85%) attendance is mandatory to be eligible to sit in the professional examination.

3.5: Course Modules

The curriculum will be taught under three Major Sections

- Faith
- Worship

Specific Quranic Commandments

3.6: Module Credit hours & Contact hours: This will be a three (03) credit hour course where each credit hour will be equivalent to eighteen (18) contact hours.

3.7: Assessment Portfolio

The assessment will be done through student portfolios based on four written assignments and two quizzes per year. The portfolio submission to the Quran teacher will be mandatory for sending admission to the university and sitting in the professional examination. The assignments will be based on the topics discussed during the year.

3.8: Reference Material

- Translations of the Holy Quran approved by the Quran Board
- Six Authentic Books of Hadith

3.9. Module Faculty

At least one full time faculty member (Lecturer or above) will be hired for running the Holy Quran course throughout the year. The qualifications of the faculty member will be certified by the academic council of the college/institution to be declared as the teacher of Holy Quran course.

LEARNING OUTCOMES

a. Oneness of Allah (SWT) (Tawheed)

- i. Describe Unity of Allah in being
- ii. Describe Unity of Allah in attributes
- iii. Describe concept of Shirk iv. Impact of Tawheed in human life

b. Prophethood (Risalat)

- i. Explain Significance of Risalat
- ii. Identify Prophets as role models iii. Recognize finality of Prophethood - Prophet Muhammad (PBUH) c. Belief in Hereafter (Aakhirat)

- i. Appraise continuity of life beyond material world
- ii. Concept of Doomsday and its various stages
- iii. Concept of Day of Judgment and accountability in the Hereafter
- iv. Concept of "Meezan"

d. Divine Revelations (Holy Books)

- i. Explain the divine decree in sending the Holy Books
- ii. Identify the Holy Quran as the only preserved & authenticated divine revelation to c
- iii. Interpret Quran as Furqan

e. Angels

Discuss belief in angels and its significance ii. Describe the universal role of angels (their specific duties) f.

Qadr

- i. Identify Taqdeer as Knowledge of Allah ii. Explain the concept of Faith in Good and Evil

CONTENTS

1. Oneness of Allah subhan wa taala (Tawheed)
2. Prophethood (Risalat)
3. Belief in Hereafter (Aakhirat)
4. Devine revelations (Holy Books)

SECTION TWO: WORSHIP (IBADAAT)

LEARNING OUTCOMES

a. Prayer (Namaz)

- i. Recognize the importance of physical purity (Taharah)
- ii. Discuss the philosophy of prayer and its role in purification of soul
- iii. Recognize the importance of prayer in building personal character - sense of duty, patience, perseverance, punctuality and self/social discipline
- iv. Spiritual, moral and social impact of prayer in building of righteous community
- v. Role in creating brotherhood, equality and unity in ummah
- vi. Identify the conditions in which relaxation in prayer is allowed e.g. during operation, c. Fasting (Roza)

travelling etc.

b. Obligatory Charity (Zakat)

- i. Identify obligatory importance of Zakat and other items as outlined under the title 'Infaq-fee-sabilillah'
- ii. Categorize the people who can be the beneficiaries of Zakat
- iii. Role of zakat in eradication of greed and love of material world
- iv. Effect of Zakat and sadaqat in circulation of wealth and alleviation of poverty
- v. Explain the essence of zakat and sadaqat in building just communities
- vi. Describe the role of state in collection and disbursement of zakat

- i. Discuss the importance and significance of fasting
- ii. Relate the Holy Quran and the month of Ramadan
- iii. Role of fasting in building personal qualities like self-control, piety and soft corner for the poor and needy persons
- iv. Identify the applications of "Taqwa" through fasting

Pilgrimage (Hajj)

- i. Discuss the importance and significance of Hajj
- ii. Identify the conditions in which Hajj becomes an obligation
- iii. Role of manasik-e-Hajj in producing discipline and complete submission
- iv. Recognize the importance of Hajj in uniting the ummah
- v. Sacrifice for Allah subhan wa taala (essence of qurbani)

TOPIC AREAS

1. Prayer (Salah/Namaz)
2. Obligatory charity (Zakat)
3. Fasting (Saum/Roza)
4. Pilgrimage (Hajj)

SECTION THREE: SPECIFIC QURANIC COMMANDMENTS

LEARNING OUTCOMES

- a. Importance of the protection of Human life
 - i. Concept of the sanctity of human life in Quran and Sunnah
 - ii. Importance and significance of a single human being even during war
 - iii. Concept of punishment in regard to the killing of a human being, voluntarily or involuntarily
- b. Jihad
 - i. Concept of Jihad and its significance (hikmat)
 - ii. Different forms of Jihad and their importance
 - iii. Principles and preparation of Jihad
- c. Heirship/Inheritance (Virasat)
 - i. Heirship and division of wealth in accordance with divine teachings
 - ii. Heirs and their shares
 - iii. Legal aspect of virasat (Hud-e-Illahi)
- d. Amar-bil-marooof-wa-Nahi-anil-munkar
 - i. Differentiation between Marooof and Munkar
 - ii. Importance and significance (effects of avoiding this Principle)
 - iii. Necessary conditions of both amar-bil-marooof and nahi-anil-munkar
 - iv. Devine reward of jihad
- v. The different stages and the necessary prerequisites
 - e. Hadood-e Illahee and taazeerat
 - i. Meaning and various types of hadood-e-Illahee

- ii. Authority for fixation of limit (hudd)
- iii. Criteria and permissible relaxation in fixing the limits
- iv. Difference between 'Haddood', 'Qisas' and 'Tazeerat'. Punishments which are left to the court of law
- v. Benefits for the good of community

f. Justice (Adal-o-insaf)

- i. Justice of Allah subhan wa taala
- ii. Importance of justice for the survival of community
- iii. Need of justice to be prevailed irrespective of religion
- iv. Devine reward for fair justice

g. Business (Bay-o-tijarat)

- i. Importance of fair business and its necessary constituents
- ii. Permissible and impermissible conditions of businesses
- iii. Concept of loan in businesses

h. Interest (Riba or Sudi karobar)

- i. Meaning of Riba or interest and its different forms
- ii. Impact of Riba on a society in general
- iii. Devine declaration and its punishment both in this world and Hereafter

i. Nikah-o-talaq

- i. Basic rulings regarding marriage and divorce
- ii. Importance of Nikah and its constituents
- iii. Conditions of Nikah and various forms of prohibited/impermissible nikah

vi.conception of dowry

v. Talaq and its various forms vi. Meaning of Khula and its conditions

CONTENTS

1. Importance of the protection of Human life
2. Jihad
3. Heirship/Inheritance (Virasat)
4. Amar-bil-marooof-wa-Nahi-anil-munkar
5. Hadood-e Illahee and taazeerat
6. Justice (Adal-o-insaf)
7. Business (Bay-o-tijarat)
8. Interest (Riba or Sudi karobar)
9. Nikah-o-talaq



RAHBAR COLLEGE
OF DENTISTRY

Islamiyat & Pakistan Studies



DEPARTMENT OF DENTAL EDUCATION

MODULE RATIONALE

This module comprises of Islamiyat & Pakistan Studies. All the medical or other curricula relate to our core context and internal fiber. The study of religion and country endorses all relevancy and competency acquisition for the purpose of service to humanity and community orientation.

ISLAMIYAT

A short course on Islamic Studies will be completed in First year with an exam at the end of the year.

Course Content:

1. Understand the basic principles of Islam.
2. Explain the concept of the Islamic state.
3. Explain the Quran as a guide for modern society and scientific development.
4. Describe the life of the Holy Prophet Peace be upon him as an example to follow.
5. Explain ethics in the Islamic prospective.
6. Describe the rights of the individual in Islam.
7. Describe the rights of women and children in Islam.
8. Explain the contribution of Islamic scholars to science and medicine.
9. Understand Islam in terms of modern scientific development.
10. Explain the concept of Rizk-e-Hilal.
11. Explain the concept of Hukook-ul-Ibad.

PAKISTAN STUDIES

A short course on Pakistan Studies will be completed in First year with an exam at the end of the year.

Course Content:

1. Describe brief the salient features of the Pakistan movement.
2. Explain the basis for the creation of Pakistan.
3. Give a brief account of the history of Pakistan.
4. Explain the ethnic and cultural distribution of the population of Pakistan.
5. Describe the Provinces and resources available in Pakistan.
6. Explain current problems faced by Pakistan.

Describe the social, economic and health problems of the rural population of Pakistan.



ISLAMIYAT AND PAKISTAN STUDIES BOOKS

- Standard Islamiyat (Compulsory) for B.A, B.Sc., M.A, M.Sc., MBBS by Prof. M.Sharif Islahi Ilmi Islamiyat (Compulsory) for B.A. B.Sc., & equivalent.
- Pakistan studies (Compulsory) for B.A. B.Sc., B.Com., Medical/Engineering by Prof. Shah Jahan Kahlun
- Pakistan studies (Compulsory) for B.A, B.Sc., B.Com., B.Ed., Medical/Engineering by Prof. Shah Jahan Kahlun



RAHBAR COLLEGE
OF DENTISTRY

CIVICS



DEPARTMENT OF DENTAL EDUCATION

MODULE RATIONALE

Civics is part and parcel of life and the study of Civics has major thrust on improvement of the quality of life and welfare of human beings. This discipline enhances the approach towards rational behavior and daily life.

There is a need for us to know role of a citizen with specific reference to Global Village, the Citizen and Daily life issues, Citizenship, Rights and Responsibility, Role of Government and State, Implementation

Issues of Devolution plan, Social Welfare Institutions/ NGOs and their role at basic level, social interactions and the new discoveries in IT and mass media, relations with International Organizations and Pakistan and its neighbors. Civics goes beyond the cognitive level to deal with social values and attitudes. From the earliest stages of the course, it is important to respect students' opinions while helping them to develop a rationale for their opinions. This curriculum is adapted from Agha Khan University Examination Board curriculum for higher secondary examination.

2. VISION & MISSION

2.1: Vision: Building the personality and character of health professionals

2.2: Mission: Teaching Civics to undergraduate students of Health Sciences, building their personality and character, enabling them to apply these principles in patient care.

3. CURRICULUM DESIGN AND ORGANIZATION

3.1: Course Aim:

- To develop understanding of the social nature and significance of civics, its key concepts and civic life.
- To emphasize learning of related themes in a way that encourages creativity, curiosity, observation, exploration and questioning.
- To create awareness of the nature of civic life and the relationship between civics and other social sciences.
- To promote understanding about the ideology of Pakistan and the struggle of an independent state.
- To inculcate the behavior patterns of national character, and qualities of a good citizen, self-reliance, patriotism and leadership.
- To create a strong sense of national unity, integration and cohesion.

☐ To prepare students as future citizens, conscious of their positive role in a society and the world at large.

3.2: Mode of Delivery: The module will be taught in the form of interactive lectures.

3.3: Learning Experience: Classroom environment will be used.

3.4: Attendance: Seventy-five percent (75%) attendance is mandatory to be eligible to sit in the professional examination.

3.5: Assessment: The assessment will be done through two written assignments and two quizzes per year. The assignments will be based on the topics discussed during the year.

3.7: Module Faculty: At least one full time faculty member (Lecturer or above) will be hired to run the civics course throughout the year. The qualifications of the faculty member will be certified by the academic council of the college/institution to be declared as the teacher of civics.

LEARNING OUTCOMES	TOPICS
i. Define civics ii. Describe how civics can improve the citizenship iii. Illustrate the scope of civics iv. Discuss the nature of civics v. Give examples how civics can help in the national development	Civics-Meaning & Nature
i. Examine the significance of civics ii. Explain how civics is important to know the problems of daily life iii. Discuss how civics can help to bring improvements in the civics life of citizens iv. Evaluate how civics can improve the sense of love and respect for human relationship v. Discuss that studying civics can develop a sense of gratitude vi. Give examples how civics is important to develop the global unity	Significance and Utility
i. Compare civics with political science, history, economics, sociology and ethics	Relationship with Social Sciences
i. Describe the term harmonic relationship ii. Explain the harmonic relationship among different members of society. (Women, children and senior citizens) iii. Explain how harmonic relationship develop for respect of religion	Harmonic Relationship
i. Define the term individual in relation to civics ii. Define the term state iii. Explain the relation between an individual and a state iv. Describe the importance of an individual in a state v. Enlist the responsibilities of an individual in a state	Individual and state
i. Identify the basic unit of social institution Discuss and characterize the different types of family ii. Give the importance of basic unit of social institution in the development of a state Enlist the responsibilities of family in general iii. Analyze your role for the betterment of the family Compare and contrast the impact of the deterioration of family in the western society and give examples	Family

i. Define community ii. Explain the nature and significance of community Discuss the role of a family in community iv. Analyze the role of an individual for the betterment of the community	Community
i. Define society ii. Elaborate the relation between an individual and society and society and state iii. Analyze the role of an individual for the betterment of society	Society
i. Define the term nation, nationality and ummah differentiate between nation and nationality distinguish between nation and ummah analyze the value, behavior and the pattern of society based on religions ii. Evaluate the characteristics of society developed by religions	Nation, Nationality
i. Trace the origin of state with reference to the theories of Divine Origin, Force and Social ii. Contract (Hobbs, Lock, Rousseau) iii. Describe the elements of a state (sovereignty, population, territory, Government) iv. Compare and distinguish the role of state, society and government	Origin and elements of State
i. Describe the functions of state ii. Describe the factors which are necessary for proper functioning of state iii. Analyze the situation when a state does not function properly iv. Describe the characteristics of a welfare state Analyze how a welfare state guarantees the equity and justice on the issues of gender, religion, and social classes	Functions of state. (Defense, law and order, welfare etc.)
i. Define the concept of sovereignty in west ii. Discuss different kinds of sovereignty iii. Explain Austin's concept of sovereignty iv. Analyze critically Austin's concept of sovereignty	Sovereignty



RAHBAR COLLEGE
OF DENTISTRY

Teaching Methodologies



DEPARTMENT OF DENTAL EDUCATION

INSTRUCTIONAL STRATEGIES

Delivery of a curriculum also needs a diversity of educational vernacular for the different learning styles. Following are a few of the recommended instructional strategies. It is advised that at least **three different methods of instructions** should be adopted in the institutional planning. This will enable the diversity of learning patterns to be facilitated.

Large Group Interactive Session (LGIS)

Lecture format is the most widely used approach to teaching especially in a large class size with average attention span of 20-30 mins. Interactive lecturing involves a two-way interaction between the presenter and the participants. Interactive methods like brainstorming, buzz group, simulation, role play, and clinical cases can be used.

Significance of its usage

- Relaxed environment, diverse opinions, active involvement
- Increase attention and motivation.
- Independence and group skills.
- Cost effective.
- Suitable for taking advantage of available audiovisual technologies.

Team based learning (TBL)

TBL is a uniquely powerful form of small group learning. It provides a complete coherent framework for building a flipped course experience. There are four essential elements of TBL which include:

- Teams must be properly formed and managed (5-7 students)
- Getting students ready
- Applying course concepts
- Making students accountable

Significance of its usage

- Students are more engaged.
- Increased excitement in TBL classroom
- Teams outperforms best members.
- Students perform better in final and standardized exams.

Problem based learning (PBL)

It is an instructional student-centered approach in which students work in small groups on a health problem, identifying their own educational needs and being responsible for the acquisition of the knowledge required to understand the scenario.

Significance of its usage

- Teamwork
- Critical evaluation of literature
- Self-directed learning and use of resources
- Presentation skills
- Leadership
- Respect for colleagues' views

Tutorials

Tutorial is a class or short series of classes, in which one or more instructors provides intensive instruction on some subject to a small group. Its purpose is to explore students' point of view, allowing time for discussion, and inculcating self-directed, reflective learning skills.

Significance of its usage

- Develop and assess the extent of background knowledge of students, which enables them to properly understand concepts which may not have been understood in lectures.
- Develop problem-solving skills.
- Develop practice of self-learning.
- Reduced time to understand the topic.

Reflective Writing

It is a metacognitive process that occurs before, during and after the situation with the purpose of developing greater understanding of both the self and situation so that future encounters with the situation are informed from previous encounters.

Significance of its usage

- Questioning attitude and new perspectives.
- Areas for change and improvement.
- Respond effectively to new challenges.
- Critical thinking and coping skills

Clinical Teaching

Teaching and learning that occurs with actual patient as the focus. It occurs in the dental simulation labs, Dental Clinics and for OMFS in the wards and operation theatre

Significance of its usage

- Stimulus of clinical contact
- Psychomotor skills
- Communication skills
- Language skills
- Interpersonal skills
- Professional attitudes and empathy
- Role modelling

Laboratory Practical

Lab practical involves things like identifying a structure, a type of stain through a microscope, a problem with a preparation, reading biochemical test results and answering safety questions. These simulations allow students to attempt the experiments in the laboratory in a risk-free way that provides the opportunity to make mistakes and learn how to correct them using the immediate feedback generated.

Significance of its usage

- Enhance mastery of subject matter.
- Develop scientific reasoning.
- Develop practical skills.
- Develop teamwork abilities.

Demonstrations

The demonstration method in teaching can be defined as giving a demo or performing a specific activity or concept. It is a teaching-learning process carried out in a very systematic manner.

Significance of its usage

- Promotes learning and correlates theory with practice.
- Sharpens the observation skills.
- Sustain interests in learning environment.
- Helps teacher to evaluate students' response



Assessment



Regulations:

1. Professional examination shall be open to any student who: -
 - a. has been enrolled/registered and completed one academic year preceding the concerned professional examination in a constituent/affiliated college of the University.
 - b. has his/her name submitted to the Controller of Examinations, for the purpose of examination, by the Principal of the college in which he / ~~she~~ is enrolled & is eligible as per all prerequisites of the examination.
 - c. has his/her marks of internal assessment in all the Blocks/Clinical Clerkships sent to the Controller of Examinations through office of the Principal of the concerned college, at the end of each Block/Clinical Clerkships, as well as at the conclusion of the academic session along with the admission form for the professional examination.
 - d. Has been certified by the principal of his/her college:
 - (i) of good character;
 - (ii) of having attended not less than cumulative 75%* of the full course of lectures delivered, practical and clinical rotations conducted in the particular academic session, while maintaining 75 % attendance in each Block/Clinical Clerkship,
 - (iii) of having appeared at the Block/Clinical Clerkship Examinations conducted by the college of enrolment with at least 50 % marks* in each Block/Clinical Clerkship examination, as well as in aggregate score of all Blocks/Clinical Clerkships examinations for the concerned year;
2. Written/Theory paper in all Professional Examinations in Modular Integrated MBBS or BDS Curricula shall consist of MCQs alone, with effect from Annual 2026 Examinations. (Ref: No. UHS/REG-25/2379, dated 17.11.2025)
3. The minimum number of marks required to pass the professional examination for each Block/Clinical Clerkship shall be fifty percent (50%) in Written and fifty percent (50%) in the 'Oral/Practical/Clinical' examinations and fifty percent (50%) in aggregate, independently and concomitantly, at one and the same time. (Clinical Exam of Long & Short cases)
4. A candidate failing in one or more Blocks/Clinical Clerkships in the annual examination shall be provisionally allowed to join the next professional class till the commencement of supplementary examinations. The candidate, however, shall have to pass the failed Block/s or Clinical Clerkship in this supplementary examination failing which he / she shall be detained in the professional year. Under no circumstances, a candidate shall be promoted to the next professional class till he/she has previously passed all the Blocks/Clinical Clerkships in the preceding professional examination.

If a student appears in the Supplementary Examination for the first time as he/she did not appear in the annual examination for any reason and failed in any Block/Clinical Clerkship in the Supplementary Examination, he/she will be detained in the same class and will not be promoted to the next class.

*Notification No. UHS/REG-25/2351 Dated 13-11-2025

5. Only one annual and one supplementary of each Professional Examination shall be allowed in a particular academic session. However, in exceptional situations, i.e., national calamities, war or loss of solved answer books in case of accident, special examination may be arranged after having observed due process of law. This will require permission of relevant authorities, i.e., Syndicate and Board of Governors.
6. Any student who fails to clear the First or Second Professional MBBS or BDS Examination, in four consecutive attempts, each, inclusive of both availed as well as un-availed attempts, after becoming eligible for the examination, and has been expelled on that account shall not be eligible for continuation of studies and shall not be eligible for admission as a fresh candidate in either MBBS or BDS.
7. The application for admission of each candidate to the professional examination shall be submitted to the Controller of Examination, through the Principal of the College, on the prescribed format, as per notified schedule, accompanied by the prescribed fee.
8. The candidates shall pay their examination fee through the Principal of their respective colleges, who shall forward the Examination Forms along with the duly paid challan of the examination fee generated from the Online Examination Form.
9. The continuous internal assessment through the Block/Clinical Clerkship, conducted by the college of enrollment, shall carry 20% weightage in the total allocated marks for the concerned Block/Clinical Clerkship in the Professional Examination conducted by the university. The score will be equally distributed to the Written and "Oral/Practical/Clinical" Examinations.
10. The marks of internal assessment through Blocks/Clinical Clerkships examination and attendance record shall be submitted to Controller of Examinations, along with question papers and keys for the Block/Clinical Clerkship examination, within two weeks of completion of each Blocks/Clinical Clerkships examination.
Further, parent-teacher meetings shall be arranged by the colleges after every Block/Clinical Clerkship examination to share feedback on the progress of students with their parents. Minutes of parent teacher meetings, academic timetables/schedule of Blocks/Clinical Clerkships and academic year study guides shall be submitted to the Department of Medical Education UHS, as well.
11. It is emphasized that fresh internal assessment or a revision of assessment for supplementary examination shall not be permissible. However, a revised internal assessment for the detained students can be submitted. The internal assessment award in a particular year will not be decreased subsequently detrimental to the detainee candidate. A proper record of the continuous internal assessment shall be maintained by the concerned department/s in the colleges.

12. The colleges may arrange remedial classes and one re-sit for each Block/Clinical Clerkship examination after fulfillment of prescribed requirements given below. The remedial classes and re-sit examination can be conducted during summer vacation/weekends, before or during preparatory leave for the concerned professional examination, subject to the following conditions:

Block/Clinical Clerkship Attendance	Remedial Classes
<75%, ≥ 50% (50-74%)	- Principal of the college may conduct remedial classes and submit result to the Examination Department, UHS, independently. - Principal of the college may conduct remedial classes for detained students, who have short attendance in the first Block/Clinical Clerkship of a professional year after detention. The college may submit record of <u>the remedial classes to the Examination Department, UHS, independently.</u>
<50%	- Principal of the college may submit attendance record of such students to Department of Medical Education, UHS, seeking permission for conduct of remedial Classes. The conduct of remedial classes in such cases shall be arranged only after permission from the Competent Authority in the university. - The colleges shall also have to provide the university with the reasons submitted by the candidates for short attendance along with documentary evidence for the same duly verified by the principal. - The following shall be considered as valid reasons for short attendance of the students for consideration of permission for remedial classes: - Illness/accident/surgery of the student or sickness/death of an immediate relative/being afflicted by a natural/man-made calamity or disaster or detained students (missed the first Block/Clinical Clerkship of the year), students clearing their preceding professional examination in supplementary, or late admitted students who have been permitted for joining by UHS

Marks in Block/Clinical Clerkship Examination	Re-sit Examination
<50% Marks/ Absence from Block /Clinical Clerkship Examination	Principal of the college may submit record of such students to Department of Medical Education, UHS, seeking permission for conduct of re-sit examination.

	ii. The conduct of re-sit examination in all cases shall be arranged only after permission from the Competent Authority in the university. iii. The colleges shall also have to provide the university with the reasons submitted by the candidates for absence from the Block/Clinical Clerkship examination, along with documentary evidence for the same duly verified by the principal. iv. The following shall be considered as valid reasons for absence of a student from Block/Clinical Clerkship examination, and for consideration of permission for re-sit examination: • Illness/accident/surgery of the student or sickness/death of an immediate relative/being afflicted by a natural/man-made calamity or disaster or detained students (missed the first Block/Clinical Clerkship of the year), students clearing their preceding professional examination in supplementary, or late admitted students who have been permitted for joining by UHS
--	---

13. The following policy shall be applicable for transition of students From Traditional Subject-Based Scheme to the Modular Integrated Curriculum Scheme:

- The students who fail in all subjects of the professional examination, either by taking the examination or due to non-appearance, and are detained in the respective professional year, shall follow the Modular Integrated Curriculum Scheme for their teaching and assessment.
- The students who fail in one or more subjects but not all the subjects of a professional examination, either by taking the examination or due to non-appearance, and are detained in the respective professional year, shall attend classes with students following the Modular Integrated Curriculum Scheme, but they will be examined in the failed subject/s according to their parent scheme, i.e., the Traditional Subject-Based Curriculum Scheme.

BDS 1st Year, BLOCK-01

Sr. No.	Written Exam		Oral/Practical exam				Total
	Subjects	No. of MCQs	Subjects	OSPE (9 marks)	OSCE/CFRC (9 marks)	OSVE (6 marks)	
1	Anatomy	23	Anatomy	02	-	01	24
2	Oral Biology	22	Oral Biology	03	-	01	33
3	Biochemistry	18	Biochemistry	-	-	01	06
4	General Pathology & Microbiology	14	General Pathology & Microbiology	01	-	01	15
5	Physiology	09	Physiology	-	-	01	06
6	Oral Pathology	09	Oral Pathology/Operative Dentistry	01	-	01	15
7	Community Dentistry	07	Community Dentistry	-	01	01	15
8	Operative Dentistry	07	Pharmacology	-	-	01	06
9	Pharmacology	08	-	-	-	-	-
10	Behavioral Sciences	03	-	-	-	-	-
Total		120	Total	7 OSPE = 63 marks	1 OSCE/CFRC = 09 marks	8 OSVE = 48 marks	120



RAHBAR COLLEGE
OF DENTISTRY

Learning Resources





Subject	Learning Resources
General Anatomy, Histology & Embryology	1. Junqueira's Basic Histology: Text and Atlas (17th ed.) 2. Wheater's Functional Histology 3. Siddiqui, L. H. Medical Histology: Text and Atlas 4. General Anatomy by Laiq Hussain Siddiqui 5. Langman's Medical Embryology (15th ed.) 6. The Developing Human (10th ed.) by Moore et al.
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.
Oral Biology & Tooth Morphology	1. Nanci, A. (2024). Ten Cate's Oral Histology, Development, Structure, and Function (10th ed.). Elsevier Health Sciences. 2. Berkovitz, B. K., Holland, G. R., & Moxham, B. J. (2017). Oral Anatomy, Histology, and Embryology (5th ed.). Elsevier Health Sciences. 3. Kumar, G. S. (2023). Orban's Oral Histology & Embryology (13th ed.). Elsevier Health Sciences. 4. Fuller, J. L. (4th ed.). Concise Dental Anatomy & Morphology. 5. Nelson, S. J. (2015). Wheeler's Dental Anatomy, Physiology and Occlusion (1st SAE). 5. Woelfel's Dental Anatomy (Jones & Bartlett Learning)
Pathology & Microbiology	1. Robbins & Cotran Pathologic Basis of Disease 2. Review of Medical Microbiology and Immunology by Levinson 3. Textbook of Pathology by Walter & Israel
Community & Preventive Dentistry	1. Textbook of Preventive and Community Dentistry by S.S. Hiremath 2. Community Oral Health by Cynthia Pine & Rebecca Harris



Pharmacology & Therapeutics	1. Katzung & Trevor's Pharmacology Examination & Board Review (12th ed.) 2. Lippincott Illustrated Reviews: Pharmacology (7th ed.)
Oral Pathology	1. Contemporary Oral and Maxillofacial Pathology by Wysocki, Sapp & Eversole 2. Cawson's Essentials of Oral Pathology & Oral Medicine
Operative Dentistry	1. Sturdevant's Art and Science of Operative Dentistry 2. Summitt's Fundamentals of Operative Dentistry 3. Dental Caries: The Disease and Its Clinical Management by Fejerskov & Kidd
Psychiatry & Behavioral Sciences	1. Hand book of Behavioral sciences, by MH Rana, 3rd ed. 2. Humayun A., Herbert M. (2010). Integrating behavioral sciences in healthcare. Islamabad: HEC.
Periodontology	1. Newman and Carranza's Clinical Periodontology (3rd South Asia Edition)
Prosthodontics	1. McCracken's Removable Partial Prosthodontics (13th Edition) 2. Boucher's Prosthodontic Treatment for Edentulous Patients (12th Edition)
Orthodontics	1. Proffit's Contemporary Orthodontics (6th Edition)
Science of Dental Materials	1. Philips Science of Dental Materials (12th Edition) 2. McCabe Applied Dental Materials (15th Edition)
Oral Medicine	1. Tyldesley's Oral Medicine (5th Edition)