Islam Dental College, Sialkot

Drafted by Department of Department of Dental Education

Study Guide Block III

Program Overview

The mission of the Bachelor of Dental Surgery (BDS) program is to develop competent, safe, and ethical dental practitioners through an integrated curriculum that combines basic sciences, clinical training, research, and community-oriented practice. The program aims to align with the standards of the Pakistan Medical and Dental Council and the University of Health Sciences, ensuring graduates are equipped with the knowledge, skills, professionalism, and lifelong learning abilities required to meet national oral health needs and compete at international levels."

Program Outcomes

By the completion of the Bachelor of Dental Surgery, a graduate is expected to;

1. Demonstrate the professional values expected of a doctor
2. Behave ethically and lawfully in clinical practice
3. Communicate effectively with patients, carers, and colleagues
4. Gather and record relevant information from patients
5. Make a clinical assessment of the patient's problems
6. Make clinical decisions and construct management plans
7. Perform clinical procedures safely and effectively
8. Use evidence to support clinical decision-making
9. Improve the quality and safety of patient care
10. Carry out research and contribute to evidence-based practice
11. Promote health and prevent disease
12. Develop as a professional through lifelong learning

1st Professional BDS Overview

Year 1 of the BDS program, structured under the integrated curriculum framework of the University of Health Sciences Lahore, serves as the foundational phase that builds the essential scientific, clinical, and professional base for dental education. Organized into three progressive blocks, it introduces students to the structure and function of the human body with a strong emphasis on craniofacial anatomy, oral biology, and basic biomedical sciences. Through integration of subjects such as Anatomy, Physiology, Biochemistry, General Pathology, and Oral Biology & Tooth Morphology, students develop a deep understanding of normal structure and function, which forms the basis for recognizing disease processes later in the curriculum. Early exposure to research principles, along with longitudinal courses such as Islamiyat/Ethics, Pakistan Studies, and behavioural sciences, ensures that students begin to develop a sense of ethical responsibility, professionalism, and critical thinking from the outset.

As students progress through the three blocks, the curriculum shifts from foundational sciences in Block I to systems-based integration in Blocks II and III. Block II emphasizes the pathophysiological basis of disease, integrating General Pathology, Pharmacology, Periodontology, Oral Pathology, and Dental Radiology with anatomical and physiological concepts to help students understand disease mechanisms and their clinical relevance. This block also strengthens psychomotor skills through early clinical exposure in Operative Dentistry (Preclinical) and reinforces communication, patient interaction, and behavioural sciences. Block III further advances this integration by focusing on systemic diseases, diagnostics, and clinical applications, incorporating cardiovascular, gastrointestinal, and nutritional sciences with dental disciplines. Students begin to interpret diagnostic data, understand radiographic findings, and apply pharmacological knowledge in simulated clinical scenarios, preparing them for more advanced clinical training in subsequent years.

Throughout Year 1, emphasis is placed on developing core competencies, including communication skills, teamwork, time management, and professional behaviour. The inclusion of Community & Preventive Dentistry fosters an early understanding of public health principles and preventive care, aligning dental education with population health needs. Parallel courses such as Ethics and Pakistan Studies nurture civic responsibility and cultural awareness, while Research methodology introduces students to evidence-based thinking and academic inquiry. Teaching strategies such as lectures, small group discussions, case-based learning, practical sessions, and simulations are paired with diverse assessment methods, including MCQs, SEQs, OSPE/OSCE, viva voce, and reflective evaluations. Collectively, Year 1 establishes a strong academic, ethical, and clinical foundation, ensuring that students transition into higher years with the necessary knowledge, skills, and professional attitudes required for competent dental practice.

BLOCK III – SYSTEMIC INTEGRATION & CLINICAL APPLICATION

Block III represents a significant step forward in the integration of systemic health sciences with emerging clinical dental concepts. Building on the knowledge and skills developed in the earlier blocks, this phase introduces students to key physiological systems alongside foundational elements of diagnosis and functional dentistry. The block comprises five modules—*Blood & Cardiovascular System I, Gastrointestinal System & Nutrition, Occlusion & Functional Dentistry, Diagnostic Foundations,* and *Professional Development & Research*—each contributing to a more clinically contextualized understanding of patient care.

The *Blood & Cardiovascular System I* module focuses on the composition and functions of blood, hemostasis, and the structure and physiology of the cardiovascular system. Students begin to appreciate the systemic factors that influence oral health and the importance of medical considerations in dental practice. Complementing this, the *Gastrointestinal System & Nutrition* module explores digestion, absorption, and nutritional principles, highlighting their direct and indirect impact on oral tissues and disease processes.

The *Occlusion & Functional Dentistry* module introduces the principles of tooth contact, jaw relationships, and functional dynamics of the masticatory system. This serves as a foundation for understanding restorative and prosthodontic concepts in later years. *Diagnostic Foundations* is designed to develop early clinical reasoning by familiarizing students with basic diagnostic tools, patient assessment techniques, and interpretation of clinical findings. Alongside these, the *Professional Development & Research* module continues to strengthen essential competencies such as ethical practice, reflective learning, teamwork, and introductory research skills, fostering a culture of inquiry and evidence-based practice.

Module No.	**Module Title**	**Integrated Subjects**	**Key Focus Areas**
8	Blood & Cardiovascular System I	Physiology, Anatomy, Biochemistry, Pharmacology	Blood, cardiac cycle, circulation, oxygen transport, CVS pharmacology
9	Gastrointestinal System & Nutrition	Physiology, Biochemistry, Oral Biology, Community Dentistry	Digestion, absorption, nutrition, oral-systemic link, public health

Module No.	Module Title	Integrated Subjects	Key Focus Areas
10	Occlusion & Functional Dentistry	Operative Dentistry (Preclinical), Orthodontics (Intro), Prosthodontics (Intro)	Occlusion, dental arches, malocclusion, functional dentistry
11	Diagnostic Foundations	Dental Radiology, Oral Pathology	Radiographic interpretation, lesion identification, diagnostics
L (Longitudinal)	Professional Development & Research	Research, CFRC-I, Ethics/Pak Studies, Psychiatry	SDL, ethics, research application, patient-centered care

Teaching & Learning Strategies:

- **Interactive Lectures** – Short, focused sessions incorporating questioning, polling, and discussion to actively engage students rather than passive listening.
- **Small Group Discussions (SGDs)** – Facilitated group work to analyze concepts such as cell structure, molecular pathways, and genetics, promoting peer learning and critical thinking.
- **Problem-Based Learning (PBL)** – Case-triggered learning where students explore clinical or scenario-based problems (e.g., cellular dysfunction, genetic disorders) to integrate basic science concepts.
- **Case-Based Learning (CBL)** – Structured clinical cases linking molecular and cellular mechanisms to oral and systemic diseases.
- **Practical/Laboratory Sessions** – Hands-on activities including microscopy, identification of cellular components, and basic biochemical experiments to reinforce theoretical knowledge.
- **Self-Directed Learning (SDL)** – Guided independent study using predefined objectives, encouraging students to explore resources, research topics, and develop lifelong learning habits.
- **Flipped Classroom Approach** – Pre-class preparation through videos or reading materials, followed by in-class application and discussion.
- **Peer Teaching & Presentations** – Students present assigned topics, enhancing understanding, communication skills, and confidence.
- **Skills-Based Sessions** – Early exposure to basic laboratory techniques, use of digital tools, and academic writing skills.
- **E-Learning / LMS-Based Activities** – Online discussions, quizzes, and resource sharing to supplement classroom teaching.
- **Reflective Practice** – Short reflective writing tasks to help students connect learning with personal and professional development

Module VIII Introduction

Module VIII provides a foundational understanding of the blood and cardiovascular system, emphasizing their structure, function, and clinical relevance within the integrated BDS curriculum. This module introduces students to the essential components of blood, including plasma, red blood cells, white blood cells, and platelets, along with their roles in oxygen transport, immunity, hemostasis, and maintenance of homeostasis.

A major focus of the module is the physiology of the cardiovascular system, including the structure and function of the heart, blood vessels, and the mechanisms regulating blood flow, blood pressure, and circulation. Students explore the cardiac cycle, the electrical conduction system of the heart, and basic principles of hemodynamics, enabling them to understand how the body maintains adequate tissue perfusion under normal and altered conditions.

The module also highlights the clinical significance of blood and cardiovascular health in dental practice. Learners are introduced to common conditions such as anemia, bleeding disorders, hypertension, and cardiovascular diseases, with an emphasis on their implications for dental procedures, patient safety, and treatment planning. This fosters early awareness of risk assessment and the need for interprofessional collaboration in managing medically compromised patients.

Subject	**Key Focus Area**	**Learning Objectives**	**Domain**	**Teaching Strategy**	**Assessment Tool**
Module VIII: Blood & Cardiovascular System-I					
Anatomy	Organization of the Vascular System	Describe the general organization of the vascular system, including the structure and functions of arteries, veins, and capillaries.	C	Lecture	MCQs/Viva
	Organization of the Nervous System	Describe the general organization of the nervous system, including the central nervous system and	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		the peripheral nervous system overview.			
	Circulatory system	Discuss circulatory routes	C	Lecture	MCQs
		Describe various types of anastomoses with examples.	C	Lecture	MCQs/Viva
		Define the portal system with its varieties.	C	Lecture	MCQs/Viva
		Describe how the walls of blood vessels receive their blood supply, including the role of vasa vasorum and diffusion from the lumen.	C	SGD	MCQs/Viva
		Describe various components of the lymph vascular system.	C	Lecture	MCQs
Histology	Lymphoid organs	Describe the structure of lymphoid organs	C	Lecture	MCQs
Physiology	Blood: White Blood Cells and Body Defense Mechanisms	Enumerate the types of white blood cells along with their normal blood count.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Discuss their site of genesis.	C	Lecture	MCQs/Viva
		Describe the characteristics and functions of neutrophils.	C	Lecture	MCQs
		Explain the process of phagocytosis and lysis of invading agents by neutrophils.	C	Lecture	MCQs/Viva
		Explain the process of phagocytosis and lysis of invading agents by macrophages.	C	Lecture	MCQs
		Explain the process of opsonization.	C	Lecture	MCQs
		Describe the process of inflammation.	C	Lecture	MCQs
		List different lines of defense during inflammation.	C	Lecture	MCQs
		Explain the process of migration of neutrophils from the blood into the inflamed tissue.	C	SGD	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Explain the functions of eosinophils and basophils.	C	Lecture	MCQs
		Discuss normal lifespan of white blood cells.	C	Lecture	MCQs
		Classify lymphocytes	C	Lecture	MCQs/Viva
		Classify T lymphocytes with their salient functions.	C	Lecture	MCQs
	Immunity	Define immunity.	C	Lecture	MCQs
		Describe innate immunity	C	Lecture	MCQs
		Classify acquired immunity.	C	Lecture	MCQs/Viva
		Define passive immunity.	C	Lecture	MCQs
		Discuss the role of T cells and B cells in acquired immunity.	C	SGD	MCQs/Viva
		Define plasma cells.	C	Lecture	MCQs
		Describe the structure of the antigen and immunoglobulin.	C	Lecture	MCQs
		List types of immunoglobulins	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Describe the mechanism of direct action of antibodies.	C	Lecture	MCQs
	Blood Types and Transfusion	Enumerate different blood group types.	C	Lecture	MCQs
		Explain the basis of the ABO and Rh blood systems.	C	Lecture	MCQs/Viva
		Discuss the features and complications of mismatched blood transfusion reactions.	C	SGD	MCQs
	Hemostasis and Blood Coagulation	Explain the mechanisms that secure hemostasis.	C	Lecture	MCQs
		Discuss the characteristics and functions of platelets.	C	Lecture	MCQs
		Mention the normal platelet count in blood and the life span of platelets.	C	SGD	MCQs/Viva
		Explain the steps involved in the formation of the primary platelet plug to seal small vascular holes.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Conditions Causing Excessive Bleeding	Define thrombocytopenia.	C	Lecture	MCQs
		List causes of thrombocytopenia.	C	Lecture	MCQs
		Explain the consequences of thrombocytopenia.	C	Lecture	MCQs
		List the clotting factors in blood.	C	Lecture	MCQs/Viva
		List vitamin K–dependent clotting factors.	C	Lecture	MCQs
		Explain the intrinsic and extrinsic clotting pathways.	C	SGD	MCQs/Viva
		Describe the mechanism of clot formation after injury.	C	Lecture	MCQs/Viva
		Discuss the mechanism of anticoagulants (heparin, oxalate, citrate) used in the laboratory.	C	Lecture	MCQs/Viva
		Explain the conditions that cause excessive	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		bleeding (Vitamin K deficiency, Hemophilia, Thrombocytopenia).			
		Discuss prothrombin time with its significance.	C	Lecture	MCQs/Viva
	Heart: Cardiac Muscle, Pump Function, and Heart Valves	Describe the structure of the heart and its functioning.	C	SGD	MCQs/Viva A
		Classify various types of blood vessels with examples.	C	Lecture	MCQs
		Explain the physiological anatomy of cardiac muscle.	C	Lecture	MCQs/Viva
	Rhythmical Excitation of the Heart	Describe the phases of the action potential of the ventricle.	C	Lecture	MCQs
		Draw the phases of the action potential of the ventricle.	C	SGD	OSCE/OSPE
		Describe the phases of the action potential of the SA node.	C	Lecture	MCQs/Viva
		Explain the mechanism of self-excitation.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Explain the conducting system of the heart with the help of a diagram.	C	Lecture	MCQs
		Describe the mechanism of excitation–contraction coupling in cardiac muscle alongside its diagrammatic representation.	C	SGD	MCQs/OSCE
		Explain the pressure and volume changes of the left ventricle during the cardiac cycle alongside its diagrammatic representation.	C	SGD	MCQs/OSCE
		Define the normal values of cardiac output, stroke volume, enddiastolic volume, end systolic volume, and venous return, with examples.	C	Lecture	MCQs/Viva
		Describe the Frank–Starling mechanism.	C	Lecture	MCQs
		Describe the autonomic regulation of the heart's pumping.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Describe the effect of potassium, calcium ions, and temperature on heart function.	C	Lecture	MCQs/Viva
	Fundamentals of Electrocardiography	Define electrocardiograph	C	Lecture	MCQs
		Explain the physiological basis and durations of waves, intervals, and segments of normal ECG alongside a labelled diagram.	C	SGD	MCQs/Viva
	Cardiac Arrhythmias	Define tachycardia with its causes.	C	Lecture	MCQs/Viva
		Define bradycardia with its causes.	C	Lecture	MCQs/Viva
		Define sinus arrhythmia on its physiological basis.	C	Lecture	MCQs/Viva
	Circulation	Explain the functional parts of circulation (arteries, arterioles, capillaries, veins, venules).	C	Lecture	MCQs/Viva
		Mention the pressures in systemic and pulmonary circulation.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Describe the nervous regulation of blood vessels and the functioning of vasomotor centers.	C	SGD	MCQs
		Explain vasovagal syncope	C	Lecture	MCQs
	Microcirculation and Lymphatic System: Capillary Exchange and Lymph Flow	Identify vessels constituting microcirculation.	C	Lecture	MCQs
		Enumerate Starling forces (hydrostatic and osmotic)	C	Lecture	MCQs
		Explain their role in capillary filtration and interstitial fluid formation.	C	Lecture	MCQs
		Define edema.	C	Lecture	MCQs/Viva
	Local and Humoral Control of Tissue Blood Flow	Describe local control of blood flow in response to tissue needs	C	Lecture	MCQs/Viva
		Discuss the role of humoral factors in the control of blood flow.	C	SGD	MCQs/Viva
		Explain the acute mechanism of local	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		blood flow control (tissue metabolism & oxygen demand).			
		Describe autoregulation of blood flow during changes in arterial pressure (metabolic and myogenic mechanisms).	C	Lecture	MCQs/Viva
	Arterial Blood Pressure: Measurement and Clinical Significance	Define blood pressure and its two primary determinants (cardiac output and total peripheral resistance).	C	Lecture	MCQs/Viva
		Define pulse pressure and mean arterial pressure.	C	Lecture	MCQs
		Interpret normal blood pressure and mean arterial pressure values.	C	SGD	MCQs/Viva
	Primary (Essential) Hypertension	Define hypertension	C	Lecture	MCQs/Viva
	Cardiac Output, Venous Return, and Their Regulation	Define cardiac output and venous return with their normal values.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Explain factors that affect cardiac output and venous return.	C	Lecture	MCQs
	Nervous Regulation of Circulation and Rapid Control of Arterial Pressure	Describe the role of the nervous system in the rapid control of arterial pressure.	C	Lecture	MCQs
		Enumerate nervous reflex mechanisms for the regulation of blood pressure.	C	Lecture	MCQs/Viva
		Explain the role of baroreceptors in the regulation of arterial blood pressure.	C	Lecture	MCQs
		Explain the role of chemoreceptors in the regulation of arterial blood pressure.	C	SGD	MCQs
		Explain CNS ischemic response.	C	Lecture	MCQs/Viva
		Explain the Cushing reaction.	C	Lecture	MCQs
	Role of Kidneys in Long-Term Control of Arterial Pressure	Describe the role of the renin–angiotensin–aldosterone mechanism in blood pressure regulation.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Explain stress relaxation and capillary fluid shift.	C	Lecture	MCQs
		Enlist immediate, intermediate, and long-term mechanisms of blood pressure regulation.	C	Lecture	MCQs/Viva
	Circulatory Shock and Its Treatment	Define different types of shock.	C	SGD	MCQs
		Explain the causes, features, and pathophysiology of hypovolemic/hemorrhagic shock.	C	Lecture	MCQs/Viva
		Explain the causes, features, and pathophysiology of septic shock.	C	SGD	MCQs
		Explain the causes, features, and pathophysiology of neurogenic shock.	C	Lecture	MCQs
		Explain the causes and features of anaphylactic shock.	C	Lecture	MCQs
		Explain cardiogenic shock.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Explain the stages of shock.	C	Lecture	MCQs
		Explain compensatory mechanisms during non-progressive shock.	C	Lecture	MCQs/Viva
	Coronary Circulation and Ischemic Heart Disease	Define angina pectoris and myocardial infarction.	C	Lecture	MCQs
	Heart Valves and Heart Sounds	List the different types of heart sounds on the physiological basis of each.	C	Lecture	MCQs/Viva
		List the causes of the 3rd and 4th heart sounds.	C	SGD	MCQs/Viva
		Define murmur	C	Lecture	MCQs
Biochemistry	Chemistry and classification of amino acids	Define zwitter ion and isoelectric pH.	C	Lecture	MCQs
	Electrophoresis	Discuss the principle, procedure, and uses of electrophoresis.	C	Lecture	MCQs/Viva
		List the functions and give the clinical importance of plasma proteins (albumin,	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		fibrinogen, and transferrin).			
		Describe serum albumin and globulins.	C	Lecture	MCQs/Viva
	Immunoglobulin classes and their functions	Enlist five major types of immunoglobulins alongside their functions/significance, and the functions of each class separately.	C	Lecture	MCQs
	Eicosanoids	Define eicosanoids.	C	Lecture	MCQs
		Outline classification and biomedical importance of eicosanoids.	C	Lecture	MCQs
		List functions of prostaglandins, leukotrienes, and thromboxane.	C	Lecture	MCQs
		Explain how the process of low-dose aspirin therapy helps in the management of patients with IHD.	C	SGD	MCQs/Viva
	Cholesterol	Describe the structure, functions, metabolism & biomedical importance of cholesterol.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Plasma lipoproteins	List the components of a lipid profile and describe the significance of cardiac enzyme markers (TropT, CK-MB) in cardiovascular health.	C	Lecture	MCQs/Viva
	Vitamins	Describe vitamin K, its active forms, sources, RDA, biochemical roles, and deficiency manifestations.	C	Lecture	MCQs
Pharmacology & Theraputics	Classification-CVS drugs	Classify antihypertensive drugs	C	SGD	MCQs
		Classify antianginal drugs.	C	Lecture	MCQs/Viva
		Classify antiarrhythmic drugs.	C	Lecture	MCQs
		Classify drugs used in cardiac failure.	C	Lecture	MCQs
Pathology	Disorders of WBCs	Define white blood cell (WBC) disorders	C	Lecture	MCQs/Viva
		Classify white blood cell (WBC) disorders.	C	Lecture	MCQs
		Discuss the causes of reactive leukocytosis (infections, stress, inflammation) that	C	SGD	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		result in elevated WBC counts and their impact on planning and post- operative healing.			
		Explain the pathophysiology of leukemoid reactions and leukemias.	C	Lecture	MCQs
	Immunity	Define the clinical aspects of innate and acquired immunity, including active and passive immunity.	C	Lecture	MCQs/Viva
		List the types of immune cells, such as phagocytes, T cells, B cells, and NK cells, with an explanation of their roles in immunity and disease progression.	C	Lecture	MCQs
		Describe the complement activation pathways (classical, alternative, and lectin)	C	Lecture	MCQs
		List the types of antibodies (IgG, IgA, IgM, IgE, IgD) with their relevance in	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		hypersensitivity reactions.			
	Hypersensitivity reactions	Explain the types and pathogenesis of hypersensitivity reactions (Type I–IV).	C	SGD	MCQs/Viva
	Blood grouping & complications of blood transfusion	Define the principles of the ABO and Rh blood grouping systems.	C	Lecture	MCQs
		State the importance of compatibility testing, including crossmatching, for safe transfusions.	C	Lecture	MCQs/Viva
		List the Hazards of blood transfusion.	C	Lecture	MCQs/Viva
		Identify scenarios in dentistry where blood grouping knowledge is essential, such as surgeries or trauma management.	C	Lecture	MCQs/Viva
		Describe the pathophysiology, features, and treatment of Rh incompatibility.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Hemodynamic disorders	Define thrombosis, embolism, infarction, and hemorrhage as hemodynamic disorders relevant to systemic health.	C	Lecture	MCQs/Viva
		Describe the types of thrombosis, including arterial and venous, and their potential impact on dental procedures, such as delayed healing or increased bleeding risks.	C	SGD	MCQs/Viva
		Discuss the pathophysiology of thrombosis, focusing on Virchow's triad (endothelial injury, stasis, and hypercoagulability).	C	Lecture	MCQs/Viva
		Explain the mechanisms and clinical features of embolism, including pulmonary and systemic embolism.	C	Lecture	MCQs/Viva
		Explain the pathophysiology of embolism, including	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		detachment of thrombi and subsequent vascular occlusion.			
		Outline the types of infarctions (white and red) and their effects on oral tissues, such as necrosis or ischemic lesions.	C	SGD	MCQs
		Describe the pathophysiology of infarction, focusing on ischemia and necrosis in the systemic context.	C	Lecture	MCQs
	Hemodynamics, Platelets & Bleeding Disorders	Define bleeding disorders.	C	Lecture	MCQs/Viva
		Classify bleeding disorders into vascular, platelet, coagulation, and mixed types.	C	Lecture	MCQs/Viva
		List causes of thrombocytopenia, such as decreased production, increased destruction, or sequestration of platelets.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		List first-line laboratory investigations for bleeding disorders, including complete blood count (CBC), platelet count, bleeding time (BT), clotting time (CT), prothrombin time (PT), activated partial thromboplastin time (aPTT), and international normalized ratio (INR).	C	Lecture	MCQs/Viva
		Discuss the interpretation of laboratory findings and their clinical correlation in diagnosing bleeding disorders (platelet & coagulation related disorder).	C	Lecture	MCQs
	Microbiology of Blood: Relevance and Implications in Dentistry	Apply knowledge of Streptococcus viridans and Staphylococcus aureus and epidermidis in explaining their role in infective endocarditis and bacteremia, and their implications for dental care.	C	Lecture	MCQs/Viva
		Discuss HIV with its virulence factors,	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		pathogenesis, lab diagnosis & prevention, recognize oral manifestations of HIV, including candidiasis and periodontal disease, in immunosuppressed patients.			
		Identify oral ulcerations caused by Cytomegalovirus and Epstein-Barr Virus (Oral Hairy leukoplakia, candida, oral ulceration) in immunocompromised individuals.	C	Lecture	MCQs
		Identify the role of Enterococcus in infective endocarditis and bacteremia, and their implications for dental care.	C	Lecture	MCQs/Viva
		Describe the dengue virus, its mode of transmission, key clinical features, and preventive measures, with emphasis on bleeding risk and	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		implications for dental care.			
		Apply infection control protocols to prevent cross-contamination and transmission of bloodborne pathogens and parasites.	C	Lecture	MCQs/Viva
	Shock	Define Shock	C	Lecture	MCQs
		Classify types of shock (hypovolemic, cardiogenic, septic) with evaluation of their pathophysiology.	C	SGD	MCQs/Viva
	Microbiology related to CVS & dentistry	Correlate septicemia caused by cardiovascular pathogens (e.g., Staphylococcus aureus, Pseudomonas aeruginosa) with oral manifestations such as petechiae or splinter hemorrhages.	C	Lecture	MCQs/Viva
		Identify microbial causes of myocarditis, such as Coxsackievirus, and their systemic effects influencing dental care.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Assess the role of oral pathogens like Treponema denticola and Porphyromonas gingivalis in contributing to cardiovascular diseases, including atherosclerosis, and integrate this knowledge into periodontal therapy.	C	Lecture	MCQs/Viva

Clinical Practicum					
Subject	**Topic**	**Learning Objective**	**Domain**	**Teaching Strategy**	**Assessment Tool**
Anatomy	Arteries	Identify arteries under a light microscope.	C	Demonstration	OSPE/OSCE
		Identify veins & capillaries under a light microscope.	C	Demonstration	OSPE/OSCE
Histology	Lymphoid Organs	Draw a labelled light microscopic diagram of lymphoid organs	C	SGD	OSPE/OSCE
Physiology	Blood Grouping	Observe the demonstration of the blood grouping procedure	C	Demonstration	OSPE/OSCE
		Explain its clinical relevance in dental practice, including its role in managing medical emergencies.	C	Demonstration	OSPE/OSCE
	Bleeding Time	Observe the demonstration of bleeding time measurement.	C	SGD	OSPE/OSCE
		Explain its importance in assessing bleeding risk in dental procedures.	C	Demonstration	OSPE/OSCE
	Clotting Time	Observe the demonstration of clotting time measurement.	C	Demonstration	OSPE/OSCE
		Explain its relevance to safe dental practice.	C	Demonstration	OSPE/OSCE
	ECG Waveform Recognition	Identify the normal waveforms and intervals on a sample ECG tracing.	C	Demonstration	OSPE/OSCE
	ECG-Based Heart Rate Calculation	Calculate heart rate from a provided normal ECG tracing alongside a description of its clinical significance.	C	Demonstration	OSPE/OSCE
	Cardiac Examination	Demonstrate palpation to locate the apex beat on a simulation model or peer under supervision.	P	Demonstration	OSPE/OSCE
	Cardiac Auscultation	Demonstrate the correct method to	P	Demonstration	OSPE/OSCE

		auscultate the precordium for heart sounds under supervision.			

Module IX Introduction

Module IX provides a comprehensive introduction to the structure and function of the gastrointestinal (GI) tract, highlighting its vital role in digestion, absorption, and overall maintenance of systemic health. Within the integrated BDS curriculum, this module establishes essential links between basic biological processes and their clinical relevance, particularly in relation to nutrition, oral health, and disease.

The module explores the anatomical organization and histological features of the GI tract, including the oral cavity, esophagus, stomach, intestines, liver, pancreas, and associated glands. Students develop an understanding of the coordinated processes of ingestion, digestion, absorption, and elimination, alongside the regulatory mechanisms involving neural and hormonal control. Special emphasis is placed on the oral cavity as the initial site of digestion, reinforcing its significance in dental practice.

A key component of this module is the study of common gastrointestinal disorders and their oral manifestations, such as nutritional deficiencies, gastroesophageal reflux, and infections. Students are introduced to the impact of systemic conditions on oral tissues, enabling early recognition and appropriate referral. The module also highlights the role of diet and nutrition in maintaining both general and oral health, fostering a preventive and holistic approach to patient care.

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
Module IX: Gastrointestinal Tract					
Anatomy	Oral Cavity Anatomy	Describe the parts and boundaries of the oral cavity	C	Lecture	MCQs
	Tongue Structure and Vascular Supply	Describe the anatomical features of the tongue with emphasis on its musculature, vascular supply, and lymphatic drainage.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Palate Anatomy and Neurovascular Supply	Describe the anatomical features of the hard and soft palate with their neurovascular supply.	C	Lecture	MCQs/Viva
	Muscles of the Soft Palate	Describe the attachments of the muscles of the soft palate along with their actions and nerve supply.	C	Lecture	MCQs
	Salivary Glands Anatomy and Neurovascular Supply	Describe the anatomical features, blood supply, and nerve supply of the salivary glands glands	C	Lecture	MCQs/Viva
	Parotid Gland Clinical Correlates	Discuss the clinical correlates of the parotid gland: Mumps, Frey's syndrome.	C	Lecture	MCQs/Viva
	Submandibular and Otic Ganglia	Describe the location, roots, and distribution of submandibular and otic ganglia.	C	SGD	MCQs/Viva
	Pharynx Anatomy and Neurovascular Supply	List the parts of the pharynx, giving their extent, anatomical features, structure, and neurovascular supply.	C	Lecture	MCQs
	Muscles of the Pharynx	Describe the attachments of the muscles of the pharynx, along with their actions and nerve supply.	C	Lecture	MCQs
	Palatine Tonsil Anatomy and Vascular Supply	Discuss the location, anatomical features, and vascular supply of palatine tonsils.	C	Lecture	MCQs/Viva
	Piriform Fossa and Tonsils Clinical Correlates	Discuss the clinical correlates of piriform fossa and tonsils: Adenoids, Quincy, Tonsillitis.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Waldeyer's Ring of Lymphatic Tissues	List the structures forming the Waldeyer's ring of lymphatic tissue.	C	Lecture	MCQs
	Cervical Esophagus Anatomy and Neurovascular Supply	Describe the anatomical features of the cervical part of the esophagus with its neurovascular supply.	C	SGD	MCQs/Viva
Histology	Oral Cavity	Describe the light microscopic structure of the lip	C	Lecture	MCQs
		Describe the light microscopic structure of the tongue.	C	Lecture	MCQs
Embryology	Tongue	Describe the development of the tongue	C	Lecture	MCQs
Physiology	General Principles of GIT Function - Motility, Nervous Control	Describe the physiologic anatomy of the gastrointestinal tract.	C	Lecture	MCQs
		Discuss the electrical activity of the smooth muscles of the GIT.	C	Lecture	MCQs/Viva
		Describe the mechanism of excitation of the smooth muscle of the gastrointestinal tract.	C	SGD	MCQs
		Discuss the factors that depolarize and hyperpolarize the GI membrane.	C	Lecture	MCQs
	Neural and Hormonal Regulation of Gastrointestinal Function	Describe the role of the autonomic nervous system in the regulation of the GIT's function.	C	Lecture	MCQs/Viva
		Describe the enteric nervous system.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Describe the Meissner's plexus.	C	Lecture	MCQs
		Differentiate between myenteric and Meissner's plexuses.	C	Lecture	MCQs
		List the gastrointestinal reflexes & explain the functions of these reflexes.	C	SGD	MCQs/Viva
		Discuss the stimuli, site of release, and actions of cholecystokinin, Gastrin, Secretin & Motilin (enteroendocrine cells)	C	Lecture	MCQs
		Differentiate between sympathetic and parasympathetic modulation of the enteric nervous system and the effector organs of the GI tract.	C	Lecture	MCQs/Viva
	Functional types of movements in the GI tract	Discuss functional movements of the GIT (propulsive & mixing)	C	Lecture	MCQs
	Esophagus	Discuss the pathophysiology & features of achalasia & Mega esophagus.	C	Lecture	MCQs
	Vomiting Reflex	Describe the stages of the vomiting act.	C	Lecture	MCQs
		Appraise the location and function of the vomiting center/ chemoreceptor trigger zone in the brain.	C	SGD	MCQs
	Motor function of the stomach	Explain the motor function of the stomach.	C	Lecture	MCQs
		Explain factors that regulate stomach emptying.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Gastric secretion	Describe characteristics & functions of the gastric secretions.	C	Lecture	MCQs
		Discuss the role of the intrinsic factor from gastric parietal cells	C	Lecture	MCQs
	Pathophysiology of Stomach	Discuss basic causes of gastritis and Pernicious anemia.	C	Lecture	MCQs
		Enumerate the causes and pathophysiology of peptic ulcer	C	SGD	MCQs/Viva
	Movements of the small intestine	Discuss the types of movements taking place in small intestine alongside their function.	C	Lecture	MCQs
		Define peristaltic rush and enteritis	C	Lecture	MCQs
	Movements of the Colon	Enumerate the types of movements taking place in colon with their functions	C	Lecture	MCQs
Biochemistry	Saliva	Elaborate the composition and functions of saliva	C	Lecture	MCQs
		Explain composition and functions of gastric juice.	C	Lecture	MCQs/Viva
		Correlate chronic use of NSAIDs with development of peptic ulcer	C	SGD	MCQs
	Pancreatic juice, bile and succus entericus	Discuss composition and functions of pancreatic juice, bile and succus entericus	C	Lecture	MCQs/Viva
	Digestion and absorption	Describe the mechanism of digestion and absorption of dietary carbohydrates	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Discuss causes, clinical features, diagnosis and management of lactose intolerance.	C	Lecture	MCQs/Viva
		Describe the mechanism of digestion and absorption of dietary proteins	C	Lecture	MCQs
		Explain the process of digestion and absorption of dietary lipids.	C	Lecture	MCQs/Viva
Pharmacology & Theraputics	Acid Peptic disease	Classify the drugs used for the treatment of Acid- Peptic Disease (APD)	C	SGD	MCQs/VivaA
		Explain their mechanism of action, uses and adverse effects	C	Lecture	MCQs
		Correlate chronic use of NSAIDS with development of peptic ulcer	C	Lecture	MCQs/Viva
		List Tripple and Quadruple regimen for APD	C	Lecture	MCQs/Viva
	Antiemetics and Prokinetics	Classify antiemetics	C	Lecture	MCQs/Viva
		Describe the mechanism of action, clinical uses, and adverse effects of metoclopramide	C	Lecture	MCQs
		Compare metoclopramide and Domperidone	C	SGD	MCQs/Viva
		List the drugs used in the prevention of chemotherapy- or radiation induced emesis	C	Lecture	MCQs/Viva
	Classification of laxatives & antidiarrheals	Classify Laxatives and antidiarrheals	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
Oral Biology & Tooth Morphology	Oral Mucosa	Define oral mucosa	C	Lecture	MCQs
		Explain the histological structure of oral mucosa with elaboration of keratinized and non-keratinized epithelium.	C	Lecture	MCQs
		Explain the cellular events in maturation of oral mucosa	C	Lecture	MCQs/Viva
		Discuss the details of the non- keratinocytes in the oral epithelium and lamina propria.	C	SGD	MCQs/Viva
		Describe the blood and nerve supply of oral mucosa	C	Lecture	MCQs
		Explain the structural variation in oral mucosa.	C	Lecture	MCQs/Viva
		Explain the mucocutaneous junctions in the oral mucosa.	C	Lecture	MCQs
		Describe the biological stages of wound healing in the oral mucosa, highlighting the role of the inflammatory response and granulation tissue formation.	C	Lecture	MCQs
		Describe the age-related changes in oral mucosa	C	Lecture	MCQs
	Physiology of Taste	Describe the process of taste perception	C	SGD	MCQs
		Identify the major systems involved in supporting the sense of taste.	C	Lecture	MCQs/Viva
		Describe the structure, location, and function of	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		taste buds along with the mechanism of taste sensations			
		Identify the basic taste modalities alongwith the major conditions that affect the sense of taste	C	Lecture	MCQs
	Salivary Glands	Define saliva alognwith its composition and function	C	Lecture	MCQs/Viva
		Classify salivary glands	C	Lecture	MCQs
		Describe the development of salivary glands.	C	SGD	MCQs
		Elaborate its changes with age and its clinical considerations	C	Lecture	MCQs
		Describe the histological structure of salivary glands along with acini and ducts	C	Lecture	MCQs/Viva
		Explain the role of myoepithelial cells	C	Lecture	MCQs
		Explain the microscopic structure of the salivary glands	C	Lecture	MCQs/Viva
		Describe the connective tissue of salivary glands	C	Lecture	MCQs
	Saliva	Discuss the mechanism of saliva formation and its ductal modification.	C	SGD	MCQs
Pathology	GERD	Define heartburn	C	Lecture	MCQs
		Describe its pathophysiology as a symptom of gastroesophageal reflux disease (GERD).	C	Lecture	MCQs
		Enumerate the etiology and clinical features of	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		GERD and peptic ulcer disease.			
Microbiology	Microbial Agents Associated with Oral Lesions	List different organisms causing oral lesions	C	Lecture	MCQs/Viva
		Discuss HPV, as disease causing organisms, their epidemiology, virulence factors, pathogenesis, lab diagnosis & prevention	C	Lecture	MCQs
		List different organisms causing diarrhea.	C	SGD	MCQs
	Microbial Agents Associated with Diarrhea	Discuss shigella & vibrio cholera as disease causing organisms, their epidemiology, virulence factors, pathogenesis, lab diagnosis & prevention.	C	Lecture	MCQs
	Helicobacter pylori Infection	Discuss Helicobacter pylori with its epidemiology, virulence factors, pathogenesis, lab diagnosis & prevention.	C	Lecture	MCQs/Viva
Oral Pathology	Abnormalities of salivary secretions	Discuss clinical abnormalities of Salivary secretions.	C	Lecture	MCQs
		Describe the etiology and clinical features of xerostomia.	C	Lecture	MCQs
		Explain the management options available for patients suffering from xerostomia.	C	Lecture	MCQs
		Explain the biochemical mechanisms that contribute to the development of rampant caries in patients with xerostomia	C	SGD	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Aphthous ulcers	List the types and salient features of ulcers (acute, chronic and recurrent)	C	Lecture	MCQs/Viva
	Anomalies of tongue and lips	Describe the anomalies of tongue (ankyloglossia, aglossia, macroglossia, microglossia) and Lips	C	Lecture	MCQs

Clinical Practicum					
Subject	**Topic**	**Learning Objective**	**Domain**	**Teaching Strategy**	**Assessment Tool**
Histology	Lip	Identify microscopic structure of lip.	C	Tutorial	OSCE/OSPE
	Tongue	Identify microscopic structure of tongue	C	Tutorial	OSEC/OSPE
Oral Biology & Tooth Morphology	Oral Epithelium and Specialized Mucosa	Draw labelled diagram of the keratinized and non-keratinized oral epithelium, specialized mucosa including tongue papillae and mucocutaneous junction.	C	Tutorial	OSCE/OSPE
	Taste Bud Structure and Tongue Sensory Map	Draw labelled diagram of the histological structure of the taste bud, alongside the specificity of the tongue for different taste sensations.	C	Tutorial	OSCE/OSPE
	Tongue Papillae and Taste Bud Identification	Identify the histological section of the tongue showing different tongue papillae and the location of taste buds in images or slides	C	Tutorial	OSCE/OSPE
	Salivary Gland Histology	Draw labelled diagram of the histological section of major salivary glands, showing serous and mucous acini, serous demilunes, and cells of intercalated, striated, and excretory ducts	C	Tutorial	OSCE/OSPE

Module X Introduction

The **Occlusion I module** in the University of Health Sciences (UHS) integrated BDS curriculum is an early clinical-foundation module designed to introduce dental students to the principles governing tooth contact, functional harmony, and their relevance to restorative and prosthetic dentistry. It builds upon basic knowledge of tooth morphology and oral biology, gradually transitioning students from theoretical understanding to preclinical skill development.

At its core, the module emphasizes the **concept of normal occlusion and its clinical significance**, enabling students to understand how teeth interact during mastication, speech, and mandibular movements. Students are introduced to occlusal relationships, determinants, and parameters that ensure **balanced and functional occlusion**, along with the biological basis of these relationships involving muscles, temporomandibular joint (TMJ), and supporting structures.

A major component of the module is the **integration of tooth morphology with occlusal function**. Learners develop the ability to identify, draw, and interpret the morphology of teeth—particularly incisors, canines, and premolars—and relate these features to their functional roles in occlusion. This integration helps students appreciate how anatomical variations influence occlusal patterns and clinical outcomes.

The module also incorporates **dental materials and preclinical operative skills**, where students learn the manipulation of materials such as gypsum, waxes, and impression materials, alongside their role in recording and reproducing occlusion. Practical exposure includes exercises in wax-ups, occlusal adjustments, and basic prosthodontic procedures like partial denture design, allowing students to correlate occlusal theory with hands-on application.

Importantly, Occlusion I is delivered as an **integrated module**, combining disciplines such as Oral Biology, Tooth Morphology, Dental Materials, Operative Dentistry, and Prosthodontics. This multidisciplinary approach ensures that students understand occlusion not as an isolated concept but as a **central link between structure, function, and clinical practice**.

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
Module X: Occlusion 1					
Anatomy	Trigeminal Nerve and Sensory Innervation	Describe the extracranial course, branches, and	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		distribution of trigeminal nerve.			
		Explain the causes and clinical consequences of damage to the nerve	C	Lecture	MCQs
		Describe the innervation of the maxillary and mandibular teeth, and their supporting structures and the anatomical basis of common variations in sensory innervation of the teeth.	C	Lecture	MCQs/Viva
	Temporomandibular Joint (TMJ)	Describe temporomandibular joint mentioning its ligaments, nerve supply and movements.	C	Lecture	MCQs/Viva
	Muscles of Mastication	Describe the muscles of mastication along with origin, insertion, action, and innervation of each muscle	C	Lecture	MCQs
		Demonstrate the examination of the origin, insertion, nerve supply, and actions of the muscles of mastication on models or cadaveric specimens	C	Lecture	MCQs/Viva
Oral Biology & Tooth Morphology	Temporomandibular Joint	Describe the histology of the temporomandibular joint (temporal and condylar bone, muscles, capsule, disk, synovial membrane, and ligaments)	C	Lecture	MCQs/Viva
	Muscle Contraction (TMJ)	Describe the biomechanics of TMJ	C	SGD	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Describe the nerve supply of the joint emphasizing the role of nerve endings	C	Lecture	MCQs
		Identify the common TMJ associated clinical manifestations	C	Lecture	MCQs
	Mastication	Define Mastication	C	Lecture	MCQs/Viva
		Elaborate chewing cycle of mastication	C	Lecture	MCQs/Viva
		Discuss different stages of mastication	C	Lecture	MCQs
		Discuss different muscles involved n mastication alongside their origin, insertions, innervation, and functions	C	SGD	MCQs/Viva
	Physiology of Swallowing	Define the terms swallowing and deglutition	C	Lecture	MCQs
		Describe the stages of swallowing, outlining the sequence and key physiological events involved in each stage.	C	Lecture	MCQs
		Describe the pathway involved in swallowing and its neural control mechanisms.	C	Lecture	MCQs
	Occlusion	Define occlusion	C	Lecture	MCQs
		Describe centric & eccentric occlusion.	C	Lecture	MCQs/Viva
	Deciduous & Permanent Incisors	Describe the crown morphology of deciduous & permanent incisors	C	SGD	MCQs
		Describe the key identification points of	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		deciduous & permanent incisors			
		Describe the normal root and pulpal morphology of maxillary and mandibular incisors	C	Lecture	MCQs/Viva
		Classify common structural anomalies of incisors	C	Lecture	MCQs
		Interpret periapical radiographs of incisors, recognizing normal anatomy and common anomalies	C	Lecture	MCQs
	Deciduous & Permanent canines	Describe the crown morphology of deciduous & permanent canines	C	Lecture	MCQs
		Describe the normal root and pulpal morphology of maxillary and mandibular canines	C	SGD	MCQs/Viva
		Describe the key identification points of deciduous & permanent canines	C	Lecture	MCQs
		Classify common structural anomalies of canines	C	Lecture	MCQs/Viva
		Interpret periapical radiographs of canines, recognizing normal anatomy and common anomalies.	C	Lecture	MCQs
		Differentiate between overjet and overbite, alongside their clinical significance.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Forensic odontology	Define forensic odontology	C	Lecture	MCQs
		Explain the significance of forensic odontology in dental identification and legal investigations	C	Lecture	MCQs
Microbiology	Infectious diseases	Describe microbial teratogens associated with craniofacial and dental anomalies, with examples (e.g., traponema, rubella, cytomegalovirus, HIV).	C	Lecture	MCQs

Clinical Practicum					
Subject	**Topic**	**Learning Objective**	**Domain**	**Teaching Strategy**	**Assessment Tool**
Anatomy	Jaw Muscles	Demonstrate basic functional mandibular movements	C	Demonstration	OSPE/OSCE
		Differentiate between the role of muscles of Mastication and accessory muscles in protrusion, lateral excursion, opening, and closing.	C	Demonstration	OSPE/OSCE
		Demonstrate the origin, insertion, nerve supply, and actions of the muscles of mastication on models or cadaveric specimens	C	Demonstration	OSPE/OSCE
	Neurovascular Supply of face	Demonstrate surface marking of trigeminal nerve in relation to relevant structures	C	Demonstration	OSPE/OSCE
		Identify their anatomical pathways and clinical relevance.	C	Demonstration	OSPE/OSCE
Oral Biology & Tooth	Temporomandibular Joint	Draw labelled histological section of the	C	Demonstration	OSPE/OSCE

Morphology		temporomandibular joint, showing temporal bone, disc, condylar bone, capsule, articular disc, and synovial membrane.			
		Demonstrate basic functional mandibular movements	C	Demonstration	OSPE/OSCE
		Differentiate the role of muscles of Mastication and accessory muscles in protrusion, lateral excursion, opening, and closing.	C	SGD	OSPE/OSCE
	Deciduous & Permanent Incisors	Draw the outlines of all deciduous & permanent incisors: labial, lingual, mesial, distal & incisal aspects	C	SGD	OSPE/OSCE
		Label each aspect pointing their morphological features (Incisal corners, marginal ridges,	C	SGD	OSPE/OSCE

		fossa, cingulum, pit, developmental depressions, imbrication lines & contact points)			
		Carve anatomical accurate models of incisors from soap blocks/ wax blocks	P	Demonstration	OSPE/OSCE
		Identify Permanent Incisors on models.	C	SGD	OSPE/OSCE
	Deciduous & Permanent canines	Draw the outlines of all deciduous & permanent canines: labial, lingual, mesial, distal & incisal aspects	C	SGD	OSPE/OSCE
		Label each aspect pointing their morphological features (Incisal slopes, labial/lingual ridges, marginal ridges, fossa, cingulum, developmental depressions,	C	SGD	OSPE/OSCE

		imbrication lines & contact points)			
		Carve anatomical accurate models of canines from soap blocks/ wax blocks	P	Demonstration	OSPE/OSCE
		Identify Permanent Canines on models.	C	Demonstration	OSPE/OSCE

Clinical Practicum					
Subject	**Topic**	**Learning Objective**	**Domain**	**Teaching Strategy**	**Assessment Tool**
Anatomy	Arteries	Identify arteries under a light microscope.	C	Demonstration	OSPE/OSCE
		Identify veins & capillaries under a light microscope.	C	Demonstration	OSPE/OSCE
Histology	Lymphoid Organs	Draw a labelled light microscopic diagram of lymphoid organs	C	SGD	OSPE/OSCE
Physiology	Blood Grouping	Observe the demonstration of the blood grouping procedure	C	Demonstration	OSPE/OSCE
		Explain its clinical relevance in dental practice, including its role in managing medical emergencies.	C	Demonstration	OSPE/OSCE
	Bleeding Time	Observe the demonstration of bleeding time measurement.	C	SGD	OSPE/OSCE
		Explain its importance in assessing bleeding risk in dental procedures.	C	Demonstration	OSPE/OSCE
	Clotting Time	Observe the demonstration of clotting time measurement.	C	Demonstration	OSPE/OSCE
		Explain its relevance to safe dental practice.	C	Demonstration	OSPE/OSCE
	ECG Waveform Recognition	Identify the normal waveforms and intervals on a sample ECG tracing.	C	Demonstration	OSPE/OSCE
	ECG-Based Heart Rate Calculation	Calculate heart rate from a provided normal ECG tracing alongside a description of its clinical significance.	C	Demonstration	OSPE/OSCE
	Cardiac Examination	Demonstrate palpation to locate the apex beat on a simulation model or peer under supervision.	P	Demonstration	OSPE/OSCE
	Cardiac Auscultation	Demonstrate the correct method to	P	Demonstration	OSPE/OSCE

		auscultate the precordium for heart sounds under supervision.			

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The module explores the anatomical organization and histological features of the GI tract, including the oral cavity, esophagus, stomach, intestines, liver, pancreas, and associated glands. Students develop an understanding of the coordinated processes of ingestion, digestion, absorption, and elimination, alongside the regulatory mechanisms involving neural and hormonal control. Special emphasis is placed on the oral cavity as the initial site of digestion, reinforcing its significance in dental practice.

A key component of this module is the study of common gastrointestinal disorders and their oral manifestations, such as nutritional deficiencies, gastroesophageal reflux, and infections. Students are introduced to the impact of systemic conditions on oral tissues, enabling early recognition and appropriate referral. The module also highlights the role of

diet and nutrition in maintaining both general and oral health, fostering a preventive and holistic approach to patient care.

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
Module IX: Gastrointestinal Tract					
Anatomy	Oral Cavity Anatomy	Describe the parts and boundaries of the oral cavity	C	Lecture	MCQs
	Tongue Structure and Vascular Supply	Describe the anatomical features of the tongue with emphasis on its musculature, vascular supply, and lymphatic drainage.	C	Lecture	MCQs/Viva
	Palate Anatomy and Neurovascular Supply	Describe the anatomical features of the hard and soft palate with their neurovascular supply.	C	Lecture	MCQs/Viva
	Muscles of the Soft Palate	Describe the attachments of the muscles of the soft palate along with their actions and nerve supply.	C	Lecture	MCQs
	Salivary Glands Anatomy and Neurovascular Supply	Describe the anatomical features, blood supply, and nerve supply of the salivary glands glands	C	Lecture	MCQs/Viva
	Parotid Gland Clinical Correlates	Discuss the clinical correlates of the parotid gland: Mumps, Frey's syndrome.	C	Lecture	MCQs/Viva
	Submandibular and Otic Ganglia	Describe the location, roots, and distribution of submandibular and otic ganglia.	C	SGD	MCQs/Viva
	Pharynx Anatomy and Neurovascular Supply	List the parts of the pharynx, giving their extent, anatomical features, structure, and neurovascular supply.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Muscles of the Pharynx	Describe the attachments of the muscles of the pharynx, along with their actions and nerve supply.	C	Lecture	MCQs
	Palatine Tonsil Anatomy and Vascular Supply	Discuss the location, anatomical features, and vascular supply of palatine tonsils.	C	Lecture	MCQs/Viva
	Piriform Fossa and Tonsils Clinical Correlates	Discuss the clinical correlates of piriform fossa and tonsils: Adenoids, Quincy, Tonsillitis.	C	Lecture	MCQs/Viva
	Waldeyer's Ring of Lymphatic Tissues	List the structures forming the Waldeyer's ring of lymphatic tissue.	C	Lecture	MCQs
	Cervical Esophagus Anatomy and Neurovascular Supply	Describe the anatomical features of the cervical part of the esophagus with its neurovascular supply.	C	SGD	MCQs/Viva
Histology	Oral Cavity	Describe the light microscopic structure of the lip	C	Lecture	MCQs
		Describe the light microscopic structure of the tongue.	C	Lecture	MCQs
Embryology	Tongue	Describe the development of the tongue	C	Lecture	MCQs
Physiology	General Principles of GIT Function - Motility, Nervous Control	Describe the physiologic anatomy of the gastrointestinal tract.	C	Lecture	MCQs
		Discuss the electrical activity of the smooth muscles of the GIT.	C	Lecture	MCQs/Viva
		Describe the mechanism of excitation of the	C	SGD	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		smooth muscle of the gastrointestinal tract.			
		Discuss the factors that depolarize and hyperpolarize the GI membrane.	C	Lecture	MCQs
	Neural and Hormonal Regulation of Gastrointestinal Function	Describe the role of the autonomic nervous system in the regulation of the GIT's function.	C	Lecture	MCQs/Viva
		Describe the enteric nervous system.	C	Lecture	MCQs
		Describe the Meissner's plexus.	C	Lecture	MCQs
		Differentiate between myenteric and Meissner's plexuses.	C	Lecture	MCQs
		List the gastrointestinal reflexes & explain the functions of these reflexes.	C	SGD	MCQs/Viva
		Discuss the stimuli, site of release, and actions of cholecystokinin, Gastrin, Secretin & Motilin (enteroendocrine cells)	C	Lecture	MCQs
		Differentiate between sympathetic and parasympathetic modulation of the enteric nervous system and the effector organs of the GI tract.	C	Lecture	MCQs/Viva
	Functional types of movements in the GI tract	Discuss functional movements of the GIT (propulsive & mixing)	C	Lecture	MCQs
	Esophagus	Discuss the pathophysiology & features of achalasia & Mega esophagus.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Vomiting Reflex	Describe the stages of the vomiting act.	C	Lecture	MCQs
		Appraise the location and function of the vomiting center/ chemoreceptor trigger zone in the brain.	C	SGD	MCQs
	Motor function of the stomach	Explain the motor function of the stomach.	C	Lecture	MCQs
		Explain factors that regulate stomach emptying.	C	Lecture	MCQs/Viva
	Gastric secretion	Describe characteristics & functions of the gastric secretions.	C	Lecture	MCQs
		Discuss the role of the intrinsic factor from gastric parietal cells	C	Lecture	MCQs
	Pathophysiology of Stomach	Discuss basic causes of gastritis and Pernicious anemia.	C	Lecture	MCQs
		Enumerate the causes and pathophysiology of peptic ulcer	C	SGD	MCQs/Viva
	Movements of the small intestine	Discuss the types of movements taking place in small intestine alongside their function.	C	Lecture	MCQs
		Define peristaltic rush and enteritis	C	Lecture	MCQs
	Movements of the Colon	Enumerate the types of movements taking place in colon with their functions	C	Lecture	MCQs
Biochemistry	Saliva	Elaborate the composition and functions of saliva	C	Lecture	MCQs
		Explain composition and functions of gastric juice.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Correlate chronic use of NSAIDs with development of peptic ulcer	C	SGD	MCQs
	Pancreatic juice, bile and succus entericus	Discuss composition and functions of pancreatic juice, bile and succus entericus	C	Lecture	MCQs/Viva
	Digestion and absorption	Describe the mechanism of digestion and absorption of dietary carbohydrates	C	Lecture	MCQs/Viva
		Discuss causes, clinical features, diagnosis and management of lactose intolerance.	C	Lecture	MCQs/Viva
		Describe the mechanism of digestion and absorption of dietary proteins	C	Lecture	MCQs
		Explain the process of digestion and absorption of dietary lipids.	C	Lecture	MCQs/Viva
Pharmacology & Theraputics	Acid Peptic disease	Classify the drugs used for the treatment of Acid- Peptic Disease (APD)	C	SGD	MCQs/VivaA
		Explain their mechanism of action, uses and adverse effects	C	Lecture	MCQs
		Correlate chronic use of NSAIDS with development of peptic ulcer	C	Lecture	MCQs/Viva
		List Tripple and Quadruple regimen for APD	C	Lecture	MCQs/Viva
	Antiemetics and Prokinetics	Classify antiemetics	C	Lecture	MCQs/Viva
		Describe the mechanism of action, clinical uses,	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		and adverse effects of metoclopramide			
		Compare metoclopramide and Domperidone	C	SGD	MCQs/Viva
		List the drugs used in the prevention of chemotherapy- or radiation induced emesis	C	Lecture	MCQs/Viva
	Classification of laxatives & antidiarrheals	Classify Laxatives and antidiarrheals	C	Lecture	MCQs/Viva
Oral Biology & Tooth Morphology	Oral Mucosa	Define oral mucosa	C	Lecture	MCQs
		Explain the histological structure of oral mucosa with elaboration of keratinized and non-keratinized epithelium.	C	Lecture	MCQs
		Explain the cellular events in maturation of oral mucosa	C	Lecture	MCQs/Viva
		Discuss the details of the non- keratinocytes in the oral epithelium and lamina propria.	C	SGD	MCQs/Viva
		Describe the blood and nerve supply of oral mucosa	C	Lecture	MCQs
		Explain the structural variation in oral mucosa.	C	Lecture	MCQs/Viva
		Explain the mucocutaneous junctions in the oral mucosa.	C	Lecture	MCQs
		Describe the biological stages of wound healing in the oral mucosa, highlighting the role of the inflammatory	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		response and granulation tissue formation.			
		Describe the age-related changes in oral mucosa	C	Lecture	MCQs
	Physiology of Taste	Describe the process of taste perception	C	SGD	MCQs
		Identify the major systems involved in supporting the sense of taste.	C	Lecture	MCQs/Viva
		Describe the structure, location, and function of taste buds along with the mechanism of taste sensations	C	Lecture	MCQs
		Identify the basic taste modalities alongwith the major conditions that affect the sense of taste	C	Lecture	MCQs
	Salivary Glands	Define saliva alognwith its composition and function	C	Lecture	MCQs/Viva
		Classify salivary glands	C	Lecture	MCQs
		Describe the development of salivary glands.	C	SGD	MCQs
		Elaborate its changes with age and its clinical considerations	C	Lecture	MCQs
		Describe the histological structure of salivary glands along with acini and ducts	C	Lecture	MCQs/Viva
		Explain the role of myoepithelial cells	C	Lecture	MCQs
		Explain the microscopic structure of the salivary glands	C	Lecture	MCQs/Viva
		Describe the connective tissue of salivary glands	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Saliva	Discuss the mechanism of saliva formation and its ductal modification.	C	SGD	MCQs
Pathology	GERD	Define heartburn	C	Lecture	MCQs
		Describe its pathophysiology as a symptom of gastroesophageal reflux disease (GERD).	C	Lecture	MCQs
		Enumerate the etiology and clinical features of GERD and peptic ulcer disease.	C	Lecture	MCQs
Microbiology	Microbial Agents Associated with Oral Lesions	List different organisms causing oral lesions	C	Lecture	MCQs/Viva
		Discuss HPV, as disease causing organisms, their epidemiology, virulence factors, pathogenesis, lab diagnosis & prevention	C	Lecture	MCQs
		List different organisms causing diarrhea.	C	SGD	MCQs
	Microbial Agents Associated with Diarrhea	Discuss shigella & vibrio cholera as disease causing organisms, their epidemiology, virulence factors, pathogenesis, lab diagnosis & prevention.	C	Lecture	MCQs
	Helicobacter pylori Infection	Discuss Helicobacter pylori with its epidemiology, virulence factors, pathogenesis, lab diagnosis & prevention.	C	Lecture	MCQs/Viva
Oral Pathology	Abnormalities of salivary secretions	Discuss clinical abnormalities of Salivary secretions.	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Describe the etiology and clinical features of xerostomia.	C	Lecture	MCQs
		Explain the management options available for patients suffering from xerostomia.	C	Lecture	MCQs
		Explain the biochemical mechanisms that contribute to the development of rampant caries in patients with xerostomia	C	SGD	MCQs
	Aphthous ulcers	List the types and salient features of ulcers (acute, chronic and recurrent)	C	Lecture	MCQs/Viva
	Anomalies of tongue and lips	Describe the anomalies of tongue (ankyloglossia, aglossia, macroglossia, microglossia) and Lips	C	Lecture	MCQs

		Clinical Practicum
Subject	**Topic**	**Learning Objective**
Histology	Lip	Identify microscopic structure of lip.
	Tongue	Identify microscopic structure of tongue
Oral Biology & Tooth Morphology	Oral Epithelium and Specialized Mucosa	Draw labelled diagram of the keratinized and non-keratinized oral epithelium specialized mucosa including tongue papillae and mucocutaneous junction.
	Taste Bud Structure and Tongue Sensory Map	Draw labelled diagram of the histological structure of the taste bud, alongsid specificity of the tongue for different taste sensations.
	Tongue Papillae and Taste Bud Identification	Identify the histological section of the tongue showing different tongue papil the location of taste buds in images or slides
	Salivary Gland Histology	Draw labelled diagram of the histological section of major salivary glands, sl serous and mucous acini, serous demilunes, and cells of intercalated, striated excretory ducts

Module X Introduction

The **Occlusion I module** in the University of Health Sciences (UHS) integrated BDS curriculum is an early clinical-foundation module designed to introduce dental students to the principles governing tooth contact, functional harmony, and their relevance to restorative and prosthetic dentistry. It builds upon basic knowledge of tooth morphology and oral biology, gradually transitioning students from theoretical understanding to preclinical skill development.

At its core, the module emphasizes the **concept of normal occlusion and its clinical significance**, enabling students to understand how teeth interact during mastication, speech, and mandibular movements. Students are introduced to occlusal relationships, determinants, and parameters that ensure **balanced and functional occlusion**, along with the biological basis of these relationships involving muscles, temporomandibular joint (TMJ), and supporting structures.

A major component of the module is the **integration of tooth morphology with occlusal function**. Learners develop the ability to identify, draw, and interpret the morphology of teeth—particularly incisors, canines, and premolars—and relate these features to their functional roles in occlusion. This integration helps students appreciate how anatomical variations influence occlusal patterns and clinical outcomes.

The module also incorporates **dental materials and preclinical operative skills**, where students learn the manipulation of materials such as gypsum, waxes, and impression materials, alongside their role in recording and reproducing occlusion. Practical exposure includes exercises in wax-ups, occlusal adjustments, and basic prosthodontic procedures like partial denture design, allowing students to correlate occlusal theory with hands-on application.

Importantly, Occlusion I is delivered as an **integrated module**, combining disciplines such as Oral Biology, Tooth Morphology, Dental Materials, Operative Dentistry, and Prosthodontics. This multidisciplinary approach ensures that students understand occlusion not as an isolated concept but as a **central link between structure, function, and clinical practice**.

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
Module X: Occlusion 1					
Anatomy	Trigeminal Nerve and Sensory Innervation	Describe the extracranial course, branches, and distribution of trigeminal nerve.	C	Lecture	MCQs
		Explain the causes and clinical consequences of damage to the nerve	C	Lecture	MCQs
		Describe the innervation of the maxillary and mandibular teeth, and their supporting structures and the anatomical basis of common variations in sensory innervation of the teeth.	C	Lecture	MCQs/Viva

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
	Temporomandibular Joint (TMJ)	Describe temporomandibular joint mentioning its ligaments, nerve supply and movements.	C	Lecture	MCQs/Viva
	Muscles of Mastication	Describe the muscles of mastication along with origin, insertion, action, and innervation of each muscle	C	Lecture	MCQs
		Demonstrate the examination of the origin, insertion, nerve supply, and actions of the muscles of mastication on models or cadaveric specimens	C	Lecture	MCQs/Viva
Oral Biology & Tooth Morphology	Temporomandibular Joint	Describe the histology of the temporomandibular joint (temporal and condylar bone, muscles, capsule, disk, synovial membrane, and ligaments)	C	Lecture	MCQs/Viva
	Muscle Contraction (TMJ)	Describe the biomechanics of TMJ	C	SGD	MCQs/Viva
		Describe the nerve supply of the joint emphasizing the role of nerve endings	C	Lecture	MCQs
		Identify the common TMJ associated clinical manifestations	C	Lecture	MCQs
	Mastication	Define Mastication	C	Lecture	MCQs/Viva
		Elaborate chewing cycle of mastication	C	Lecture	MCQs/Viva
		Discuss different stages of mastication	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		Discuss different muscles involved n mastication alongside their origin, insertions, innervation, and functions	C	SGD	MCQs/Viva
	Physiology of Swallowing	Define the terms swallowing and deglutition	C	Lecture	MCQs
		Describe the stages of swallowing, outlining the sequence and key physiological events involved in each stage.	C	Lecture	MCQs
		Describe the pathway involved in swallowing and its neural control mechanisms.	C	Lecture	MCQs
	Occlusion	Define occlusion	C	Lecture	MCQs
		Describe centric & eccentric occlusion.	C	Lecture	MCQs/Viva
	Deciduous & Permanent Incisors	Describe the crown morphology of deciduous & permanent incisors	C	SGD	MCQs
		Describe the key identification points of deciduous & permanent incisors	C	Lecture	MCQs
		Describe the normal root and pulpal morphology of maxillary and mandibular incisors	C	Lecture	MCQs/Viva
		Classify common structural anomalies of incisors	C	Lecture	MCQs
		Interpret periapical radiographs of incisors, recognizing normal	C	Lecture	MCQs

Subject	Key Focus Area	Learning Objectives	Domain	Teaching Strategy	Assessment Tool
		anatomy and common anomalies			
	Deciduous & Permanent canines	Describe the crown morphology of deciduous & permanent canines	C	Lecture	MCQs
		Describe the normal root and pulpal morphology of maxillary and mandibular canines	C	SGD	MCQs/Viva
		Describe the key identification points of deciduous & permanent canines	C	Lecture	MCQs
		Classify common structural anomalies of canines	C	Lecture	MCQs/Viva
		Interpret periapical radiographs of canines, recognizing normal anatomy and common anomalies.	C	Lecture	MCQs
		Differentiate between overjet and overbite, alongside their clinical significance.	C	Lecture	MCQs
	Forensic odontology	Define forensic odontology	C	Lecture	MCQs
		Explain the significance of forensic odontology in dental identification and legal investigations	C	Lecture	MCQs
Microbiology	Infectious diseases	Describe microbial teratogens associated with craniofacial and dental anomalies, with examples (e.g., traponema, rubella, cytomegalovirus, HIV).	C	Lecture	MCQs

Clinical Practicum					
Subject	**Topic**	**Learning Objective**	**Domain**	**Teaching Strategy**	**Assessment Tool**
Anatomy	Jaw Muscles	Demonstrate basic functional mandibular movements	C	Demonstration	OSPE/OSCE
		Differentiate between the role of muscles of Mastication and accessory muscles in protrusion, lateral excursion, opening, and closing.	C	Demonstration	OSPE/OSCE
		Demonstrate the origin, insertion, nerve supply, and actions of the muscles of mastication on models or cadaveric specimens	C	Demonstration	OSPE/OSCE
	Neurovascular Supply of face	Demonstrate surface marking of trigeminal nerve in relation to relevant structures	C	Demonstration	OSPE/OSCE
		Identify their anatomical pathways and clinical relevance.	C	Demonstration	OSPE/OSCE
Oral Biology & Tooth	Temporomandibular Joint	Draw labelled histological section of the	C	Demonstration	OSPE/OSCE

Morphology		temporomandibular joint, showing temporal bone, disc, condylar bone, capsule, articular disc, and synovial membrane.			
		Demonstrate basic functional mandibular movements	C	Demonstration	OSPE/OSCE
		Differentiate the role of muscles of Mastication and accessory muscles in protrusion, lateral excursion, opening, and closing.	C	SGD	OSPE/OSCE
	Deciduous & Permanent Incisors	Draw the outlines of all deciduous & permanent incisors: labial, lingual, mesial, distal & incisal aspects	C	SGD	OSPE/OSCE
		Label each aspect pointing their morphological features (Incisal corners, marginal ridges,	C	SGD	OSPE/OSCE

		fossa, cingulum, pit, developmental depressions, imbrication lines & contact points)			
		Carve anatomical accurate models of incisors from soap blocks/ wax blocks	P	Demonstration	OSPE/OSCE
		Identify Permanent Incisors on models.	C	SGD	OSPE/OSCE
	Deciduous & Permanent canines	Draw the outlines of all deciduous & permanent canines: labial, lingual, mesial, distal & incisal aspects	C	SGD	OSPE/OSCE
		Label each aspect pointing their morphological features (Incisal slopes, labial/lingual ridges, marginal ridges, fossa, cingulum, developmental depressions,	C	SGD	OSPE/OSCE

		imbrication lines & contact points)			
		Carve anatomical accurate models of canines from soap blocks/ wax blocks	P	Demonstration	OSPE/OSCE
		Identify Permanent Canines on models.	C	Demonstration	OSPE/OSCE

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