



NUMS
NATIONAL UNIVERSITY
OF MEDICAL SCIENCES

3rd Year BDS Curriculum (2023)

**National University of Medical Sciences
Pakistan**

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General Guidelines

1. Preamble

The recently revised standards by the Pakistan Medical and Dental Council (PM&DC) encourages integration of major subjects both horizontally and longitudinally. This curriculum meets the standards of Pakistan Medical and Dental Council and our students, on completion of program will develop required competencies as defined worldwide in a graduate doctor.

This curriculum also aims to improve different skills of the future dentists including communication, leadership & management and research skills and inculcate ethical values and professionalism

This curriculum has been developed by the BDS faculty from constituent/affiliated colleges in collaboration with NUMS Academic Directorate

2. Curriculum perspective

NUMS curriculum is evolved taking into consideration Constructivist, Cognitivist, behaviorist with some element of Constructivist approach. It allows students to construct their own knowledge based on what they already know and to use that knowledge in purposeful activities requiring decision making, problem solving, and judgments.

3. Level of integration

The approach is discipline-based with clinical relevance.

4. Competencies

The focus of this curriculum is on following competencies:

- a. Medical Knowledge
- b. Problem solving
- c. Procedural skills
- d. Communication skills
- e. Empathy
- f. Professionalism
- g. Leadership and Management skills
- h. Research skills

5. Yearly Outcomes

By the end of third year, students should be able to:

- a. Diagnose common general medical disorders and manage medical emergencies relevant to dental practice
- b. Diagnose and suggest management of common general surgical conditions, provide immediate care in surgical emergencies and carry out common practical procedures relevant to Dental practice
- c. Apply the knowledge of periodontium in health and disease to diagnose and manage various periodontal conditions according to the classification and plan treatment strategies to restore periodontal health and function.
- d. Identify signs, symptoms and clinicopathological features of various disorders related to dentistry

6. Contact Hours Distribution Year-III

Subject	Total
General Surgery	200
General Medicine	200
Oral Pathology	150
Oral Medicine	125
Periodontology	175
Prosthodontics	125
Operative Dentistry	100
Oral & Maxillofacial Surgery	125
*Behavioral Sciences (Curriculum Separately Attached)	50
SDL	10
Total	1260

7. Implementation plan

Implementation of curriculum is at the discretion of institute. However, for your convenience

a proposed implementation plan is given below which may be modified as per the requirement of each institute

Lectures/day (Mon-Fri): 02/ Day											
Proposed Clinical Rotation Plan											
Block I: 12 weeks				Block II: 12 weeks				Block III: 12 weeks			
A	B	C	D	A	B	C	D	A	B	C	D
Oral Pathology (2 hrs for 5 days for 3 wks = 30 hrs)	Oral Medicine (2 hrs for 5 days for 3 wks = 30 hrs)	Periodontology (2.5 hrs for 5 days for 3 wks = 37.5 hrs)	Oral & Maxillofacial Surgery (2.5 hrs for 5 days for 3 wks = 35 hrs)	Oral Pathology (1 hr for 5 days for 3 wks = 15 hrs)	Oral Medicine (1 hr for 5 days for 3 wks = 15 hrs)	Operative Dentistry (2 hrs for 5 days for 3 wks = 30 hrs)	Periodontology (2 hrs for 5 days for 3 wks = 30 hrs)	Oral Pathology (2 hrs for 5 days for 3 wks = 30 hrs)	Oral Medicine (2 hrs for 5 days for 3 wks = 30 hrs)	Periodontology (2.5 hrs for 5 days for 3 wks = 37.5 hrs)	Prosthodontics (2.5 hrs for 5 days for 3 wks = 35 hrs)
General Medicine (3 hrs for 5 days for 3 wks = 45 hrs)	General Surgery (3 hrs for 5 days for 3 wks = 45 hrs)	Operative Dentistry (2.5 hrs for 5 days for 3 wks = 35 hrs)	Prosthodontics (2.5 hrs for 5 days for 3 wks = 35 hrs)	General Medicine (4 hrs for 5 days for 3 wks = 60 hrs)	General Surgery (4 hrs for 5 days for 3 wks = 60 hrs)	Prosthodontics (3 hrs for 5 days for 3 wks = 45 hrs)	Oral & Maxillofacial Surgery (3 hrs for 5 days for 3 wks = 45 hrs)	General Medicine (3 hrs for 5 days for 3 wks = 45 hrs)	General Surgery (3 hrs for 5 days for 3 wks = 45 hrs)	Operative Dentistry (2.5 hrs for 5 days for 3 wks = 35 hrs)	Oral & Maxillofacial Surgery (2.5 hrs for 5 days for 3 wks = 35 hrs)
3 wks	3 wks	3 wks	3 wks	3 wks	3 wks	3 wks	3 wks	3 wks	3 wks	3 wks	3 wks

8. **Educational strategies:**

The educational strategies overarching the curriculum shall be:

- a. Student centered
- b. Integration
- c. Problem based
- d. Structured
- e. With component of community based and electives

9. **Resources.** To be filled in by the institute

- a. Faculty
- b. Facilities
- c. Administration for Course
- d. Administrative structure
- e. Communication with students

10. **Examination.**

- a. The weighting of internal assessment is 20% in 3rd professional BDS Examination
- b. There will be three end of block and pre annual examinations. The scores of tests of each end block assessment and pre-annual examination will be used for calculation of the internal assessment.
- c. The structure of the paper of all end of block and pre annual will be same as that for annual examination though syllabus will be different. Pre-annual examination will be from whole syllabus.
- d. The date sheet for end of block and pre annual examinations will be published by Examination branch of college while the examinations will be conducted by respective department. The result will be submitted to examination branch for record.
- e. The University shall take the 3rd professional Examination at the end of the academic year. Annual Theory & Practical Examination shall be of 100 marks each in; General Medicine, General Surgery, Oral Pathology and Periodontology and 50 Marks each in Oral Medicine. The pass score shall be 50% in theory and practical separately. However, in clinical subjects, student should pass in clinical exams / OSCE (with 50% marks) and unobserved stations (with 50% marks) separately

Evaluation of the Course. To be filled in by the institute

3rd YEAR BDS
BLOCK WISE DISTRIBUTION

BLOCK-I (12 weeks)

General Medicine	General Surgery	Periodontology	Oral Pathology	Oral Medicine
<ul style="list-style-type: none"> • Cardiovascular system • Haematology • Nephrology 	Principles of surgery	<ul style="list-style-type: none"> • Anatomy & physiology of periodontium • Classification of periodontal disease & epidemiology. • Periodontal microbiology • Host response and host bacterial interactions • Local factors and Systemic factors • Periodontal pathogenesis • Gingival inflammation • Periodontal pocket • Bone loss and patterns of bone loss 	<ul style="list-style-type: none"> • White Lesions • Epithelial Pathology • Dental Caries • Heamatological Malignancies/Lymphomas • Periapical disorders 	<ul style="list-style-type: none"> • Intro to Oral Med • Principles of Assesment & management • Oral ulcers • Diseases of lips & tongue • Cancer n Precancerous lesions • Oral pigmentation • Vesiculobullous lesions • Blood related disorders • Renal diseases

BLOCK-II (12 weeks)

General Medicine	General Surgery	Periodontology	Oral Pathology	Oral Medicine
<ul style="list-style-type: none"> • Respiratory system • Nervous system • Gastrointestinal system 	<ul style="list-style-type: none"> • Trauma and its management • Anesthesia and its risks 	<ul style="list-style-type: none"> • Effect of Smoking on periodontium • Halitosis • Gingivitis • Acute gingival infections • Desquamative gingivitis • Gingival enlargement • Chronic Periodontitis • Aggressive periodontitis • Necrotizing ulcerative periodontitis • Trauma from occlusion • Perio Non-Surgical Therapy • Plaque biofilm control • Perio-endo/prostho considerations 	<ul style="list-style-type: none"> • Developmental Disturbances of Oral Region • Odontogenic Tumours • Odontogenic Cysts • Non-Odontogenic Cysts • Salivary Glands • Connective Tissue Lesions (Fibrous, Neural tissue lesions) 	<ul style="list-style-type: none"> • Orofacial pain • Facial paralysis • TMDs • Face n neck swellings • Salivary glands • GIT disorders • Nutritional disorders

BLOCK-III (12 weeks)

General Medicine	General Surgery	Periodontology	Oral Pathology	Oral Medicine
<ul style="list-style-type: none"> • Endocrinology • Musculoskeletal system • Infections 	<ul style="list-style-type: none"> • Common surgical disorders relevant to dental practice • Quality of care in clinical practice 	<ul style="list-style-type: none"> • General principles of periodontal surgery • Gingival curettage • Gingivectomy and Gingivoplasty • Flap surgery • Modified Widman flap • Osseous surgery • Furcation involvement • Regenerative Periodontal Therapy • Esthetic and periodontal plastic surgery • Supportive Periodontal care • Splinting of Teeth • Oral Implantology 	<ul style="list-style-type: none"> • Connective Tissue (Muscle, Vascular, Adipose and Osseous Lesions) • Immune-mediated Disorders, • Bone Pathology • Viral infections • Fungal Infections • Bacterial/Granulomatous Infections 	<ul style="list-style-type: none"> • Immunity • Endocrinopathies • Disorders of teeth • Osteochemo necrosis • Infections • Medical Emergencies

General Medicine

GENERAL MEDICINE

TOPIC/ THEME	LEARNING OUTCOMES By the end of a unit, candidates will be able to:	LEARNING OBJECTIVES This course enables the student to:	INSTRUCTIONAL STRATEGIES	ASSESSMENT TOOLS
CARDIOVASCULAR SYSTEM	<ul style="list-style-type: none"> Recognize important cardiovascular conditions Manage acute chest pain and Vasovagal syncope 	<ul style="list-style-type: none"> List differential diagnosis of acute chest pain and its principles of management. List spectrum of ischemic heart disease and its management. Describe the etiology, diagnosis and guidelines of management of hypertension. Discuss the etiology, diagnosis and treatment of rheumatic fever/RHD Describe the pathophysiology, etiology, investigations and management of cardiac failure. Describe the infectious agents of infective endocarditis and its diagnosis, investigations and management 	Interactive lectures, Small group discussions	MCQs, SAQs
INFECTIONS	Manage the common infections	<ul style="list-style-type: none"> Diagnose and treat the common infective causes of fever like enteric fever, dengue fever and malaria. Diagnose common viral infections like influenza, COVID 19 Identify the infections like HIV/AIDS and other STDs, and important fungal infections like candidiasis 	Interactive lectures, Small group discussions	MCQs, SAQs
GASTROINTESTINAL SYSTEM	<ul style="list-style-type: none"> Recognize important GI and 	<ul style="list-style-type: none"> Recognize and approach to common GI symptoms 	Interactive lectures, Small	MCQs, SAQs

	hepatobiliary conditions <ul style="list-style-type: none"> • Manage common GI and hepatobiliary presentations 	like diarrhea, vomiting, dyspepsia, abdominal pain <ul style="list-style-type: none"> • Describe the pathophysiology of the acid peptic disease and its appropriate investigations and management. • Approach to the patient with upper GI bleeding • Describe the etiology, clinical features, investigations and management of acute hepatitis, chronic hepatitis and cirrhosis of liver with special emphasis on clinical implications of the liver diseases in dentistry. 	group discussions	
RESPIRATORY SYSTEM	<ul style="list-style-type: none"> • Recognize important respiratory conditions • Manage common respiratory presentations 	<ul style="list-style-type: none"> • Explain the risk factors of pneumonia, its classifications, investigations and appropriate treatment. • Describe the etiology, diagnosis and guidelines of management of chronic bronchial asthma and acute severe asthma • Describe the etiology, diagnosis and treatment pulmonary tuberculosis • Describe the pathophysiology, etiology, investigations and management of chronic obstructive pulmonary disease. 	Interactive lectures, Small group discussions	MCQs, SAQs
NERVOUS SYSTEM	Diagnose and manage the common neurological conditions.	<ul style="list-style-type: none"> • Approach to the patient with headache • Describe the etiology, diagnosis and guidelines of management of meningitis and encephalitis. 	Interactive lectures, Small group discussions	MCQs, SAQs

		<ul style="list-style-type: none"> Describe the etiology, diagnosis and management of cerebrovascular accident Describe the classification, etiology, investigations and management of epilepsy. 		
HAEMATOLOGY	Manage common bleeding disorders	<ul style="list-style-type: none"> Identify and discuss the common clotting disorders like hemophilia and Von-Willebrand disease. Identify and discuss the diseases like immune thrombocytopenic purpura and disseminated intravascular coagulation Describe the classification of anemia and its diagnosis, investigations and management Approach to anticoagulant therapy Identify common haematological malignancies 	Interactive lectures, Small group discussions	MCQs, SAQs
NEPHROLOGY	<ul style="list-style-type: none"> Approach the patient with kidney diseases Manage fluid and electrolyte imbalances Manage common UTIs 	<ul style="list-style-type: none"> Describe the classification, etiology, investigations and management of acute kidney injury and chronic kidney disease. Identify and manage fluid and electrolyte imbalances Discuss etiology, management of common urinary tract infection 	Interactive lectures, Small group discussions	MCQs, SAQs
ENDOCRINOLOGY	<ul style="list-style-type: none"> Diagnose common endocrine disorders Manage diabetic emergencies 	<ul style="list-style-type: none"> Describe the etiology, clinical features, investigations and treatment of hypothyroidism, hyperthyroidism and parathyroid disorders 	Interactive lectures, Small group discussions	MCQs, SAQs

		<ul style="list-style-type: none"> Describe the pathophysiology, classification of diabetes mellitus and its appropriate investigations and management. Manage diabetic emergencies 		
MUSCLOSKELETAL SYSTEM	Identify common rheumatological disorders	<ul style="list-style-type: none"> Describe the etiology, diagnosis and management of systemic lupus erythematosus Describe the etiology, investigations and management of rheumatoid arthritis. Describe the etiology, diagnosis and guidelines of management of osteoporosis and osteoarthritis 	Interactive lectures, Small group discussions	MCQs, SAQs

TOPICAL DETAILS OF CLINICAL SKILLS TO BE LEARNED AT THE BEDSIDE

Learning Objective:	Psychomotor Objectives:	Teaching Methodology	Assessment tool
Art Of History Taking	Examination Technique of: <ul style="list-style-type: none"> Abdomen Respiratory System Neurology Cardiology 	Bed Side Teaching/ Skills Lab	OSCE
Formal Structure of Medical History			
Symptoms Pertaining to: <ul style="list-style-type: none"> Abdomen Respiratory System Neurology Cardiology 			
Normal and Abnormal Signs in <ul style="list-style-type: none"> Abdomen Respiratory System Neurology Cardiology 			

Recommended books

1. Davidson's Principles and Practice of Medicine
2. Kumar and Clarks Clinical Medicine
3. Clinical methods (Macleod or Hutchinsons)

General Surgery

Topic/ Theme	Learning outcomes At the end of this activity, the learner will be able to:	Learning objectives At the end of this activity, the learner will be able to:	Instructional Strategies	Assessment Tools
PRINCIPLES OF SURGERY				
Body's response to trauma and stress	Apply basic principles of surgery related to trauma and stress in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Mediators of the metabolic response to injury • Physiological and biochemical changes that occur during injury and recovery • Changes in body composition that accompany surgical injury • Avoidable factors that compound the metabolic response to injury • Concepts behind optimal perioperative care 	<ul style="list-style-type: none"> • Large Class Format • Interactive Session • Student presentations 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
Shock, Pathology, Types and management	Apply basic principles of surgery related to shock in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • The pathophysiology of shock and ischaemia–reperfusion injury • The different patterns of shock and the principles and priorities of resuscitation • Appropriate monitoring and end points of resuscitation • Use of blood and blood products, the benefits and risks of blood transfusion 	<ul style="list-style-type: none"> • Large Class Format • Interactive Session • Student presentations 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
Wound Healing & its complications	Apply the knowledge of wound healing and its complications in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Normal healing and how it can be adversely affected • How to manage wounds of different types, of different structures and at different sites 	<ul style="list-style-type: none"> • Large Class Format • Interactive Session • Student presentations • Bedside demonstrations during clinical 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce

		<ul style="list-style-type: none"> Aspects of disordered healing that lead to chronic wounds The variety of scars and their treatment 	rotations / OR visits	
Types of Wound closure	Apply the knowledge of wound closure in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> The principles of skin and abdominal incisions The principles of wound closure The principles of drain usage The factors that determine whether a wound will become infected 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce
Wound Infection / Surgical Site Infection	Apply the knowledge of wound infection in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> The classification of sources of infection and their severity The indications for and choice of prophylactic antibiotics The characteristics of the common surgical pathogens and their sensitivities The spectrum of commonly used antibiotics in surgery and the principles of therapy The misuse of antibiotic therapy with the risk of resistance 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce
Cross infection control in the clinical environment	Apply basic principles of cross infection control in the clinical environment in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> What basic precautions to take to avoid surgically relevant hospital acquired infections 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce
Blood transfusion in surgical patients	Apply the knowledge of basic principles of Blood transfusion in	Demonstrate basic comprehension of the following	<ul style="list-style-type: none"> Large Class Format 	<ul style="list-style-type: none"> MCQs SAQs Clinical

	surgical patients in dental practice.	with emphasis on clinical application: <ul style="list-style-type: none"> • The concept of 'Transfusion Trigger' • Use of blood and blood products, the benefits and risks of blood transfusion 	Interactive Session <ul style="list-style-type: none"> • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • Scenario based Viva Voce
Colloids and Crystalloids used in surgical patients	Apply the knowledge of Colloids and Crystalloids used in surgical patients in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Fluid and electrolyte requirements in the pre, peri and postoperative patient 	<ul style="list-style-type: none"> • Large Class Format • Interactive Session • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
Common fluid & electrolyte disorders in surgical patients	Apply the knowledge of common fluid & electrolyte disorders in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Common clinical scenarios leading to hypo and hypernatremia in a surgical patient, their underlying pathophysiology and management • Common clinical scenarios leading to hypo and hyperkalemia in a surgical patient, their underlying pathophysiology and management 	<ul style="list-style-type: none"> • Large Class Format • Interactive Session • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
Common acid base disorders in surgical patients	Apply the knowledge of common acid base disorders in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Definition, types and pathophysiology of acidosis and alkalosis • Common clinical scenarios leading to acidosis and alkalosis in a surgical patient, their underlying 	<ul style="list-style-type: none"> • Large Class Format • Interactive Session • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce

		pathophysiology and management		
Nutritional management of surgical patients	Apply basic principles of nutritional management of surgical patient in dental practice.	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • The causes and consequences of malnutrition in the surgical patient • How to detect malnutrition in a patient • The nutritional requirements of surgical patients in the pre, peri and post-operative period • The nutritional consequences of intestinal resection • The different methods of providing nutritional support to patients and their complications 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
Risk assessment in surgery	Apply basic principles of surgical risk assessment in dental practice.	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • The concept of risk versus benefit in surgical care of patients • Common tools available for risk stratification and allocation in surgical patients 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
Pre-operative preparation of Surgical patients	Apply basic principles of Pre-operative preparation of patients in dental practice.	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • Surgical, medical and anaesthetic aspects of patient assessment • How to optimise the patient's condition before surgery • How to identify and optimise the patient at higher risk • How to take consent • How to organise an operating list 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce

Post-operative care of Surgical patients	Apply basic principles of Post-operative care of patients in dental practice.	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • The system of postoperative care • How to recognise and treat common post-operative complications in the immediate postoperative period • The principles of enhanced recovery • The system for discharging patients 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
Principles of Minimal Access Surgery Application of invasive and non-invasive diagnostic modalities in surgical practice	Discuss principles of laparoscopic and robotic surgery with focus on its indications, advantages and disadvantages	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • The principles of laparoscopic and robotic surgery • The advantages and disadvantages of such surgery • The safety issues and indications for laparoscopic and robotic surgery 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside demonstrations during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
TRAUMA AND ITS MANAGEMENT				
Trauma Management based on ATLS protocol	<ul style="list-style-type: none"> • Assess the patient presenting with trauma in dental practice • Apply the knowledge of trauma management in clinical scenarios 	<ul style="list-style-type: none"> • Demonstrate basic comprehension of the following with emphasis on clinical application: • The importance of time in trauma management • How to assess a trauma patient • How to respond to a trauma patient • Value of team work and planning in trauma care • Sequence of priorities in the early assessment of the trauma patient • Principle of triage in immediate management of the trauma patients 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Trauma care workshops 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS

		<ul style="list-style-type: none"> • Concepts of injury recognition prediction based on the mechanism and energy of injury • Principles of primary and secondary surveys in the assessment and management of trauma • Techniques for the initial resuscitative and definitive care aspects of trauma based on ATLS protocol • Necessary protocols to allow early stabilization of the patient leading on to definitive Care 		
Head injury	<ul style="list-style-type: none"> • Assess the patient presenting with head injury in dental practice • Apply the knowledge of head injury in clinical scenarios 	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • Physiology of cerebral blood flow and the • pathophysiology of raised intracranial pressure • Management of head injury and prevention of secondary brain injury 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Trauma care workshops 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS
Cervical spine injury	<ul style="list-style-type: none"> • Assess the patient presenting with Cervical spine injury in dental practice • Apply the knowledge of Cervical spine injury in clinical scenarios 	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • Accurate initial assessment of spinal trauma • The pathophysiology and types of spinal cord injury • The basic management of spinal trauma and the major pitfalls • The prognosis of spinal cord injury, factors affecting functional outcome, and common associated complications 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Trauma care workshops 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS
Maxillofacial trauma	<ul style="list-style-type: none"> • Assess the patient presenting with maxillofacial 	Demonstrate basic comprehension of the following	<ul style="list-style-type: none"> • Large Class Format 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical

	trauma in dental practice <ul style="list-style-type: none"> • Apply the knowledge of maxillofacial trauma in clinical practice 	with emphasis on clinical application: <ul style="list-style-type: none"> • Recognise the life-threatening nature of facial injuries through compromise of the airway and associated head and spinal injuries • A methodology for examining facial injuries • The classification of facial fractures • The diagnosis and management of fractures of the middle third of the facial skeleton and the mandible • The importance of careful cleaning and accurate suturing of facial lacerations 	Interactive Session <ul style="list-style-type: none"> • Student presentations • Trauma care workshops 	<ul style="list-style-type: none"> • Scenario based Viva Voce • TOACS
Neck trauma	<ul style="list-style-type: none"> • Assess the patient presenting with neck trauma in dental practice • Apply the knowledge of neck trauma in clinical scenarios 	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Overview of surgical anatomy of the neck • Pathophysiology of penetrating and blunt neck trauma • The neck zones used to describe neck injuries • Principles of management of neck trauma 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Trauma care workshops 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce
Chest trauma and its managementThoracotomy / Use of Chest drains Hemorrhage and its types	<ul style="list-style-type: none"> • Assess the patient presenting with chest trauma in dental practice • Apply the knowledge of chest trauma in clinical scenarios 	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • The gross and surgical anatomy of the chest and abdomen • The pathophysiology of torso injury • The strength and weaknesses of clinical assessment in the injured patient • The use of special investigations and their limitations 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Trauma care workshops 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS

		<ul style="list-style-type: none"> • The operative approaches to the thoracic cavity • The special features of an emergency department • thoracotomy for haemorrhage control • The philosophy of damage control surgery • Basic structure and working of a chest drain with an underwater seal • Insertion of a chest drain and its care • How and when to remove chest drains • Complications associated with use of chest drains 		
Burns	<ul style="list-style-type: none"> • Assess the patient presenting with burn in dental practice • Apply the knowledge of burn in clinical scenarios 	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • The different causes and types of burns • The pathophysiology of burns • Factors leading to early and late mortality in burn patients • Pre hospital and ER room management of a burn patient • Assessing the area and depth of burns • Fluids available for resuscitation of burn victims, advantages and disadvantages associated with their use • Methods for calculating the rate and quantity of fluids to be given • Early monitoring of a burn patient • Techniques for treating burns patient • The pathophysiology of electrical and chemical burns 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Trauma care workshops 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS
COMMON SURGICAL DISORDERS RELEVANT TO DENTAL PRACTICE				

Benign and malignant disorders of the Thyroid gland	<ul style="list-style-type: none"> Assess the patient presenting with disorders of the Thyroid gland Outline the management plan for disorders of the Thyroid gland 	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> The embryology and anatomy of the thyroid and parathyroid gland The physiology and investigations of thyroid gland Various types of benign and malignant thyroid swellings Clinical history taking / examination of a patient presenting with thyroid swelling Clinical symptoms and signs that indicate thyroid malignancy Selection of appropriate investigations for thyroid swellings Overview of various treatment modalities available for treatment of thyroid disorders, their advantages and disadvantages 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS Mini-CEX
Thyroidectomy & its complications	<p>Outline the indications, preoperative preparation of a patient with thyroid disorder and post-operative complications of thyroidectomy</p>	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> Indications of surgery in thyroid disorders Pre-op preparation of a patient with thyroid disorder Complications after thyroid surgery particularly life-threatening complications that can occur after thyroidectomy Hyperparathyroidism 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS Mini-CEX

Disorders of the Parathyroid gland (Hyper and hypo-parathyroidism, benign hyperplasia, malignancy, MEN syndromes) and their surgical management	<ul style="list-style-type: none"> Assess the patient presenting with disorders of the Parathyroid gland Outline the management plan for disorders of the Parathyroid gland 	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> The embryology and anatomy of the parathyroid gland The physiology and investigations of parathyroid gland, selection of appropriate investigations for parathyroid disorders Various types of benign and malignant disorders of the parathyroid gland Difference between primary, secondary and tertiary hyper-parathyroidism Clinical history taking / examination of a patient presenting with parathyroid disorder Overview of various treatment modalities available for treatment of parathyroid disorders Parathyroidectomy and its complications The concept of auto-transplantation of parathyroids 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS Mini-CEX
Differential diagnosis & diagnostic approach to neck swellings	<p>Diagnose the patient presenting with neck swelling on the basis of history and clinical examination</p>	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> The differential diagnosis of a neck swelling based on the concept of anatomical triangles of the neck Difference between cyst (true cyst and false cyst), sinus and fistula Clinical diagnostic landmarks of common neck swellings namely plunging ranula, thyroglossal cyst, submandibular gland swelling, laryngocele, 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS Mini-CEX

		pharyngocele, branchial cyst, branchial fistula and cystic hygroma		
Cervical lymphadenopathy	Diagnose the patient of cervical lymphadenopathy in clinical practice	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> Clinical anatomy of the lymph nodes and lymphatic drainage of the head and neck The levels of neck lymph nodes Common causes of localized and generalized lymphadenopathy and their clinical features Clinical differentiation between acute and chronic lymphadenitis Cold abscess and the collar stud abscess Clinical features suggesting malignant lymphadenopathy Where to look for the primary disease in cases of secondary malignant deposits in the neck lymph nodes Planning a diagnostic workup for a patient presenting with cervical lymphadenitis 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS Mini-CEX
Neck dissections & its types	Apply the knowledge of types of neck dissections, their pros and cons in clinical scenarios	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> The meaning of term 'Neck dissection' The concept of en-bloc resection of draining lymph nodes in surgical oncology The various types of neck dissections used in surgical practice, their pros and cons 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS
Oral cancer and precancerous conditions (Carcinoma tongue and lip)	Apply the knowledge of oral cancer and precancerous conditions in clinical practice	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> Demography of oral cancer 	<ul style="list-style-type: none"> Large Class Format Interactive Session 	<ul style="list-style-type: none"> MCQs SAQs Clinical

		<ul style="list-style-type: none"> • Oral cancer prevalence in Pakistan • Risk factors for development of oral cancer especially the relationship between oral cancers and the use of alcohol and tobacco • Premalignant lesions of the oral cavity, their diagnosis and management • The concept of 'Field change' in malignancies of the aero-digestive tract • The cardinal clinical features and management of patients presenting with oropharyngeal cancer (employing carcinoma tongue and lip as the prototype disease conditions) • Surgical reconstruction in patients undergoing treatment of oro-pharyngeal cancer 	<ul style="list-style-type: none"> • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • Scenario based Viva Voce • TOACS • Mini-CEX
Skin malignancies	Differentiate between different malignant skin swellings in clinical practice	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • Clinical anatomy of skin • Clinical examination of an ulcer and swelling • Various morphological types of skin ulcers and their differential diagnoses • Premalignant lesions of the skin • Demography, clinical features and management of common skin malignancies namely Squamous and Basal celled carcinoma, Malignant Melanoma 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS • Mini-CEX
Common benign skin swellings	Differentiate between different benign skin swellings in clinical practice	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • Clinical anatomy of skin 	<ul style="list-style-type: none"> • Large Class Format Interactive Session 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical

		<ul style="list-style-type: none"> • Clinical examination of a skin swelling • Cardinal clinical features and management of common skin malignancies namely Lipoma, Epidermoid and Dermoid cysts and hemangiomas 	<ul style="list-style-type: none"> • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • Scenario based Viva Voce • TOACS • Mini-CEX
Carcinoma Larynx	Apply the knowledge of Carcinoma Larynx in clinical scenarios	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Clinical anatomy of larynx • Demography, clinical features and management of a patient presenting with carcinoma larynx 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS • Mini-CEX
Tracheostomy, indications, care and complications	Outline the indications, care and complications of Tracheostomy	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Clinical anatomy of trachea • Types of tracheostomy • Indications of performing tracheostomy • Physiological effects that take place after a tracheostomy is performed • Complications that can occur during or after a tracheostomy • Care of a patient in the early post-operative period after tracheostomy 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits • Teaching videos 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS
Benign and Malignant disorders of the Salivary glands	Apply the relevant knowledge of disorders of the Salivary glands in clinical practice	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • The surgical anatomy of the salivary glands • The presentation, pathology and investigation of common benign and malignant salivary gland disease 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS • Mini-CEX

		<ul style="list-style-type: none"> • The medical and surgical treatment of stones, infections and tumours that affect salivary glands • Parotidectomy, its complications and their management • Surgical excision of the submandibular salivary gland and its complications 		
Dysphagia	Apply the knowledge of Dysphagia in clinical scenarios	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • The clinical anatomy and physiology of the oesophagus • and their relationship to disease • Types and differential diagnoses of dysphagia • The clinical features, investigations and treatment of benign and malignant disease with particular reference to the common adult disorders • Demography, pre malignant lesions, clinical features and management of a patient presenting with malignant dysphagia • Esophagectomy and its types 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical Scenario based Viva Voce • TOACS • Mini-CEX
Skin grafts, flaps, basics of reconstructive surgery	Apply the knowledge of Skin grafts, flaps, basics of reconstructive surgery in clinical scenarios	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • The spectrum of plastic surgical techniques used to restore bodily form and function the concept of 'Reconstruction ladder' • The relevant anatomy and physiology of tissues used in reconstruction • The various skin grafts and how to use them appropriately 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits • Teaching videos 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical Scenario based Viva Voce • TOACS

		<ul style="list-style-type: none"> • The principles and use of flaps • How to use plastic surgery to manage difficult and complex tissue loss 		
Surgical Infections	Apply the knowledge of Surgical Infections in clinical scenarios	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Causes, clinical features and management of folliculitis, cellulitis, carbuncle, an abscess, necrotizing fasciitis and synergistic gangrene • Causes, clinical features and management of Tetanus and Gas gangrene 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical Scenario based Viva Voce • TOACS • Mini-CEX
Parasitic infections of surgical importance	Apply the relevant knowledge of Parasitic infections in clinical scenarios	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Demography causes, clinical features and management of Amoebiasis and Hydatid disease with special reference to hepatic involvement in these conditions 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical Scenario based Viva Voce • TOACS • Mini-CEX
General introduction to fractures	Apply the relevant knowledge of principles of fracture in clinical practice	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> • Clinical anatomy of long bones • Pathophysiology of fractures • Types of fractures with special reference to difference between simple (closed) and compound (open) fractures • Stages of fracture healing • Principles of fracture management • Complications after fractures 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical Scenario based Viva Voce • TOACS • Mini-CEX
Osteomyelitis	Apply the knowledge of Osteomyelitis in clinical scenarios	Demonstrate basic comprehension of the following	<ul style="list-style-type: none"> • Large Class Format 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical

		<p>with emphasis on clinical application:</p> <ul style="list-style-type: none"> • Causes, clinical features, management and complications of acute and chronic osteomyelitis in long bones • The importance of early recognition and management of acute osteomyelitis in children 	<p>Interactive Session</p> <ul style="list-style-type: none"> • Student presentations • Bedside learning during clinical rotations / OR visits 	<ul style="list-style-type: none"> • Scenario based Viva Voce • TOACS • Mini-CEX
Cleft lip and palate	Apply the knowledge of Cleft lip and palate in clinical practice	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • Risk factors and classification of cleft lip and palate • The principles of reconstruction of cleft lip and palate • The key features of the perioperative care of the child with cleft lip and palate • The associated complications of cleft lip and palate and their management • The importance of multi-disciplinary approach in managing patients with cleft lip and palate to achieve good results 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits • Teaching videos 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS • Mini-CEX
ANESTHESIA AND ITS RISKS				
Anesthesia and its risks	<ul style="list-style-type: none"> • Summarize the techniques of different anaesthesia along with their complications • Outline the management of pain and pain from malignant disease 	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> • Techniques of anaesthesia and airway maintenance namely general, regional and local anaesthesia • Methods of providing pain relief • Local and regional anaesthesia techniques especially spinal and epidural anaesthesia its procedure and complications 	<ul style="list-style-type: none"> • Large Class Format Interactive Session • Student presentations • Bedside learning during clinical rotations / OR visits • Teaching videos 	<ul style="list-style-type: none"> • MCQs • SAQs • Clinical • Scenario based Viva Voce • TOACS

		<ul style="list-style-type: none"> The management of chronic pain and pain from malignant disease 		
QUALITY OF CARE IN CLINICAL PRACTICE				
Maintaining Quality of care	<ul style="list-style-type: none"> Discuss Key Performance Indicators (KPIs) in clinical care Differentiate between clinical audit and clinical research 	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> Can quality of clinical care be measured Key Performance Indicators (KPIs) in clinical care Introduction to clinical audit and the audit cycle Differences between clinical audit and clinical research 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits Teaching videos 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS
Evidence based Medicine	Integrate EBM in clinical practice	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> What is Evidence Based Medicine (EBM) Why is EBM required How is EBM integrated into clinical practice Lessons learned from history from poor EBM practices 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits Teaching videos 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS
Patient safety in the clinical environment	Apply patient safety strategies in clinical practice	<p>Demonstrate basic comprehension of the following with emphasis on clinical application:</p> <ul style="list-style-type: none"> The importance of patient safety and the scale of the problem Medical errors, their range and definition Models for understanding how adverse events and near misses occur Patient safety strategies and solutions 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits Teaching videos 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS

		<ul style="list-style-type: none"> Applying the science of patient safety to practice Patient safety principles that are specific to the surgeon Dealing with the 'second victim' of a medical error 		
Occupational hazards in the clinical environment	Apply the knowledge of occupational hazards in the clinical environment to avoid its occurrence in clinical practice	Demonstrate basic comprehension of the following with emphasis on clinical application: <ul style="list-style-type: none"> Identification and management of occupational hazards in the surgical environment Needle stick injuries, their consequences and prevention 	<ul style="list-style-type: none"> Large Class Format Interactive Session Student presentations Bedside learning during clinical rotations / OR visits Teaching videos 	<ul style="list-style-type: none"> MCQs SAQs Clinical Scenario based Viva Voce TOACS

TOPICAL DETAILS OF CLINICAL SKILLS TO BE LEARNED AT THE BEDSIDE OR IN THE CLINICAL SKILLS LABORATORY

S NO	Clinical Skills to be Learned	Teaching Methodology	Assessment tool
1.	Clinical history taking	<ul style="list-style-type: none"> Student presentations Bedside learning during clinical rotations / in the clinical skills lab / OR visits Teaching videos Teaching Radiology films 	<ul style="list-style-type: none"> TOACS Mini-CEX
2.	General physical examination of a patient		
3.	Systemic physical examination of a patient with special emphasis on chest examination		
4.	Formulating a diagnosis and treatment plan for a patient		
5.	Clinical examination of a swelling		
6.	Clinical examination of an ulcer		
7.	Clinical examination of a patient with cervical lymphadenopathy		
8.	Clinical examination of a parotid swelling		
9.	Clinical examination of a submandibular gland swelling		
10.	Clinical examination of facial and trigeminal cranial nerve lesions		
11.	Clinical examination of a patient with oral lesion suspected to be malignant		
12.	Clinical examination of a goiter		

13.	Clinical examination of a branchial cyst / fistula, thyroglossal cyst, cystic hygroma		
14.	Identification and uses of: <ul style="list-style-type: none"> a. Common surgical instruments b. Chest drain with under water seal. c. Common drains (NG tube, foley catheter) d. Commonly used surgical sutures e. Commonly used intravenous cannulas, central venous catheters, LP needles, intra-venous fluids f. Instruments used for airway management (Guedel's airway, endotracheal tube, cricothyroidotomy / tracheostomy tube. g. Diathermy machine h. General anesthesia apparatus 		
15.	Identification of radiologic anatomy in a normal Chest X ray		
16.	Identification of following pathologies on X ray: <ul style="list-style-type: none"> a. Pleural effusion. b. Pneumothorax c. Cervical spine injury 		
17.	Identification of typical presentations of extra-dural, sub-dural intracranial hematomas and sub-arachnoid hemorrhage on CT scan		
18.	Introduction to protocols of operation theatre, ward work, patient clerking and out-patient clinics		

TOPICAL DETAILS OF CLINICAL SKILLS TO BE LEARNED THROUGH WORKSHOPS

Ser	Topic	Workshop	Assessment tool
1.	Intravenous access	For serial 1 & 2 Basic Surgical Skills Workshop	Formative
2.	Introduction to basic surgical skills		Formative
3.	Antisepsis, cross infection control and gowning up in the operating room	For serial 3 Cross Infection Control Workshop	Formative
4.	Primary Trauma Care based on the ATLS protocol		Formative
5.	Clinical communication (Role modeling) with special emphasis on counseling and taking written informed consent	For serial 4 Trauma Care Workshop	Formative
		For serial 5 Clinical Communication Skills Workshop	

TOPICAL DETAILS OF CLINICAL SKILLS AND SURGICAL PROCEDURES TO BE OBSERVED (O) OR PERFORMED (P) IN THE OPERATING ROOM (OR), EMERGENCY DEPARTMENT AND SURGICAL WARD (LOG BOOK TO BE MAINTAINED FOR THESE SKILLS / PROCEDURES)

Ser	Skills to be learned	Observation/ Performance level	Assessment tool
1.	Collection of samples of blood, urine, sputum, pus swab (P)	Performed under supervision	Clinical Log book
2.	Administration of drugs by intramuscular and intravenous routes (P)	Performed under supervision	Clinical Log book
3.	Wound care and dressings (P)	Performed under supervision	Clinical Log book
4.	Skin suturing and (O)	Observed	Clinical Log book
5.	Skin suture removal (P)	Performed under supervision	Clinical Log book
6.	Needle biopsies, aspiration of localized fluids (O)	Observed	Clinical Log book
7.	Pre-operative preparations, sterilization, and disinfection techniques in the OR (O)	Observed	Clinical Log book
8.	Incision and drainage of an abscess (O)	Observed	Clinical Log book
9.	Excision of soft tissue lumps (O)	Observed	Clinical Log book
10.	Thyroidectomy (O)	Observed	Clinical Log book
11.	Excision of a major salivary gland (Parotidectomy, sub-mandibular excision) (O)	Observed	Clinical Log book
12.	Application of skin graft (O)	Observed	Clinical Log book
13.	Administration of General anesthesia (O)	Observed	Clinical Log book
14.	Administration of Spinal and Epidural anesthesia (O)	Observed	Clinical Log book
15.	Application of POP cast to a long bone fracture (O)	Observed	Clinical Log book

Recommended books

1. Bailey and Love's Short Practice of Surgery – 27th edition
2. An Introduction to the Symptoms & Signs of Surgical Disease by Norman S Browse
3. A Manual on Clinical Surgery by S. DAS
4. Clinical Methods in General Surgery by Hamilton & Bailey

Periodontology

Theme/Topics	Learning Outcomes At the end of this course, student will be able to:	Learning Objectives This course enables the student to:	Instructional Strategy	Assessment Tools
BIOLOGIC BASIS OF PERIODONTOLOGY				
ANATOMY AND PHYSIOLOGY OF PERIODONTIUM	<ul style="list-style-type: none"> Outline the knowledge of the anatomy and physiology of the tissues of the periodontium and related structures. Outline age changes in periodontium 	<ul style="list-style-type: none"> Describe, label and Identify diverse anatomical features of periodontium. Identify microscopic features of periodontium. Describe physiology of saliva and role of gingival crevicular fluid. Identify blood supply, nerve supply and lymphatic drainage of periodontium of each tooth. Describe the features of age changes in periodontium 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SAQs MCQs VIVA VOCE OSCE
CLASSIFICATION OF PERIODONTAL DISEASES	<ul style="list-style-type: none"> Classify and tabulate gingival and periodontal diseases Recognize developmental and acquired deformities along with mucogingival deformities around teeth 	<ul style="list-style-type: none"> Define gingival diseases. Define periodontal diseases. Tabulate gingival diseases. Tabulate periodontal diseases. 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SAQs MCQs VIVA VOCE
EPIDEMIOLOGY OF PERIODONTAL DISEASE	<ul style="list-style-type: none"> Identify periodontal diseases by applying epidemiology indices and select appropriate diagnostic tools Quote incidence and prevalence of periodontal diseases in the community and worldwide. 	<ul style="list-style-type: none"> Define indices, including: <ul style="list-style-type: none"> ➤ Plaque index ➤ Debris index ➤ Gingival bleeding index ➤ Sulcus index ➤ Periodontal index ➤ Community periodontal index ➤ Periodontal destructive index Recognize epidemiological tools to 	<ul style="list-style-type: none"> LGIS SGIS SDL Clinical demonstration 	<ul style="list-style-type: none"> SAQs MCQs VIVA VOCE OSCE

		<p>assess periodontal conditions.</p> <ul style="list-style-type: none"> • Select appropriate instruments for calculating indices • Quote incidence and prevalence of periodontal diseases in the community and worldwide. 		
PERIODONTAL MICROBIOLOGY	<ul style="list-style-type: none"> • Interpret the role of bacteria in the pathogenesis of periodontal tissue destruction. • Identify various colonies of bacteria responsible for periodontal tissue destruction 	<ul style="list-style-type: none"> • Describe the nature, composition and physiology of plaque biofilm and its relationship to inflammatory periodontal diseases • Interpret the role of bacteria in the pathogenesis of periodontal tissue destruction. • Identify various colonies of bacteria responsible for periodontal tissue destruction. • Distinguish between various colored complexes of periodontal pathogens. 	<ul style="list-style-type: none"> • LGIS • SGIS • SDL 	<ul style="list-style-type: none"> • SAQs • MCQs • VIVA VOCE • OSCE
HOST RESPONSE AND HOST BACTERIAL INTERACTIONS IN PERIODONTAL DISEASE	<ul style="list-style-type: none"> • Interpret inflammatory response from host after bacterial interactions. • Relate the behaviors of different bacteria with host response. • Enlist putative periodontal pathogens 	<ul style="list-style-type: none"> • Define and describe Host bacterial interactions • Express risk factors for periodontal disease. • Name different disease causing periodontal pathogens 	<ul style="list-style-type: none"> • LGIS • SGIS • SDL 	<ul style="list-style-type: none"> • SAQs • MCQs • VIVA VOCE

SYSTEMIC FACTORS; SYSTEMIC DISEASES ASSOCIATED WITH PERIODONTAL DISEASE	<p>Recognize the bidirectional influence of systemic conditions on periodontium and its implications (vice versa)</p>	<ul style="list-style-type: none"> • Identify the role of systemic diseases/ conditions in the etiology of periodontal disease. • Describe clinical features of periodontal disease associated with systemic diseases/factors. • Tabulate common systemic diseases or conditions that have an impact of periodontal health. • Differentiate between clinical features of various systemic conditions/diseases. • Recognize the role of AIDS on periodontium. • Identify treatment options for gingival disease. 	<ul style="list-style-type: none"> • LGIS • SGIS • SDL 	<ul style="list-style-type: none"> • SAQs • MCQs • VIVA • VOCE
PERIODONTAL PATHOGENESIS a. GINGIVAL INFLAMMATION b. PERIODONTAL POCKET c. BONE LOSS AND PATTERNS	<ul style="list-style-type: none"> • Explain the pathogenesis and its significance in initiation of periodontal pockets • Distinguish types of periodontal pockets on the basis of its classification • Enlist patterns and classification of bone loss • Interpret and diagnose anatomical landmarks and bone loss by different methods. (Bone sounding) • Differentiate and explain types of bone loss Radiographically and clinically 	<ul style="list-style-type: none"> • Define, identify and Describe gingival inflammation, periodontal pocket and bone loss patterns. • Describe pathogenesis of gingival inflammation, pocket formation and bone destruction patterns. • Calculate clinical attachment loss. • Demonstrate gingival and periodontal probing. • Determine pathological signs of periodontal tissues. • Interpret normal and pathological structures found on dental radiographs. • Describe histopathological features associated with 	<ul style="list-style-type: none"> • LGIS • SGIS • SDL • Clinical demonstration 	<ul style="list-style-type: none"> • SAQs • MCQs • VIVA • VOCE • OSCE

		<p>gingival inflammation.</p> <ul style="list-style-type: none"> • Label periodontal pocket • Point out techniques available for detecting change in bone heights on radiographs • Identify and discuss clinical features of gingival inflammation, periodontal pocketing and bone loss patterns. 		
SMOKING AND PERIODONTAL DISEASE	<ul style="list-style-type: none"> • Apply knowledge of environmental risk factors for periodontal diseases and methods for their modification (including tobacco, stress, and diet) • Summarize the mechanism and role of smoking on periodontal therapy • Enlist effects of smoking on etiology and pathogenesis of periodontal disease 	<ul style="list-style-type: none"> • Describe effects of smoking on etiology and pathogenesis of periodontal disease • Explain the effect of smoking on periodontal therapies. 	<ul style="list-style-type: none"> • LGIS • SGIS • SDL 	<ul style="list-style-type: none"> • SAQs • MCQs • VIVA VOCE
HALITOSIS	<ul style="list-style-type: none"> • Recognize origin/pathogenesis of halitosis • Outline diagnostic tools with treatment options 	<ul style="list-style-type: none"> • Differentiate between various types of halitosis • Put together all the investigations tools with treatment options 	<ul style="list-style-type: none"> • LGIS • SGIS • Clinical demo 	<ul style="list-style-type: none"> • MCQ • SAQ • VIVA VOCE • OSCE

PERIO-ENDO, PROSTHODONTICS, ORTHO, RESTORATIVE PERIODONTAL CONSIDERATION	<ul style="list-style-type: none"> • Interpret the interrelationship of periodontitis to pulpal disease • Classify endo Perio lesions • Summarize the hazards of orthodontic forces on periodontium and role of oral hygiene maintenance during orthodontic treatment • Discuss the significance of biologic width with practicing prosthodontics procedures. 	<ul style="list-style-type: none"> • Define and classify periodontal- endodontic lesions. • Identify local factors affecting periodontium. • Express the importance of: <ul style="list-style-type: none"> ➤ Biological width violation consequences ➤ Aesthetic tissue management Occlusal consideration in restorative therapy 	<ul style="list-style-type: none"> • LGIS • SGIS • SDL 	<ul style="list-style-type: none"> • MCQs • VIVA VOCE
CLINICAL PERIODONTOLOGY AND NON-SURGICAL PERIODONTAL THERAPY				
PERIODONTAL DISEASES: 1. GINGIVAL CONDITIONS	<p>Discuss the pathogenesis of different gingival diseases, including chronic gingivitis, necrotizing ulcerative gingivitis, and acute gingival conditions, enlargements.</p>	<ul style="list-style-type: none"> • Identify and classify the types of gingival diseases. • Differentiate Acute and Chronic forms of gingivitis. • Describe clinical and histopathological features of gingival diseases. • Identify and distinguish between various gingival diseases. • Identify and Correlate clinical features of common gingival disease: <ul style="list-style-type: none"> ➤ Acute necrotizing ulcerative gingivitis ➤ Gingival desquamation • Recognize and describe gingival enlargements 	<ul style="list-style-type: none"> • LGIS • SGIS • SDL 	<ul style="list-style-type: none"> • SAQs • MCQs • VIVA VOCE • OSCE

PERIODONTAL CONDITIONS	<ul style="list-style-type: none"> Should be able to review the disease initiation and progression of periodontal diseases. Should apply knowledge about diagnosis of different periodontal diseases like chronic and aggressive periodontitis approaches to manage Aggressive and Atypical forms of aggressive periodontitis. 	<ul style="list-style-type: none"> Enlist causative factors. Discuss Histopathological changes associated with various periodontal diseases. Summarize immune reactions in pathogenesis of periodontal diseases. Describe clinical features of Aggressive and Chronic Periodontitis. Diagnose Aggressive and Chronic Periodontitis. Report differential diagnosis of periodontal disease. Describe acute necrotizing ulcerative periodontitis. Identify and describe features of periodontal abscess. Identify Refractory Periodontitis. 	<ul style="list-style-type: none"> LGIS SGIS SDL PBL 	<ul style="list-style-type: none"> SEQs MCQs VIVA VOCE OSCE
TRAUMA FROM OCCLUSION	<ul style="list-style-type: none"> Apply knowledge about Parafunctional habits and types of trauma from occlusion. Enumerate treatment options including psychological behavior after diagnosing of condition 	<ul style="list-style-type: none"> Define Trauma from occlusion. Identify types. Indicate Consequences of trauma. Examine and recall tissue response of trauma. 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SAQs MCQs VIVA VOCE
NON-SURGICAL PERIODONTAL THERAPY	<ul style="list-style-type: none"> Apply the techniques and principles of non-surgical therapy Implement the rationale clinically. Select appropriate non-surgical technique from Scaling, root planing, 	<ul style="list-style-type: none"> Discuss the goals & rationale of Non-surgical Periodontal therapy Understand the difference between Scaling & Root planing Describe the procedure 	<ul style="list-style-type: none"> SGIS SDL Clinical demo 	<ul style="list-style-type: none"> SAQ MCQ VIVA VOCE OSCE

	curettage.	<p>of Scaling and Root planing</p> <ul style="list-style-type: none"> • Discuss the process of wound healing after non-surgical therapy. • Select proper instruments for scaling and root planing. • Understand the hazards of over instrumentation • Describe the possible causes of treatment failure 		
PERIODONTAL EXAMINATION AND DIAGNOSIS	<ul style="list-style-type: none"> • Take patient's personal, medical and dental history. • Execute findings of history and correlate with patient's diagnosis. • Carry out Basic periodontal examination (BPE) • Interpret investigation results; Radiographs, Periodontal charting. • Diagnose and document periodontal disease. • Recognize when to ask for help and refer. 	<ul style="list-style-type: none"> • Appraise the importance of patient's history. • Express patient's personal, medical and dental history. • Analyze findings of medical and dental history and correlate with patient's diagnosis. • Score correctly on BPE chart • Detecting periodontal disease by reading comprehensive periodontal charting • Interpret investigation tools such as: <ul style="list-style-type: none"> ➤ Vitality tests ➤ Hematological and microbiological tests ➤ Sensitivity/ Specificity measuring tests ➤ Radiographs • Diagnose a periodontal disease. • Recognize own limits to ask for help. • Point out the facts in 	<ul style="list-style-type: none"> • SGIS • PBL • Clinical demo 	<ul style="list-style-type: none"> • MCQs • VIVA VOCE • OSCE

		<p>terms, appropriate to the intellectual capacity of the patient.</p> <ul style="list-style-type: none"> Outline clearly and succinctly the impact of oral health status on quality of life of the patient. 		
TREATMENT PLANNING AND PROGNOSIS	<ul style="list-style-type: none"> Categorize treatment plans. Outline the impact of proposed treatment on quality of life to the patient. Appraise possible and probable outcomes of treatment options as well as the need for future supportive care, prevention and maintenance. Recognize types of prognosis 	<ul style="list-style-type: none"> Categorize treatment plans and outline clearly and succinctly the impact of proposed treatment on quality of life to the patient Appraise possible and probable outcomes of treatment options as well as the need for future supportive care, prevention and maintenance Recognize types of prognosis and have clear concept of treatment plan in light of examination, diagnosis, risks involved. Clinical findings and prognosis. 	<ul style="list-style-type: none"> SGIS PBL 	<ul style="list-style-type: none"> SAQs MCQs VIVA VOCE OSCE
PERIODONTAL INSTRUMENTS AND INSTRUMENTATION	<ul style="list-style-type: none"> Classify and identify use of different instruments in non-surgical and surgical therapy Demonstrate chair side manners and various hand grasp techniques for instrumentation. 	<ul style="list-style-type: none"> Classify periodontal instruments. Identify periodontal instruments Describe the use of the various periodontal instruments. Demonstrate chair side manners and techniques. Demonstrate various hand grasp techniques for instruments 	<ul style="list-style-type: none"> SGIS Clinical demo 	<ul style="list-style-type: none"> SAQs MCQs VIVA VOCE OSCE
PLAQUE CONTROL:	<ul style="list-style-type: none"> Evaluate the status of oral hygiene to educate the patient and employ various adjuncts to non-surgical therapy to 	<ul style="list-style-type: none"> Identify and describe various plaque control techniques. Explain chemical and mechanical plaque 	<ul style="list-style-type: none"> SGIS SDL Clinical demonstration 	<ul style="list-style-type: none"> SAQs MCQs VIVA VOCE

MECHANICAL PLAQUE CONTROL	<p>show rationale for use. (chemical plaque control)</p> <ul style="list-style-type: none"> Classify interdental cleaning aids and name chemical and mechanical plaque control techniques Demonstrate the use of correct types of brushing techniques Emphasize the need of good oral hygiene practices (including use of oral irrigation technique and disclosing agents) 	<p>control techniques.</p> <ul style="list-style-type: none"> Identify and Describe Oral hygiene instructions. Employ various adjuncts to non- surgical therapy to show rationale for use. Classify interdental cleaning aids. Identify the importance of: <ul style="list-style-type: none"> ➤ Toothbrush brushing techniques ➤ Oral irrigation technique ➤ Disclosing agent 		<ul style="list-style-type: none"> OSCE
CHEMICAL PLAQUE CONTROL	<ul style="list-style-type: none"> Describe the effects and interactions of medications used for the prevention and therapy of periodontal diseases Classify antimicrobial agents used in periodontal disease Identify commonly used antimicrobial agents (Chlorhexidine) and explain its mechanism 	<ul style="list-style-type: none"> Define antimicrobial agent. Classify antimicrobial agents used in periodontal disease. Identify commonly used antimicrobial agents in periodontal disease. Differentiate between the use of Systemic and Local antimicrobial agents. Label serial and combination antibiotic therapy 	<ul style="list-style-type: none"> LGIS SGIS 	<ul style="list-style-type: none"> SAQs MCQs VIVA VOCE
PERIODONTAL SURGERY AND SUPPORTIVE THERAPY				
GENERAL PRINCIPLES OF PERIODONTAL SURGERY 1) SUTURES 2) PERIODONTAL DRESSING 3) HEMOSTASIS	<ul style="list-style-type: none"> Identify indications and contraindications for periodontal surgery. Explain consent and procedure to patient. Identify steps for patient preparation before surgery. Recognize different types of suturing materials 	<ul style="list-style-type: none"> Apply knowledge of different surgical techniques and instruments used in periodontics, their indications and contraindications, advantages and disadvantages; and be able to tell the use of specialized surgical 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SEQs MCQs VIVA VOCE

	<ul style="list-style-type: none"> Describe suturing techniques and identify various types of periodontal dressings. Demonstrate the use of periodontal dressing Express the techniques and agents used in achieving intraoperative hemostasis 	<ul style="list-style-type: none"> instruments Identify steps for patient preparation before surgery. Recognize types of sutures. Describe suturing techniques. Identify various types of periodontal dressing. Demonstrate the use of periodontal dressing 		
GINGIVAL CURETTAGE	<ul style="list-style-type: none"> Enlist the indications and contraindications of gingival curettage Identify rationale for treatment Describe procedure and healing after treatment 	<ul style="list-style-type: none"> Enlist the indications and contraindications of gingival curettage Identify Rationale for treatment. Describe procedure. Describe procedure and steps of healing after surgical procedure. 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SEQs MCQs VIVA VOCE
GINGIVECTOMY AND GINGIVOPLASTY	<ul style="list-style-type: none"> Explain the treatment options for different gingival enlargements Reproduce all the indications, contraindications and prerequisites to perform procedure. 	<ul style="list-style-type: none"> Identify rationale for treatment. Describe different techniques. Recognize Epulis removal procedure. 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SEQs MCQs VIVA VOCE
FLAP SURGERY OSSEOUS SURGERY FURCATION INVOLVEMENT	<ul style="list-style-type: none"> Identify and classify types of flaps. Describe flap designs and techniques. Discuss indications and contraindications of Modified Widman flap surgery. Identify rationale for osseous surgery. Discuss indications and contraindications of osseous surgery. Discuss healing after periodontal surgery. Discuss gingival 	<ul style="list-style-type: none"> Identify and classify types of flaps. Describe flap designs and techniques/Modified Widman flap Discuss indications and contraindications of flap surgery. Identify rationale for osseous surgery. Discuss indications and contraindications of osseous surgery. Discuss healing after periodontal surgery. 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SEQs MCQs VIVA VOCE

	recession, classification and treatment modalities <ul style="list-style-type: none"> Describe furcation, factors, indications, and treatment options. 			
REGENERATIVE PERIODONTAL THERAPY	<ul style="list-style-type: none"> Describe the rationality, indications and technique of the GTR procedure. Classify graft materials used in periodontal therapy. 	<ul style="list-style-type: none"> Describe the rationality of the procedure. Describe the procedure of GTR. Classify graft materials used in periodontal therapy 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SEQs MCQs VIVA VOCE
ESTHETIC AND PERIODONTAL PLASTIC SURGERY	<ul style="list-style-type: none"> Recall the objectives of periodontal plastic/Mucogingival surgery Recognize recession defects according to Miller's classification Describe gingival grafting techniques 	<ul style="list-style-type: none"> Enlist indications of mucogingival/plastic surgery Discuss techniques to Increase Attached Gingiva Classify gingival recession defects by Miller Describe free gingival grafting, connective tissue grafting, apically repositioned flap, coronally advance flap. 	<ul style="list-style-type: none"> LGIS 	<ul style="list-style-type: none"> SAQ MCQ VIVA VOCE OSCE
SUPPORTIVE PERIODONTAL THERAPY	<ul style="list-style-type: none"> Summarize the rationale for supportive periodontal treatment Implement the maintenance program in patients Define splinting of teeth Bullet pointing the indications and contraindications of splint 	<ul style="list-style-type: none"> Discuss the goal of supportive periodontal therapy Tabulate maintenance recall procedure Describe splinting and its types Enlist indications and contraindications of splints 	<ul style="list-style-type: none"> LGIS SGIS SDL 	<ul style="list-style-type: none"> SAQ MCQ VIVA VOCE OSCE
ORAL IMPLANTOLOGY				
Oral Implantology	<ul style="list-style-type: none"> Discuss the concept of osteointegration Discuss the Anatomy, Biology, Function of peri-implant tissue 	<ul style="list-style-type: none"> Discuss the concept of osteointegration Describe Peri-implant Infections Describe Implant- 	<ul style="list-style-type: none"> LGIS SDL 	<ul style="list-style-type: none"> MCQs VIVA VOCE

	<ul style="list-style-type: none"> • Outline the stages in surgical placement of dental implant • Enlist contraindications and complications of dental implant 	<p>Related Complications and Failures</p> <ul style="list-style-type: none"> • Discuss supportive Implant Treatment • Describe basic Implant Surgical Procedure. 		
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DETAILS OF CLINICAL TRAINING IN PERIODONTICS

Clinical Learning Outcome

“By the end of successful completion of periodontics training, the students will gain clinical skills for basic periodontal assessment and treatment by effectively managing assigned patients with periodontal disease under direct supervision”

Periodontics clinical training learning objectives	Teaching Strategies	Assessment tool
<p>By the end of the clinical rotation students should be able to;</p> <ol style="list-style-type: none"> 1. Carry out patient's history in log book. 2. Practice chair side manners and ethics. 3. Perform basic periodontal examinations with consent. 4. Formulating a diagnosis of periodontal disease. 5. Appreciate the radiographic changes associated with periodontal diseases. 6. Identify the etiological factors of periodontal conditions. 7. Determine the disease prognosis. 8. Construct a treatment plan according to the patient's medical history 9. Identify risk factors with emphasis on total patient care. 10. Recognize periodontal armamentarium. 11. Possess hands on skills for using hand and power-driven periodontal instrumentation. 12. Perform manual scaling on 40 patients under direct supervision. 13. Perform ultrasonic scaling on 10 patients under direct supervision. 14. Follow anxiety reduction protocol while ensuring pain control during the provision of treatment. 15. Be acquainted with common medical emergencies on dental chair. 16. Outline a maintenance plan for the patient. 17. Effectively communicate the maintenance plan to the patient. 18. Evaluate the results of periodontal therapy. 19. Provide oral hygiene instructions while positively reinforcing the patient's plaque control efforts. 	<ul style="list-style-type: none"> • Active clinical demonstrations • Small group interactive sessions ; <ol style="list-style-type: none"> 1. Role play /Mock history taking group activities 2. Paper scenarios as triggers 3. You-tube or other online sites as a source of film triggers for identified learning outcome. 4. Anonymised patient data. 5. Radiograph interpretations. 6. Treatment plan discussions and assignments. • Simulation of clinical procedure /practice of instrument grasp and strokes on dental models or phantom head • Presentations 	<p>OSCE /TOCS</p> <p>Students log book of clinical procedures</p> <p>Chair side viva</p>

Recommended books

1. Newman and Carranza Clinical Periodontology 13th edition
2. Clinical periodontology Jan Lindhe 6th edition
3. Atlas of periodontology and Implant therapy
4. Periodontics by J.D Manson 6th Edition

Oral Pathology

Course Outline

Theme/ Topics	Learning Outcome	Learning Objectives	Educational Strategy	Assessment Tools
	At the completion of this Course, the students will be able to:	This course enables the students to:		
White Lesion (only microscopic features)	Identify signs, symptoms and clinicopathological features of various white lesions.	<ul style="list-style-type: none"> • Differentiate between acute and chronic forms of Candidiasis on the basis of histopathological features • Learn about microscopic features of leukoedema, white spongy Nevus, tobacco pouch keratosis and nicotine stomatitis • Describe the pathogenesis and histopathology of actinic cheilitis and submucous fibrosis • Differentiate between hairy leukoplakia, hairy tongue and geographic tongue on clinicopathological basis • Learn about the reticular and erosive types of lichen planus. • Identify the risk factors responsible to cause different forms of leukoplakia along with their clinical and histopathological features. 	<ul style="list-style-type: none"> • Interactive Lectures • Small Group Discussion • PBL • Quiz 	<ul style="list-style-type: none"> • MCQs • SAQs • OSPE
Epithelial Pathology	Differentiate between various epithelial pathologies on the basis of clinicopathological features.	<ul style="list-style-type: none"> • Differentiate between speckled leukoplakia and proliferative verrucous leukoplakia • Differentiate histopathological features of mild, moderate and severe dysplasia, carcinoma in situ • Learn about the red lesion, its pathogenesis and clinical presentation 	<ul style="list-style-type: none"> • Interactive Lectures • Small Group Discussions • PBL • Quiz 	<ul style="list-style-type: none"> • MCQs • SAQs • OSPE

		<ul style="list-style-type: none"> Describe the risk factors along with the mutagenic and carcinogenic ingredients Describe the clinical staging and histopathological grading of Oral Squamous Cell Carcinoma Differentiate between different variants of squamous cell carcinoma including varicose, adenosquamous, basaloid, adenoid squamous cell, nasopharyngeal carcinoma. Learn about benign epithelial lesions including squamous papilloma and keratoacanthoma Have knowledge about ABCD of melanoma 		
Infections	Identify the etiology and histopathology of bacterial, viral, fungal infections.	<ul style="list-style-type: none"> Distinguish between Tuberculosis, Syphilis and Actinomycosis on the basis of histopathological features Recall histopathology of Herpes simplex, Varicella Zoster Epstein- barr Cytomegalo Human Herpes virus 8 Human papilloma viruses and Retrovirus (HIV) Identify superficial fungal infections (Candidiasis) and deep fungal infections Histoplasmosis. Paracoccidioidomycosis, Blastomycosis, Aspergillosis and Zygomycosis on the basis of oral and histopathological features. 	<ul style="list-style-type: none"> Interactive Lectures Small Group Discussions PBL Quiz 	<ul style="list-style-type: none"> MCQs SAQs OSPE
Bone Pathology	Classify and differentiate between benign and malignant bone tumors and	<ul style="list-style-type: none"> Distinguish between fibrous, cement-osseous, ossifying fibroma, paget's, 	<ul style="list-style-type: none"> Interactive Lectures Small Group 	<ul style="list-style-type: none"> MCQs SAQs OSPE

	study the histopathological features of various bone pathologies	<p>hyperparathyroidism, osteopetrosis, osteogenesis imperfect, cherubism and cleidocranial dysplasia</p> <ul style="list-style-type: none"> • Diagnose between tori, osteoblastoma, osteoid osteoma and giant cell lesions on the basis of clinicopathological and radiographic features. • Distinguish between osteogenic sarcoma, chondrosarcoma, ewing's sarcoma on the basis of clinicopathological features. 	<ul style="list-style-type: none"> • Discussions • PBL • Quiz 	
Connective Tissue Lesions	<ul style="list-style-type: none"> • Comprehend the clinical presentation of various connective tissue lesions and analyze the diagnosis by correlating clinical and microscopic features 	<ul style="list-style-type: none"> • Recall classification based on benign and malignant tumors • Benign Tumors <ul style="list-style-type: none"> ○ Peripheral Giant Cell Granuloma ○ Peripheral Ossifying Fibroma ○ Lipoma (only microscopy) ○ Traumatic Neuroma ○ Palisaded Encapsulated Neuroma ○ Neurilemoma ○ Neurofibroma ○ Neurofibromatosis Type-1 ○ Multiple Endocrine Neoplasia Type-2B ○ Melanotic Neuroectodermal Tumor of Infancy ○ Paraganglioma ○ Granular Cell Tumor ○ Congenital Epulis ○ Hemangioma and Vascular Malformations ○ Sturge-Weber Angiomatosis ○ Nasopharyngeal Angiofibroma 	<ul style="list-style-type: none"> • Interactive Lectures • Small Group Discussions • PBL • Quiz 	<ul style="list-style-type: none"> • MCQs • SAQs • OSPE

		<ul style="list-style-type: none"> ○ Hemangiopericytoma ○ Lymphangioma ○ Leiomyoma ○ Rhabdomyoma ○ Osseous and Cartilaginous Choristomas ● Malignant tumors <ul style="list-style-type: none"> ○ Fibrosarcoma ○ Malignant fibrous histiocyteoma ○ Liposarcoma ○ Angiosarcoma ○ Kaposi Sarcoma ○ Leiomyosarcoma ○ Rhabdomyosarcoma ● Describe microscopic features of following reactive lesions. ● Reactive lesions <ul style="list-style-type: none"> ○ Giant cell fibroma ○ Epulis fissuratum ○ Inflammatory Papillary Hyperplasia ○ Fibrous Histiocyteoma ○ Fibromatosis ○ Myofibroma ○ Oral-focal mucinosis ○ Pyogenic Granuloma (All these epulides will be taught by perio dept) ● Diagnose these lesions by correlating with clinical and microscopic features of the following diseases: <ul style="list-style-type: none"> ○ Neoplasms of Fibrous tissue origin ○ Neural tissue neoplasms ○ Muscle tissue neoplasms ○ Adipose and Vascular tissue neoplasms ○ Osseous and cartilaginous tissue neoplasms 		
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Hematological Malignancies	Distinguish between hematological malignancies and recall treatment modalities in relation to their clinicopathological picture.	<ul style="list-style-type: none"> Distinguish Hodgkin's and non Hodgkin's lymphoma on the basis of oral and histopathological features Diagnose Burkitt's lymphoma, multiple myeloma, plasmacytoma and langerhan cell histiocytosis on the basis of histopathological features. 	<ul style="list-style-type: none"> Interactive Lectures Small Group Discussions PBL Quiz 	<ul style="list-style-type: none"> MCQs SAQs OSPE
Odontogenic and non-odontogenic cysts	Discuss and distinguish various cysts on the basis of their origin, nature, expansion and radiographic presentation	<ul style="list-style-type: none"> Classify odontogenic and non odontogenic cysts Distinguish following odontogenic and non odontogenic cysts on the basis of origin, nature, expansion, clinical presentation, histopathology and radiographic features <p>ODONTOGENIC CYSTS:</p> <ol style="list-style-type: none"> Periapical cysts Dentigerous cysts Eruption cysts Paradental cysts Lateral periodontal cysts Gingival cysts of adult & newborn Glandular odontogenic cyst <p>NON ODONTOGENIC CYSTS:</p> <ol style="list-style-type: none"> Nasopalatine duct cysts Nasolabial cysts Globulomaxillary cyst Median palatal cyst Median mandibular cyst Palatal cysts of newborn <p>Dermoid and Epidermoid cysts(only microscopic features)</p>	<ul style="list-style-type: none"> Interactive Lectures Small Group Discussions PBL Quiz 	<ul style="list-style-type: none"> MCQs SAQs OSPE
Odontogenic Tumors	Diagnose odontogenic tumors on the basis of clinical, radiographic and microscopic features	<ul style="list-style-type: none"> Differentiate between odontogenic tumors of epithelial origin using clinical, radiographic and histopathological correlation, tumors include Ameloblastoma, 	<ul style="list-style-type: none"> Interactive Lectures Small Group <p>Discussions</p> <ul style="list-style-type: none"> PBL Quiz 	<ul style="list-style-type: none"> MCQs SAQs OSPE

		<p>Keratocystic odontogenic tumour, Calcifying epithelial odontogenic tumour, Adenomatoid odontogenic tumour, Squamous odontogenic tumour</p> <ul style="list-style-type: none"> • Diagnose between different odontogenic tumors of odontogenic origin on the basis of clinical and microscopic features, tumors include Odontogenic fibroma, Odontogenic myxoma, Cementoblastoma, • Ameloblastic fibroma & fibrodontoma, Odontogenic carcinoma, Primary intra osseous carcinoma 		
<p>Salivary Gland Pathology</p> <p>a. Reactive Lesions (mucocele, mucous retention cyst, necrotizing sialometaplasia)</p> <p>b. Immune-mediated diseases (Sjogren syndrome)</p> <p>c. Benign tumours (pleomorphic adenoma, warthin tumor, monomorphic adenoma)</p> <p>d. Malignant tumours (mucoepidermoid)</p>	<p>Classify salivary gland on the basis of pathology and diagnose the lesions by correlating clinical and histological features.</p>	<ul style="list-style-type: none"> • Diagnose reactive lesions, immune mediated diseases of salivary gland pathology by correlation of their clinicopathological features. • Distinguish benign and malignant tumors of salivary gland on the basis of clinical presentation and histopathological features. 	<ul style="list-style-type: none"> • Interactive Lectures • Small Group <p>Discussions</p> <ul style="list-style-type: none"> • PBL • Quiz 	<ul style="list-style-type: none"> • MCQs • SAQs • OSPE

carcinoma, adenoid cystic carcinoma, acinic cell carcinoma, polymorphous low-grade adenocarcinoma				
DENTAL CARIES AND PERIAPICAL DISORDER DENTAL CARIES: <ol style="list-style-type: none"> Aetiology Clinical Types Role of Plaque, Carbohydrates Enamel Caries Dentine Caries Cementum Caries PERIAPICAL PATHOLOGY: <ol style="list-style-type: none"> Acute and chronic periodontitis Chronic apical periodontitis Periapical abscess (to be taught by perio dept) Periapical granuloma Acute and chronic osteomyelitis Cellulitis 	Dental Caries: Differentiate between various clinical types of dental caries on clinicopathological basis Periapical: Compare and contrast various periapical pathologies on clinicopathological basis	<ul style="list-style-type: none"> Distinguish between different types of dental caries on the basis of etiology and clinicopathological features Discuss the role of plaque and carbohydrates in the development of dental caries. Distinguish periapical abscess from periapical granuloma, acute and chronic osteomyelitis on the basis of clinical presentation and histopathological presentation. Discuss the pathogenesis of cellulitis. 	<ul style="list-style-type: none"> Interactive Lectures Small Group Discussions <ul style="list-style-type: none"> PBL Quiz 	<ul style="list-style-type: none"> MCQs SAQs OSPE
IMMUNE MEDIATED DISORDERS 1- Pemphigus vulgaris	Distinguish between immune mediated disorders on histological and cytological basis	<ul style="list-style-type: none"> Differentiate between pemphigus vulgaris and mucous membrane pemphigoid on the basis of their cytological and histopathological features. 	<ul style="list-style-type: none"> Interactive Lectures Small Group Discussions <ul style="list-style-type: none"> PBL 	<ul style="list-style-type: none"> MCQs SAQs OSPE

2- Mucous-membrane pemphigoid 3- Epidermolysis bullosa 4- Erythema Multiforme Lichen Planus	(Clinical features and immunofluorescence will be taught by oral med dept)	<ul style="list-style-type: none"> Diagnose epidermolysis bullosa, erythema multiforme, lichen planus on the basis of oral manifestations, cytological and histopathological features. 	<ul style="list-style-type: none"> Quiz 	
Granulomatous disorders a. Crohn's disease b. Cheilitis granulomatosa c. Wegeners Granulomatosis d. Sarcoidosis (only microscopy)	Evaluate various granulomatous disorders and distinguish between caseating and non caseating granulomas	Describe histopathological features of disorders having caseating and non-caseating granulomas on the basis of microscopy. <ul style="list-style-type: none"> Crohn's disease Cheilitis granulomatosa Wegeners Granulomatosis Sarcoidosis 	<ul style="list-style-type: none"> Interactive Lectures Small Group Discussions <ul style="list-style-type: none"> PBL Quiz 	<ul style="list-style-type: none"> MCQs SAQs OSPE
DEVELOPMENTAL DISTURBANCES OF ORAL LESIONS	Classify developmental anomalies and defects in development of oral structures while appreciating the difference in various genetic syndromes	Demonstrate understanding of developmental disturbances of oral region under three broad categories <ul style="list-style-type: none"> Developmental disturbances in Teeth (will be taught by oral medicine dept) Developmental disturbances in soft tissue Developmental disturbances in bone (cleft lip and palate will be covered by gen surgery dept) Developmental cysts(non-odontogenic) 	<ul style="list-style-type: none"> Interactive Lectures Small Group Discussions <ul style="list-style-type: none"> PBL Quiz 	<ul style="list-style-type: none"> Type 1 MCQs SAQs OSPE

Learning Outcomes Practical
Oral Pathology Third Year BDS

<u>Topic</u>				
1- Actinomycosis 2- Tuberculous granuloma 3- Candidiasis 4- Squamous cell carcinoma 5- Oral epithelial dysplasia 6- Squamous cell carcinoma 7- Mucocele 8- Pleomorphic adenoma 9- Warthin's tumor 10- Mucoepidermoid carcinoma 11- Adenoid cystic carcinoma 12- Acinic cell carcinoma 13- Polymorphous low-grade adenocarcinoma 14- Lichen planus 15- Pemphigus vulgaris 16- Radicular cyst 17- Dentigerous cyst 18- Lateral periodontal cyst 19- Keratocystic odontogenic tumor 20- Ameloblastoma 21- Calcifying odontogenic tumor 22- Adenomatoid odontogenic tumor 23- Hemangioma 24- Pyogenic granuloma 25- Giant cell granuloma 26- Hodgkin's lymphoma 27- Burkitt's lymphoma 28- Fibrous dysplasia 29- Ossifying fibroma 30- Zones of enamel caries 31- Zones of dentine caries 32- Procedure of H&E staining	Skills	<ul style="list-style-type: none"> • Prepare H&E slides • Use microscopes • Identify the microscopic features of slides • Diagnose the slides • Illustrate the salient features on workbook with H&E pencils 	Multimedia/ Optika Interactive demonstration Group activity on microscope	OSPE Workbook

Recommended books

- **Textbook- Contemporary Oral and Maxillofacial Pathology, Latest Edition**
- **Reference Books**
 - Oral and Maxillofacial Pathology By Neville**
 - Oral and Maxillofacial Pathology by Regezzi**

ORAL MEDICINE

Theme/ Topics	Learning Outcomes Students should be able to:	Learning Objectives	Instructional Strategy	Assessment Tools
Introduction and Terminologies used in oral medicine	Differentiate between various terms and identify different clinical terms depending on clinical and radiographic examination.	<ul style="list-style-type: none"> Define basic terms used in Oral medicine Differentiate different clinical terms. 	Presentations	<ul style="list-style-type: none"> Quiz Viva
Principles of oral medicine (patient assessment)	Demonstrate proper history taking and clinical examination of patient with oral lesions.	<ul style="list-style-type: none"> Take a comprehensive relevant history Perform extra-oral and intra-oral examination of the patient. 	History and examination in clinical rotations	Hands on OSPE
Investigations	<ul style="list-style-type: none"> Advise required investigations of blood, urine, Endocrine function, Immunological, serology, & microbiology. Classify different types of biopsy and their use in dentistry. 	<ul style="list-style-type: none"> Identify various diagnostic modalities used in patients suffering from oral diseases and manifestations of systemic diseases in the oral cavity Describe & advise the required biopsy technique, & all imaging techniques 	<ul style="list-style-type: none"> Biopsy techniques Radiographic examination in clinical rotations 	OSCE
Principles of Management	Diagnose & identify different therapeutic options including topical and systemic modalities, their uses, and limitations in the oral cavity.	Execute a suitable treatment plan. Select appropriate topical creams, ointments, &/or systemic therapy, their indications & limitations.	Lectures Clinical rotations.	Viva
Bacterial Infections	Manage bacterial lesions presenting in the oral cavity due to specific bacteria after diagnosis	Describe oral manifestations of Syphilis, only.	Lectures and clinical rotations	<ul style="list-style-type: none"> SAQ MCQs Viva
Viral Infections	Manage oral lesions associated with viruses after diagnosis.	<ul style="list-style-type: none"> Diagnosis & management of Herpes Simplex, Varicella zoster, EBV, Coxsackie, & human papilloma viral infections. 	Lectures, Clinical rotation	<ul style="list-style-type: none"> SAQ MCQs Viva

		<ul style="list-style-type: none"> Only oral features of HIV infection. 		
Fungal Infections	<ul style="list-style-type: none"> Differentiate between candidal infections Establish a diagnosis on basis of its causes, clinical examination and investigations 	<ul style="list-style-type: none"> Oral signs/symptoms & treatment of Superficial Oral Candidiasis. Identify the causes of fungal infectio 	Presentations Lectures	<ul style="list-style-type: none"> SAQ MCQs Viva
Oral Ulcerations	Identify different types of ulcerations and syndromes associated with it. Manage oral ulcerations in all age groups including adolescents after diagnosis	Diagnose & manage Traumatic ulceration, <ul style="list-style-type: none"> RAS (all 3 types), Behcet's disease, PFAPA syndrome, MAGIC syndrome. 	Presentations Clinical rotations	<ul style="list-style-type: none"> SAQ MCQs Viva
Diseases of Tongue	Manage different abnormalities of tongue after diagnosis	<ul style="list-style-type: none"> Differentiate between Fissured tongue, coated tongue, hairy tongue, geographic tongue, Median Rhomboid glossitis Discuss their causes & management of fissured tongue, coated tongue, hairy tongue, geographic tongue, Median Rhomboid glossitis, Macroglossia & Ankyloglossia. 	Presentations	<ul style="list-style-type: none"> SAQ MCQs Viva
Diseases of lips	Manage different diseases of lips after diagnosis	Diagnose & propose management of swellings of lips, Angular cheilitis, lip fissures, lick eczema, Actinic cheilitis, Allergic cheilitis.	Lectures	<ul style="list-style-type: none"> SAQ MCQs Viva
Swellings of the neck	<ul style="list-style-type: none"> Perform neck examination and establish differential 	<ul style="list-style-type: none"> Classification of neck swellings. Causes of cervical lymphadenopathy. 	Lectures, Clinical rotations	<ul style="list-style-type: none"> SAQ MCQs Viva OSCE

	diagnosis of the face and neck swellings	<ul style="list-style-type: none"> Perform neck examination & describe cervical lymph node levels. 		
Salivary gland Swellings	<ul style="list-style-type: none"> Manage different salivary gland swellings e.g. different obstructive, viral, bacterial, infections after making diagnosis Differentiate between unilateral and bi-lateral salivary gland swellings involving any of the three major salivary glands or minor salivary glands. 	<ul style="list-style-type: none"> Identify Mucocele, Ranula. Diagnose viral & bacterial sialadenitis, eg. Mumps. Sialosis & its causes. Manage different salivary gland swellings e.g. different obstructive, viral, bacterial, infections 	Lectures Clinical rotations	<ul style="list-style-type: none"> SAQ MCQs Viva OSCE
Disturbances of salivary flow	<ul style="list-style-type: none"> Assess & Diagnose patients presenting with dryness in the oral cavity on the basis of etiology and identify complications associated with it. 	<p>Xerostomia, Hypersalivation, Halitosis, Sjogren's syndrome.</p> <ul style="list-style-type: none"> Identify their causes, order investigations, & suggest suitable treatment. 	Lectures Clinical rotations	<ul style="list-style-type: none"> SAQ MCQs Viva
Oral Pigmentation	<ul style="list-style-type: none"> Manage oral lesions presenting as pigmented lesions based on history and clinical findings and differential diagnosis 	Identify Amalgam tattoo, Melano-acanthoma, Familial & drug induced pigmentation.	Lectures Clinical rotations	<ul style="list-style-type: none"> SAQ MCQ Viva
Precancerous Lesions	<ul style="list-style-type: none"> Demonstrate understanding of white and red lesions that may progress to cancerous lesions. Manage pre-cancerous conditions after diagnosis Differentiate between pre-cancerous lesions and conditions. 	Clinical diagnosis & management of Leukoplakia(all types) Erythroplakia, Tobacco pouch keratosis, Nicotine stomatitis, white sponge nevus, Leukoedema, Oral submucous fibrosis.	Lectures Clinical rotations	<ul style="list-style-type: none"> SAQ MCQs Viva OSPE

Oral Carcinoma & Carcinogenesis	Identify cancerous lesions and conditions and refer to specialist	<ul style="list-style-type: none"> • Explain TNM staging of OSCC, • Cervical lymph nodes • Discuss management modalities. 	Lectures Clinical rotations	<ul style="list-style-type: none"> • SAQ • MCQs • Viva • OSPE
Vesiculobullous diseases	<ul style="list-style-type: none"> • Relate different mucosal symptoms with dermal signs to diagnose and treat mucocutaneous blistering disorders • Differentiate between all vesicobullous lesions by means of comprehensive history and clinical evaluation & investigations. 	<ul style="list-style-type: none"> • Oral manifestations, investigations and treatment of VBD. • Lichen planus, Pemphigus vulgaris, MMPemphigoid, Bullous pemphigoid, Epidermolysis bullosa, Erythema multiforme. 	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Blood related Disorders	Identify oral manifestations of blood related disorders.	Identify Oral manifestations of Anemia, Leukemia, Thrombocytopenia, Myelodysplastic syndrome.	Lectures Clinical rotations	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Disorders of nutrition	Identify and manage oral symptoms of diseases due to nutritional deficiencies	Oral manifestations of nutritional deficiencies, Scurvy, Burning mouth syndrome, & their management	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Gastro-Intestinal Disorders	Identify and manage oral symptoms of different Gastro-intestinal disorders.	Oral manifestations of Coeliac disease, Crohn's disease, Ulcerative colitis, GERD, Orofacial granulomatosis, & only their management.	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Endocrinopathies and Renal diseases	Identify and manage oral symptoms of different endocrine disturbances and renal diseases.	Oral manifestations & dental treatment of pregnant, diabetic, CRF, dialysis and Renal transplant patients, Addison's disease & Cushing syndrome.	Lectures Clinical rotations	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Facial Pain	Classify different types of headache, their diagnosis	Diagnose & differentiate between	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs

	and management using non-surgical methods.	Migraine, Cluster & Tension headaches, Giant cell arteritis.	Clinical rotations	<ul style="list-style-type: none"> • Viva
Trigeminal Neuralgia	Diagnose a patient with Trigeminal neuralgia and manage such a patient.	Diagnosis & medical management of Trigeminal neuralgia. Outline of surgical treatment methods.	Lectures Clinical rotations	<ul style="list-style-type: none"> • SAQ • MCQs • Viva • OSPE
Glossopharyngeal Neuralgia	Diagnose & manage a patient with Glossopharyngeal neuralgia	Diagnosis & medical management of GN.	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Facial Paralysis	<ul style="list-style-type: none"> • Differentiate between UMNL and LMNL on the basis of etiology • Manage facial palsy 	<ul style="list-style-type: none"> • Diagnose Facial (Bell's palsy) • Recognize Upper motor neuron & lower motor neuron lesions. • Explain their causes & advise management. 	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Temporomandibular disorders-TMDs	<ul style="list-style-type: none"> • Differentiate between TMPDS, Internal derangements, & Arthritis. • Advise appropriate management. Demonstrate diagnostic methods of TMDs, specially TMJ examination. 	<ul style="list-style-type: none"> • Explain anatomy of TMJ and disorders related to it. • Discuss the diagnostic modalities and brief treatment of such disorders. • Demonstrate diagnostic methods of TMDs, specially TMJ examination. 	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Immunity	Diagnose and manage hypersensitivity reactions that may show signs and symptoms in the oral cavity.	Autoimmunity, Hypersensitivity, Immunodeficiency, Drug allergies.	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs • Viva
Disorders of teeth	Recognize various syndromes that directly or indirectly affect facial hard tissues and teeth.	<ul style="list-style-type: none"> • Diagnose Hypodontia, variation in number size & shape of teeth. • Causes of Teeth attrition, erosion, abrasion. 	Lectures	<ul style="list-style-type: none"> • SAQ • MCQs • Viva

		<ul style="list-style-type: none"> Abnormalities of structure of Enamel & Dentine. 		
Osteochemonecrosis	Diagnose patients presenting with symptoms of osteochemonecrosis or osteoradionecrosis and management of such a patient.	Outline Oral manifestations, causes, & management of <ul style="list-style-type: none"> Osteoradionecrosis (ORN), Bisphosphonate ON of Jaws (BONJ). 	Lectures	<ul style="list-style-type: none"> SAQ MCQs Viva
Medical Emergencies	Manage medical emergencies in their clinical practices.	Diagnosis and Mx of all dental chairside emergencies.	Lectures Role play, clinical rotation	<ul style="list-style-type: none"> SAQ MCQ Viva OSCE
Clinical training				
a. Take detailed history of the patient b. Perform extra-oral and intra-oral examination <ol style="list-style-type: none"> Examination of lymph nodes Examination of cranial nerves Examination of temporo-mandibular joint Examination of muscles of mastication Examination of salivary glands Examination of hard and soft tissues of oral cavity (Tongue, Mucosa, Soft Palate, Hard Palate, Teeth, Alveolar bone Lingual & Pharyngeal tonsils. Major & Minor Salivary glands. c. Advise investigations d. Establish diagnosis e. Formulate appropriate treatment plan f. Recognize instruments used in medical emergency <ol style="list-style-type: none"> Endotracheal tube Guedel's airway Oxygen mask AMBU bag IV cannula Syringe Nasogastric Tube g. Justify uses of drugs prescribed to patients in a dental OPD <ol style="list-style-type: none"> Analgesics Steroids Adrenaline Nitroglycerine Anxiolytics Antibiotics 			In Dental clinics	OSCE

7) Glucagon		
8) Saltbutamol		

Recommended Books:

- Tyldesley's Oral Medicine, 5th Edition, by Anne Field & Lesley Longman.
- Oral and Maxillofacial Medicine, the Basis of Diagnosis and Treatment, 2nd Edition, by Crispian Scully.
- Medical Problems in Dentistry, 6th Edition, by Crispian Scully.
- A Clinical guide to Oral Medicine by P J Lamely & M A O Lewis.