Clinical Dentistry 01: Basic Diagnosis and Treatment Planning Module

3rd Year BDS

KMU (IHPER) - Dental Central Curriculum Committee

Teaching Hour Allocation

S. No	Subject	Hours
1.	Periodontology	10
2.	Oral Pathology	9
3.	Oral Medicine	3
4.	General Medicine	7
5.	General Surgery	8
6.	Operative Dentistry	3
7.	Prosthodontics	8
8.	Oral & Maxillofacial Surgery	4
Total		52

S#	Theme	Duration in Hours/Days/Weeks
1.	Normal & Its Deviation (Normal Vs Abnormal)	22 hrs
2.	Clinical approach to patient	30 hrs
Total		**52 hrs**

Learning Objectives

By the end of this Module, 3rd year BDS students will be able to:

1. Describe the structure and normal functions of oral mucosa and epithelium.
2. Identify the cellular components of oral epithelium and explain their roles.
3. Define oral medicine and explain its scope in dental practice.
4. Classify the infections and conditions of oral cavity.
5. Explain the importance of consent taking before history taking and examination.
6. Outline the steps and importance of detailed history taking.
7. Characterize chief complaint (Pain, Swelling, or Ulcer) using Open-Ended Questions
8. Explain the principles and sequence of extra oral and intraoral examination.
9. Explain the Red flag signs and referral criteria.
10. Elicit a complete patient history.
11. Describe the parts and functions of a microscope.
12. Identify the abnormal histopathological structures. (deviation from normal)
13. Demonstrate slide set up on the microscope for histopathology evaluation.
14. Apply infection control and prophylactic measures for patients with systemic illnesses.
15. Describe diverse anatomical features of periodontium.
16. Describe physiology of saliva and Gingival crevicular fluid.
17. Describe the function of JE & role of salivary antibodies.
18. Discuss Radiographic aid in periodontal diagnosis.

Theme 1: Normal Vs Abnormal		
Topic	**Hours**	**Learning Objectives**
Oral Pathology		
Review of normal histology & Basic pathological terms.	**1**	1. Define normal oral mucosa. 2. Describe normal blood cells in peripheral film. 3. Identify normal bone, cartilage & tooth structure under the microscope 4. Define basic pathological terms with examples. 5. Differentiate among the basic pathological terms.
General Medicine		
Introduction to General Medicine	1	6. Discuss subject of General Medicine and its scope in dentistry 7. Describe the normal ranges and physiological basis of vital signs (temperature, pulse, respiratory rate, blood pressure, oxygen saturation). 8. Explain the clinical significance of deviations in vital signs (e.g., tachycardia, fever, tachypnea, and hypotension).
General Surgery		
Normal homeostasis vs response to injury	**1**	9. Define homeostasis. 10. Explain the mediators of the metabolic response to injury (surgery) 11. Explain the key catabolic elements of the metabolic/surgical stress response 12. Explain the concept and components of ERAS.
Wounds and Ulcers	1	13. Describe normal wound healing after surgery. 14. Explain the factors influencing the healing of a wound. 15. Differentiate between healing by primary, secondary and tertiary intention. 16. Define scars and contractures. Differentiate between hypertrophic scars and keloids. Explain their management. 17. Differentiate between tidy & untidy wounds. Explain the management for each. 18. Differentiate between acute and chronic wound. 19. Describe the management of an acute wound.
Sepsis & Asepsis: The principals involved	2	20. Classify surgical site infections (SSIs). Describe their clinical presentation. 21. Describe the classification of wounds based on surgical site infections. 22. Differentiate between bacteremia, SIRS and sepsis & their implication in a surgical patient. 23. Explain the principles of prevention of surgical site infections.

		24. Describe the etiology, pathogenesis and management of surgically important infections and infestations
Periodontology		
Healthy Periodontium	2	25. Describe diverse anatomical features of periodontium. 26. Describe physiology of saliva and gingival crevicular fluid. 27. Explain the protective role of gingiva. 28. Describe blood supply, nerve supply and lymphatic drainage of periodontium of each tooth.
Classification Of Periodontal Diseases	2	29. Define periodontal health and disease, recognizing the continuum from health to disease. 30. Explain the differences between the 2018 classification of periodontal and peri-implant diseases and the 1999 AAP classification. 31. Classify periodontal diseases into: 32. Periodontal health and gingival health 33. Gingivitis 34. Periodontitis 35. Other conditions affecting the periodontium (e.g., systemic diseases, developmental conditions) 36. Stage periodontitis based on severity and extent, and grade based on progression rate and risk factors. 37. Enumerate and manage risk factors for periodontal diseases, including systemic factors and local factors. 38. Classify peri-implant diseases, including: • Peri-implant health • Peri-implant mucositis • Peri-implantitis
Defense mechanism of Gingiva	1	39. Describe the function of JE & role of salivary antibodies.
Aetiology of periodontal diseases	**2**	40. Define Plaque. 41. Describe composition, chemical and microbial structure of Plaque. 42. Recall role of plaque accumulation in aetiology of periodontal disease. 43. Define calculus, formation, types & role as plaque retaining factors.
Prosthodontics		
Partial Edentulism: RPDs	1	44. Define key terminologies used in RPD 45. Differentiate tooth-supported vs. tooth-tissue supported RPDs. 46. Discuss the role of retention, support, and stability in RPD success.
OMFS		

Clinical Actions of specific local anesthetic agents	**1**	47. Enlist commonly used anesthetic solutions in dentistry (e.g., Lidocaine, Articaine, Bupivacaine, Prilocaine, Mepivacaine). 48. Compare onset, duration, potency, and toxicity of these agents. 49. Select appropriate agents based on clinical needs (short vs. long procedures). 50. Calculate maximum recommended doses and adjust according to patient weight/age. 51. Discuss precautions in special populations (pregnant, cardiac, pediatric, geriatric patients)
Operative Dentistry		
Normal Vs Abnormal	1	52. Differentiate normal anatomy & morphology of the tooth structure and abnormal findings (caries, discoloration) on clinical examination.
Lab Work		
Oral Pathology		
Microscope	2	53. Describe the parts and functions of a microscope. 54. Enumerate the other devices of magnification 55. Demonstrate slide set up on the microscope for histopathology evaluation.
General history and examination form	2	56. Record basic medical and dental history
Infection Control in oral pathology diagnostic laboratory.	2	57. Describe standard precautions, post exposure prevention, post exposure prophylaxis, management and work-related restriction as advised by CDC. 58. Demonstrate optimum infection control in oral pathology diagnostic laboratory.
Theme 2: Clinical approach to patient		
Oral Medicine		
Principles of oral Medicine: Consent, Principles of patient management Laboratory investigation Management plan and referral.	1	59. Define oral medicine. 60. Discuss the scope and practice of oral medicine. 61. Define consent in dental practice. 62. Enumerate different types of consent (e.g., informed, implied, express). 63. Discuss the steps required to form a diagnosis and management plan in oral medicine • History • Examination • Laboratory investigations • Imaging • Diagnosis (provisional/definitive) • Management plan

		64. Discuss in detail the lab investigations used in dental practice, and discuss their importance (CBC, culture and sensitivity, etc.) 65. Explain the referral criteria in dentistry. 66. Explain the principles of therapy.
Patient assessment: History Examination	1	67. Discuss in detail the components of history for a dental patient and its importance 68. Discuss general and specific extra- and intra oral examination and its importance
Imaging techniques	1	69. Discuss the different types of imaging techniques used in dentistry, their terminology, benefits, indications, and contraindications. • Periapical radiograph • Occlusal view • Bitewing • Lateral ceph • OPG • CT scan • CBCT • MRI • Ultrasound
General Surgery		
Surgical Informed Consent	1	70. Define consent taking in surgical practice. 71. Explain the types and components of surgical informed consent
Perioperative & Post Operative Care	1	72. Discuss the immediate postoperative complications (nausea, vomiting, pain) and their management. 73. Identify perioperative risk factors (e.g., diabetes, bleeding disorders) and tailor surgical treatment according to guidelines.
Principles of Anesthesia.	2	74. Discuss the principles of anesthesia 75. List the various types of Anesthesia 76. Discuss the indications and contraindications of anesthesia in surgery 77. Discuss the pathophysiology and the management of pain in the surgical patient
General Medicine		
Principles of History taking Counselling & Communication	1	78. Describe the purpose and importance of thorough history taking in medical diagnosis and patient care. 79. Enumerate the key components of a complete medical history: presenting complaint, history of

		presenting illness, past medical and surgical history, drug and allergy history, family and social history, and systemic review. 80. Discuss the importance of effective communication, empathy, and confidentiality during history taking. 81. Explain the principles of effective patient counselling— empathy, active listening, clarity, honesty, and shared decision-making. 82. Discuss the ability to communicate diagnosis, treatment plans, prognosis and breaking bad news in an understandable and sensitive manner. 83. Explain the importance of patient education and informed consent in medical management.
Symptomalogy	1	84. Discuss common medical symptoms such as fever, cough, chest pain, dyspnea, edema, jaundice, cyanosis, and fatigue. 85. Correlate specific symptom patterns with likely underlying diseases. 86. Formulate a differential diagnosis based on presenting symptoms and clinical context. 87. Explain the red flag symptoms that require urgent evaluation or intervention.
Medical Conditions	1	88. List common systemic diseases encountered in general medicine, including Diabetes Mellitus, Hypertension. 89. Enlist important points in history taking about common medical conditions. 90. Discuss appropriate drug history and the impact of these drugs in clinical practice. 91. Explain the impact of comorbidities on diagnosis, treatment, and prognosis.
Clinical signs	1	92. Describe the principles and purpose of general physical examination. 93. Explain the proper scheme of taking vital signs and GPE 94. Discuss the abnormalities in vital signs and GPE
Investigations in medicine	1	95. Discuss appropriate general investigations based on history and physical findings.

		96. Describe the role of general/basic investigations in diagnosis and monitoring of disease. 97. Describe common labs (Blood CP, blood sugars, RFTS, Electrolytes, Urine R/E, and LFTs) with their significance. 98. Interpret common lab investigations (Blood CP, blood sugars, RFTS, Electrolytes, Urine R/E, and LFTs) 99. Explain abnormal values and correlate with systemic illness.
Management levels in medicine	1	100. Describe the concept of evidence-based medicine and standard treatment protocols. 101. Explain the role of lifestyle modification, patient education, and preventive strategies in treatment.
Periodontology		
Clinical Diagnosis and Treatment planning	2	102. Categorize treatment plans according to phases of periodontal therapy following correct sequence of therapies. 103. Outline clearly and succinctly the impact of proposed treatment on quality of life to the patient. 104. Discuss possible and probable outcomes of treatment options as well as the need for future supportive care, prevention and maintenance.
Determination of Prognosis	1	105. Discuss types of prognosis and factors involved in determination of prognosis 106. Discuss treatment plan considering prognosis considering examination, diagnosis, risks involved and Clinical findings
Prosthodontics		
Considerations for Managing Tooth Loss	1	107. Discuss the indications and contraindications for removable partial denture provision 108. Discuss different types of removable partial dentures. 109. Identify the main components of cast partial denture.
Classification of Partially Edentulous Arches (Lecture)	1	110. Describe partially edentulous arches using Kennedy's Classification. 111. Discuss Applegate's rules in classification. 112. Compare different classifications and justify their clinical relevance.
Surveying	2	113. Define the dental surveyor and its primary role in removable prosthodontics. 114. Discuss the key components of a dental surveyor List the three main types of surveyors (Ney, Jelenko, Williams) and state their basic differences. 115. Explain the fundamental purposes of surveying

		116. Define key terminologies: path of insertion, path of dislodgement, guide plane, height of contour, survey line, undercut, tripodization.
Diagnosis and Treatment Planning	1	117. Describe the role of history taking and examination in diagnosis. 118. Enlist steps in treatment planning for partially edentulous patients.
Preparation of the Mouth for Removable Partial Dentures	2	119. Differentiate between surgical and non-surgical pre-prosthetic procedures. 120. Explain the selection of suitable mouth preparations for successful RPD fabrication.
OMFS		
Preoperative Health Status Evaluation	2	121. Outline the essential elements of a comprehensive history. 122. Discuss a systematic approach to patient health status evaluation including chief complaint, history of present illness, and past medical, dental, and social histories. 123. Explain red flag symptoms in maxillofacial history (e.g., trismus, paresthesia, progressive swelling). 124. Differentiate between pain characteristics related to odontogenic and non-odontogenic causes. 125. Explain the relevance of systemic diseases, medications, and allergies in surgical patient assessment. 126. Describe significance of extra oral and intraoral examination to reach a diagnosis. 127. Define the purpose and principles of investigations in oral and maxillofacial surgical practice. 128. Differentiate between general i.e. baseline and specific i.e., diagnostic or confirmatory investigations. 129. List common general & specific investigations to reach definitive diagnosis.
Radiography	1	130. Define plain radiography and its role in the diagnostic process in oral and maxillofacial surgery. 131. Explain the indications, advantages, and limitations of: • Intraoral periapical radiograph (IOPA) • Occlusal radiograph • Orthopantomogram OPG
Oral Pathology		
Fundamentals of histopathological evaluation.	1	132. Describe tissue processing for histopathological evaluation. 133. Explain tissue embedding and section cutting on a microtome and slide preparation and staining. 134. Define Biopsy 135. Enumerate indications of biopsy

Diagnostic imaging relevant to dentistry.	1	136. Enlist uses of Ultra sound in dentistry. 137. Enlist indication, and contraindication of CT scan. 138. Define CBCT. 139. Enlist indication of CBCT.
Operative Dentistry		
Radiography	2	140. Identify the normal structures visible on periapical radiograph. 141. Differentiate about Normal vs abnormal periapical findings (apices, roots, periapical pathology, endodontics) 142. Describe the indication and use of periapical xray in operative & endodontics. 143. Describe the guidelines for prescribing periapical and bitewing xray 144. Enumerate the indications of bitewing xrays

Learning Resources	
Oral Pathology	1. Oral and Maxillofacial Pathology, 3rd Edition by: Brad Neville, Douglas D. Damm, Carl M. Allen, & Jerry Bouquot. 2. Cawson's Essentials of Oral Pathology and Oral Medicine (2008), edition 8, ISBN: 978-0443101250. 3. Oral radiology- Principles and Interpretation. 6th edition By: White and Pharoah. 4. Oral Diagnosis, Oral Medicine and Treatment Planning (2001), edition 2, ISBN: 978-1550092066 5. Color Atlas of Oral Diseases, Clinical and Pathologic Correlations. By Cawson RA, Binnie WH and Eveson JW.Second Edition, 1995.
Oral Medicine	1. Tyldesley's Oral Medicine 2. Cawson's Essentials of Oral Pathology and Oral Medicine 3. Oral Medicine by Lester W. Burket 4. Clinical Oral Medicine by Crispian Scully
General Medicine	1. Davidson's Principles and Practice of Medicine 2. Macleod's Clinical Examination 3. Hutchison's Clinical Methods
General Surgery	1. Bailey & Love Short Practice of surgery 27th edition 2. Norman Browse Introduction to the Symptoms & Signs of Surgical Disease 5th edition 3. Kirk's General Surgical Operations 7th edition
Periodontology	1. Carranza book of clinical periodontology, Edition (12th, 13th, 14th) 2. Clinical periodontology and implantology by Jan Lindhe Edition (7th,8th)

	3. Color Atlas of periodontology by J.D Strahan & I.M.Wate 4. Fundamental of Periodontics by T.G. Wilson. JR 5. Text book of periodontology and Oral Implantology by Nayak, Upoor and Mahesh CP 2nd Edition
Prosthodontics	1. Carr AB, Brown DT. McCracken's Removable Partial Prosthodontics. 15th ed. Philadelphia: Elsevier; 2020. 2. Winstanley RB. A colour atlas of removable partial dentures: JC Davenport, RM Basker, JR Heath and JP Ralph. Pp. 199. 1987. London
Oral & Maxillofacial Surgery	1. Handbook of Local Anaesthesia. Stanely F. Malamed. Fifth edition 2. Contemporary Oral & Maxillofacial Surgery. James R Hupp, Edward Elis III, Myron R Tucker