


Program specific learning outcome

S.No	Subject	Specific Competencies	Steps taken to attain the specific competencies
1	Anatomy	<ul style="list-style-type: none"> • To acquire knowledge about structural components of the body (macroscopic and microscopic) and correlate it normal body functions. • To emphasize development and developmental anomalies of oral, dental and maxillofacial structures 	<ul style="list-style-type: none"> • Dissection of human cadavers • Study of preserved specimens • demonstrations
2	Physiology	<ul style="list-style-type: none"> • To acquire adequate knowledge and skill to perform physiology laboratory tests. • To interpret these normal functions with a view to differentiate from abnormal functions • To demonstrate the knowledge and understanding of biomolecules 	<ul style="list-style-type: none"> • Estimation of Hb concentration. • Determination of differential count of white blood cell(WBC). • Determination of bleeding time & clotting time. • Determination of blood grouping & cross matching. • Determination of Erythrocyte Sedimentation Rate (ESR). <p>OSPE: Recording BP by palpatory and auscultatory method Examination of radial pulse</p>
3	Biochemistry	<ul style="list-style-type: none"> • To apply the knowledge and understanding of biochemistry in dentistry . • To demonstrate the knowledge and understanding of biomolecules forming the structure of the human body, their functions and role in health and disease. • To learn the normal biochemical values in conventional and SI. Units. 	<ul style="list-style-type: none"> • To Estimate blood glucose • To Estimate abnormal constituents of urine(sugar, protein & ketonebodies) and their clinical significance


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		<ul style="list-style-type: none"> • To diagnose diabetes 	
4	Dental Anatomy, Embryology And Oral Histology	<ul style="list-style-type: none"> • To identify different teeth in different dentition . • To explain any tooth by its morphology . • To acquire the clinical importance of teeth and oral tissues. • To mention the histological structures of tooth and associated oral structures . To differentiate between normal and pathological state of oral structures. • To Outline the development of maxillae, mandible, palate, tongue and lips. • Able to understand the age changes of normal oral structures e Able to learn the chronology and pattern of tooth eruption and its clinical significance . • To learn the physiologic process of tooth development. • To learn in detail the formation of enamel, dentine, cementum, pulp, periodontal ligament, salivary glands and Temporomandibular joint. • To learn the mechanisms and theories of tooth eruption 	<ul style="list-style-type: none"> • Wax carving of permanent tooth • Microscopic examination and study of dental and oral structures, salivary glands
5	General Pathology	<ul style="list-style-type: none"> • To learn about the causes & pathogenesis of diseases . • To demonstrate the knowledge and understanding of general pathological and preventive knowledge about diseases. • To apply pathological knowledge in practising dental surgery to improve the oral and dental health 	<ul style="list-style-type: none"> • Test for abnormal constituents of urine like sugar, albumin, ketone bodies . • Demonstration of specimens. OSPE: • Hematological investigation - total and differential count.
6	Microbiology	<ul style="list-style-type: none"> • To have knowledge & 	<ul style="list-style-type: none"> • To study different


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		<p>understanding about sterilization, asepsis and infection prevention.</p> <ul style="list-style-type: none"> To learn about the characteristics of different types of disease-causing microorganisms 	<p>types and parts of microscope OSPE:</p> <ul style="list-style-type: none"> Gram staining o Biomedical waste segregation Handwashing technique
7	General Pharmacology	<ul style="list-style-type: none"> Describe indications, contraindications and side effects of medicines related to dental practice. To manage dental pain. To learn about the proper use of local anesthetic agents . To preserve drugs for common dental problems o To learn therapeutic decision making . To write rational prescription 	<ul style="list-style-type: none"> OSPE: Preparation of tooth powder Preparation of tooth paste Prescription
8	Dental Materials	<ul style="list-style-type: none"> To have knowledge about physical and chemical properties of dental materials . A student must learn to manipulate dental materials to be used in clinical practice 	<ul style="list-style-type: none"> Making of impression with impression compound Manipulation of gypsum products Manipulation of dental cements
9	Pre-clinical Conservative Dentistry	<ul style="list-style-type: none"> To develop skills in cavity preparation and restorative procedure. To develop skills in the manipulation of dental materials used in conservative dentistry 	<ul style="list-style-type: none"> Cavity preparation in plaster models. Cavity preparation and restoration in phantom models
10	Pre-clinical Prosthodontics and crown and Bridge	<ul style="list-style-type: none"> To develop skills for fabrication of complete dentures and removable partial dentures. To develop skills in manipulation of various impression materials for clinical practice 	<ul style="list-style-type: none"> Preparation of special trays Preparation of occlusal rims and teeth setting in articulator
11	General Medicine	<ul style="list-style-type: none"> The student should be able to perform general physical examination and look for anaemia, cyanosis, 	<ul style="list-style-type: none"> Patient examination and case presentation . Case discussions of diagnosis of various


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		<p>clubbing, jaundice and to record vital signs- pulse, BP, temperature.</p> <ul style="list-style-type: none"> • To know history taking from the patient and writing • To diagnose various systemic diseases from history and physical findings • Interpret and correlate physical findings with investigations like x-rays, hematology, urine and stool examination • to learn intramuscular and intravenous injections • prescription writing 	<p>systemic diseases and investigations.</p>
12	General Surgery	<ul style="list-style-type: none"> • To identify the common surgical problems, consider the differential diagnosis and complications • The student must be able to learn and mention benign and malignant tumors of soft and hard tissue of head and neck • To be able to perform minor surgical procedures like incision and drainage of abscess • To take biopsy under local anaesthesia • Understanding about personal and patient safety in OPD and OT through proper asepsis and infection prevention • Knowledge and management of shock and appropriate referral in potential emergency situations during dental procedures. 	<p>OSCE:</p> <ul style="list-style-type: none"> • Patient care diagnosis and treatment planning • Case discussions
13	Oral Pathology and Oral Microbiology	<ul style="list-style-type: none"> • To learn the oral manifestations of systemic diseases . • To learn the etiology, clinical features, radiographic and histopathological features of 	<ul style="list-style-type: none"> • Microscopic examination of histopathologic slides, . Demonstration of specimens

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		<p>common developmental disturbances of teeth and jaws</p> <ul style="list-style-type: none"> • To acquire knowledge about clinical and histopathologic features of odontogenic, non-odontogenic and salivary gland tumors • basic knowledge about biopsy and frozen section in diagnosis of oral disease 	Demonstration of models
14	Oral Medicine and Radiology	<ul style="list-style-type: none"> • Knowledge about red and white lesions of oral cavity. • To know about clinical features and laboratory investigations for common infective and non-infective ulcers of the oral cavity • Knowledge about radiations safety, hazards. • Must be able to take and interpret intraoral radiographs. • Knowledge about clinical features and pathogenesis of vesiculobullous lesions of oral mucosa 	<ul style="list-style-type: none"> • Oral cavity examination with detailed recording of case history • Taking of intraoral periapical radiographs and its interpretation
15	Conservative Dentistry and Endodontics	<ul style="list-style-type: none"> • To be able to diagnose all types of carious lesions . • To prepare class I and class II cavities and restore with amalgam . • Competent to carry out small composite restorations . • To understand the principles of aesthetic dental procedures . • The student should learn about patient assessment and diagnostic procedures for endodontic therapy . • Able to perform RCT for anterior teeth 	<ul style="list-style-type: none"> • Class I and class II amalgam restorations • Composite restorations • Deep caries management • Endodontic procedures of anterior teeth
16	Oral and Maxillofacial Surgery	<ul style="list-style-type: none"> • Able to diagnose, manage and treat patients with oral surgical problems . Understand and practice the basic principles of 	<ul style="list-style-type: none"> • Extraction of teeth under local anaesthesia • Assisting surgical procedures .


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		<ul style="list-style-type: none"> sterilization Should be competent in the extraction of teeth Able to provide primary care and manage medical emergencies in dental office . Have a broad knowledge of maxillofacial surgery and oral implantology Should be familiar with legal, ethical and moral issues pertaining to the patient care and communication skills 	<ul style="list-style-type: none"> Patient history taking . Case discussions
17	Orthodontics and Dentofacial Orthopaedics	<ul style="list-style-type: none"> To understand about the normal growth and development of facial skeleton and dentition To diagnose different types of malocclusion To manage and treat simple malocclusion like anterior spacing using removable appliances . Treatment planning and execution of preventive and interceptive orthodontic 	<ul style="list-style-type: none"> C-ephalometric tracing Orthodontic wire bending Fabrication of simple orthodontic appliances
18	Paediatric and Preventive Dentistry	<ul style="list-style-type: none"> Knowledge about management of dental diseases in children Able to manage physically and mentally disabled children efficiently according to their treatment needs . Able to guide and counsel the parents about the various paediatric dental treatment modalities available . To understand the principles of prevention and preventive dentistry in children 	<ul style="list-style-type: none"> Scaling and restorative procedures Case history
19	Periodontology	<ul style="list-style-type: none"> To diagnose and manage common periodontal diseases To learn the basic principles of periodontal instrumentation 	<ul style="list-style-type: none"> Case history and case discussion Assisting surgical procedures Oral prophylaxis


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		<p>and perform it</p> <ul style="list-style-type: none"> • Identification of periodontal instruments To perform scaling and root planning with full aseptic precautions • To provide oral hygiene instructions to patients • To learn appropriate investigations to diagnose periodontal diseases • To have an understanding of prevention of periodontal diseases • Must be able to furnish initial treatment plan and treat gingivitis and periodontitis cases • To be able to perform minor surgical procedures like abscess drainage, operculectomy etc. 	
20	Prosthodontics and Crown and Bridge	<ul style="list-style-type: none"> • Competent to carry out conventional complete and partial removable dentures, fixed partial dentures • Able to understand and use various dental materials . • Competent to carry out routine prosthodontic procedures 	<ul style="list-style-type: none"> • Fabrication of removable and fixed partial dentures • Fabrication of complete dentures
21	Public Health Dentistry	<ul style="list-style-type: none"> • Apply the Principles of health promotion and disease prevention • To have knowledge about provision of community dental health care . • To have community based preventive measures . • To administer oral hygiene instructions, topical fluoride therapy, pit and sealant application 	<ul style="list-style-type: none"> • Conducting Dental health education campaigns • Recording of Indices . • Prevention dental restorative procedures


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