



KARPAGA VINAYAGA INSTITUTE OF DENTAL SCIENCES

GST Road, Chinna Kolambakkam, Padalam (po), Chengalpattu (dt)
Madhuranthagam(tk), Tamilnadu 603 308

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 cadaversStudy of preserved specimensdemonstrations
2.	Physiology	<ul style="list-style-type: none">To acquire adequate knowledge and develop skill to perform physiology laboratory tests.To interpret these normal functions with a view to differentiate from abnormal functionsTo 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).OSPE: Recording BP by palpatory and auscultatory method Examination of radial pulse
3.	Biochemistry	<ul style="list-style-type: none">To apply the knowledge and understanding of	<ul style="list-style-type: none">To Estimate blood glucose



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		<p>biochemistry in dentistry</p> <ul style="list-style-type: none"> 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 To diagnose diabetes. 	<ul style="list-style-type: none"> To Estimate abnormal constituents of urine(sugar, protein & ketone bodies) and their clinical significance
4.	<p>Dental Anatomy, Embryology And Oral Histology</p>	<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 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, 	<ul style="list-style-type: none"> Wax carving of permanent tooth Microscopic examination and study of dental and oral structures, salivary glands



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		<p>dentine, cementum, pulp, periodontal ligament, salivary glands and Temporo-mandibular joint.</p> <ul style="list-style-type: none"> To learn the mechanisms and theories of tooth eruption 	
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. <p>OSPE:</p> <ul style="list-style-type: none"> Hematological investigation – total and differential count
6	Microbiology	<ul style="list-style-type: none"> To have knowledge & understanding about sterilization, asepsis and infection prevention To learn about the characteristics of different types of disease causing microorganisms 	<ul style="list-style-type: none"> To study different types and parts of microscope <p>OSPE:</p> <ul style="list-style-type: none"> Gram staining 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 	<p>OSPE:</p> <ul style="list-style-type: none"> Preparation of tooth powder Preparation of tooth paste Writing



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		<p>use of local anaesthetic agents</p> <ul style="list-style-type: none"> To prescribe drugs for common dental problems To learn therapeutic decision making To write rational prescription 	<p>prescription</p>
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 procedures 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 & Crown & 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, clubbing, jaundice and to record vital signs- pulse, BP, temperature. To know history taking from the patient and writing To diagnose various 	<ul style="list-style-type: none"> Patient examination and case presentation Case discussions of diagnosis of various systemic diseases and investigations.



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		<p>systemic diseases from history and physical findings</p> <ul style="list-style-type: none"> • Interpret and correlate physical findings with investigations like x-ray, hematology, urine and stool examination • To learn intramuscular and intravenous injections • Prescription writing 	
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> <p>Patient care- diagnosis and treatment planning</p> <p>Case discussions</p>
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, 	<ul style="list-style-type: none"> • Microscopic examination of histopathologic slides, • Demonstration of



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		<p>radiographic and histopathological features of 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 tumours Basic knowledge about biopsy and frozen section in diagnosis of oral disease 	<p>specimens</p> <ul style="list-style-type: none"> 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 radiation 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 	<ul style="list-style-type: none"> Class I and class II amalgam restorations Composite restorations Deep caries management Endodontic procedures of anterior teeth



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		<p>and diagnostic procedures for endodontic therapy</p> <ul style="list-style-type: none"> • Able to perform RCT for 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 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"> • Extraction of teeth under local anaesthesia • Assisting surgical procedures • 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 orthodontics 	<ul style="list-style-type: none"> • Cephalometric 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 	<ul style="list-style-type: none"> • Scaling and restorative procedures • Case history



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		<p>children efficiently according to their treatment needs</p> <ul style="list-style-type: none"> • 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 	taking
19	Periodontology	<ul style="list-style-type: none"> • To diagnose and manage common periodontal diseases • To learn the basic principles of periodontal instrumentation and perform it • 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. 	<ul style="list-style-type: none"> • Case history and case discussion • Assisting surgical procedures • Oral prophylaxis



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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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