

8.1.8 LIST AND STEPS TAKEN BY THE COLLEGE TO MEASURE ATTAINMENT OF SPECIFIC COMPETENCIES BY THE BDS STUDENTS/INTERNS STATED IN THE UNDERGRADUATE CURRICULUM DURING THE LAST FIVE YEARS

S.No	Subject	Specific Competencies	Steps taken to attain the specific competencies
1.	Anatomy	 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 	 Dissection of human cadavers Study of preserved specimens Demonstrations
2.	Physiology	 To acquire adequate knowledge and develop 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 	 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.	Biochemist ry	 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 Sl. Units To diagnose diabetes. 	 To Estimate blood glucose To Estimate abnormal constituents of urine(sugar, protein & ketone bodies) and their clinical significance
4.	Dental Anatomy, Embryolog y And Oral Histology	 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 	 Wax carving of permanent tooth Microscopic examination and study of dental and oral structures, salivary glands



5		 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, dentine, cementum, pulp, periodontal ligament, salivary glands and Temporo- mandibular joint. To learn the mechanisms and theories of tooth eruption 	
5	General Pathology	 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 	 Test for abnormal constituents of urine like sugar, albumin, ketone bodies Demonstration of specimens. OSPE: Hematological investigation – total and differential count
6	Microbiolo gy	• To have knowledge & understanding about	• To study different types and parts of



		 sterilization, asepsis and infection prevention To learn about the characteristics of different types of disease causing microorganisms 	 microscope OSPE: Gram staining Biomedical waste segregration Handwashin g technique
7	General Pharmacol ogy	 Describe indications, contraindications and side effects of medicines related to dental practice. To manage dental pain To learn about the proper use of local anaesthetic agents To prescribe drugs for common dental problems To learn therapeutic decision making To write rational prescription 	 OSPE: Preparation of tooth powder Preparation of tooth paste Writing prescription
8	Dental materials	 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 	 Making of impression with impression compound Manipulation of gypsum products Manipulation of dental cements



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9	Pre- clinical Conservati ve Dentistry	 To develop skills in cavity preparation and restorative procedures To develop skills in the manipulation of dental materials used in conservative dentistry 	 Cavity preparation in plaster models Cavity preparation and restoration in phantom models
10	Pre- clinical Prosthodo ntics	 To develop skills for fabrication of complete dentures and 	 Preparation of special trays Preparation of
	& Crown &Bridge	 removable partial dentures To develop skills in manipulation of various impression materials for clinical practice 	occlusal rims and teeth setting in articulator



11	General Medicine	 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 systemic diseases from history and physical findings Interpret and correlate physical findings with investigations like x- ray, hematology, urine and stool examination To learn intramuscular and intravenous injections Prescription writing 	 Patient examination and case presentation Case discussions of diagnosis of various systemic diseases and investigations.
12	General Surgery	 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 	OSCE: Patient care- diagnosis and treatment planning Case discussions



		 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. 	
13	Oral Pathology and Oral Microbiolo gy	 To learn the oral manifestations of systemic diseases To learn the etiology, clinical features, radiographic and histopathological features of common developmental disturbances of teeth and jaws 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 	 Microscopic examination of histopathologic slides, Demonstration of specimens Demonstration of models
14	Oral Medicine and Radiology	 Knowledge about red and white lesions of oral cavity To know about clinical 	• Oral cavity examination with detailed recording of case history



		 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 	•	Taking of intraoral periapical radiographs and its interpretation
15	Conservati ve Dentistry and Endodonti cs	 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 	•	Class I and class II amalgam restorations Composite restorations Deep caries management Endodontic procedures of anterior teeth
16	Oral and Maxillofaci al Surgery	 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 	•	Extraction of teeth under local anaesthesia Assisting surgical procedures Patient history taking Case discussions



		 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 	
17	Orthodonti cs and Dentofacia l Orthopaed ics	 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 	 Cephalometric tracing Orthodontic wire bending Fabrication of simple orthodontic appliances
18	Paediatric and Preventive Dentistry	 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 	 Scaling and restorative procedures Case history taking



		• To understand the principles of prevention and preventive dentistry in children	
19 Peri logy	odonto	 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. 	 Case history and case discussion Assisting surgical procedures Oral prophylaxis
20 Pros ntics Cro	sthodo s and wn ^a	 Competent to carry out conventional complete and partial removable 	 Fabrication of removable and fixed partial



and Brid	 ge dentures, fixed partial dentures Able to understand and use various dental materials Competent to carry out routine prosthodontic procedures 	 Dentures Fabrication of complete dentures
21 Public Health Dentistr	 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 	 Conducting Dental health education campaigns Recording of Indices Prevention dental restorative procedures

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