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AL-AZHAR DENTAL COLLEGE

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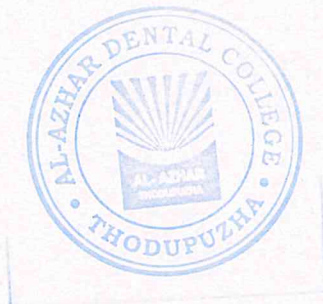
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2.6.1 The Institution has stated the learning outcomes (generic and program-specific) and graduate attributes as per the provisions of the Regulatory bodies and the University; which are communicated to the students and teachers through the website and other documents

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DR. HARVEY THOMAS M.D.S.

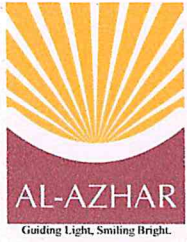
PRINCIPAL

TO WHOMSOEVER IT MAY CONCERN

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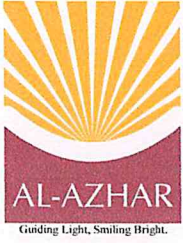
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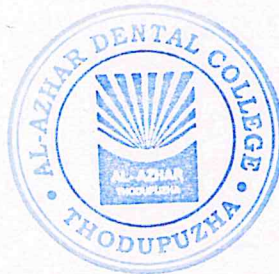
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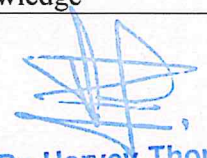
PROGRAMME WISE LEARNING OUTCOME

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Course	Subject	Course Outcome
First year BDS	General human anatomy including embryology & histology	a) Knowledge and understanding
		1) Know the normal disposition of the structures in the body while clinically examining a patient and while conducting clinical procedures. 2) Know the anatomical basis of disease and injury. 3) Know the microscopic structure of the various tissues, a pre-requisite for understanding of the disease processes. 4) Know the nervous system to locate the site of lesions according to the sensory and or motor deficits encountered. 5) Have an idea about the basis of abnormal development, critical stages of development, effects of teratogens, genetic mutations and environmental hazards. 6) Know the sectional anatomy of head neck and brain to read the features in radiographs and pictures taken by modern imaging techniques. 7) Know the anatomy of cardio-pulmonary resuscitation.
		a) skills
		1) To locate various structures of the body and to mark the topography of the living anatomy. 2) To identify various tissues under microscope. 3) To identify the features in radiographs and modern imaging techniques. 4) To detect various congenital abnormalities.
	General human physiology	a) Knowledge
		1) Explain the normal functioning of all the organ systems and their interactions for well-co-ordinated total body function. 2) Assess the relative contribution of each organ system towards the maintenance of the milieu interior. 3) List the physiological principles underlying the pathogenesis and treatment of disease.
		b) Skills
		1) Conduct experiments designed for the study of physiological phenomena. 2) Interpret experimental and investigative data 3) Distinguish between normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory.
	Biochemistry	a) Knowledge




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		<p>1)Crisp knowledge on the biochemical basis of the life processes relevant to the human system and to dental/medical practice.</p> <p>2)Information on the functional groups, hydrophobic and hydrophilic moieties and weak valence forces that organise macromolecules.</p> <p>3) Discussion on metabolic processes should put emphasis on the overall change, interdependence and molecular turnover.</p> <p>4)Introduction to biochemical genetics and molecular biology</p> <p>5)Exposure to antivitamins, antimetabolites and enzyme inhibitors</p> <p>6) An overview of metabolic regulation including hormonal action, second messengers and regulation of enzyme activities.</p>
		b) Skills
		<p>1)analyse and interpret investigative data</p> <p>2) demonstrate the skills of solving scientific and clinical problems and decision making in dentistry.</p> <p>3) understand biochemical basis of health and diseases</p> <p>4)integrate molecular events with structure and function of human body</p>
	Dental anatomy, embryology & oral histology	a) Knowledge
		<p>1)Appreciate the normal development, morphology, structure & functions of oral tissues & variations in different pathological/non-pathological states.</p> <p>2) The student should understand the histological basis of various dental treatment procedures and physiologic ageing process in the dental tissues.</p> <p>3)The students must know the basic knowledge of various research methodologies</p>
		b)Skills
		<p>1)Carving of crowns of permanent teeth in wax.</p> <p>2)Microscopic study of Oral tissues.</p> <p>3)Identification of Deciduous & Permanent teeth</p> <p>4) Age estimation by patterns of teeth eruption from plaster casts of different age groups.</p>
Second year BDS	General pathology	a) Knowledge
		<p>1)To demonstrate and analyse pathological changes macroscopically explain their observations in terms of disease processes.</p> <p>2)To integrate knowledge from the basic sciences, clinical medicine and dentistry in the study of Pathology.</p>




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		<p>3)To demonstrate understanding of the capabilities and limitations of morphological Pathology in its contribution to medicine, dentistry and biological research.</p> <p>4)To demonstrate ability to consult resource materials outside lectures, laboratory and tutorial classes</p>
		b) Skill
		Apply the scientific study of disease processes, which result in morphological and functional alterations in cells, tissues and organs to the study of pathology and the practice of dentistry
	General microbiology	a) Knowledge
		<p>1)Understand the basics of various branches of microbiology and able to apply the knowledge relevantly. 2) Apply the knowledge gained in related medical subjects like General Medicine and General Surgery and Dental subjects like Oral Pathology, Public Health Dentistry, Periodontics, Oral Surgery, Pedodontics, Conservative Dentistry and Oral medicine in higher classes.</p> <p>3)Understand and practice various methods of Sterilisation and disinfection in dental clinics.</p> <p>4)Have a sound understanding of various infectious diseases and lesions in the oral cavity.</p>
		b) Skills
		<p>1)Student should have acquired the skill to diagnose, differentiate various oral lesions.</p> <p>2) Should be able to select, collect and transport clinical specimens to the laboratory.</p> <p>3) Should be able to carry out proper aseptic procedures in the dental clinic.</p>
	General and dental pharmacology & therapeutics	a) Knowledge
		<p>1)Describe the pharmacokinetics and pharmacodynamics of essential and commonly used drugs in general and in dentistry in particular.</p> <p>2)List the indications, contraindications; interactions, and adverse reactions of commonly used drugs with reason</p> <p>3)Tailor the use of appropriate drugs in disease with consideration to its cost, efficacy, safety for individual and mass therapy needs.</p> <p>4)Indicate special care in prescribing common and essential drugs in special medical situations such as pregnancy, lactation, old age, renal, hepatic damage and immuno compromised patients.</p>




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		<p>5) Integrate the rational drug therapy in clinical pharmacology.</p> <p>5) Indicate the principles underlying the concepts of "Essential drugs".</p> <p>6) Recognise and report adverse drug reaction to suitable authorities.</p>
		b) Skills
		<p>1) Prescribe drugs for common dental and medical ailments.</p> <p>2) To appreciate adverse reactions and drug interactions of commonly used drugs.</p> <p>3) Observe experiments designed for study of effects of drugs.</p> <p>4) Critically evaluate drug formulations and be able to interpret the clinical pharmacology of marketed preparations commonly used in dentistry.</p>
	Dental materials	a) Knowledge
		<p>1) To understand the evolution and development of science of dental materials.</p> <p>2) Impart knowledge of physical and chemical properties and advantages and disadvantages of various materials used in dentistry.</p> <p>3) Acquire knowledge of biomechanical requirements of particular restorative material and its application & limitations.</p> <p>4) Laying down standards or specifications of various materials to guide to manufacturers as well as to help professionals.</p> <p>5) Search for newer and better materials which may answer our requirements with greater satisfaction.</p> <p>6) To understand and evaluate the claims made by manufactures of dental materials.</p>
		b) Skills
		<p>1) Knowledge about the composition, properties, manipulative techniques and their various commercial names.</p> <p>2) Acquire skills to select and use the materials appropriately for laboratory and clinical use.</p> <p>3) Provide with certain criteria of selection and which will enable to discriminate between facts and propaganda with regards to claims of manufactures.</p> <p>4) Acquire wider knowledge of physical, chemical and biological properties of the various materials used in the mouth because they may cause irritation of oral tissues.</p>
	Preclinical conservative	a) Knowledge and skills




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		<p>1) Identification and study of hand cutting instruments chisels, gingival margin trimmers, excavators and hatchet.</p> <p>2) Identification and use of rotary cutting instruments in contra angle hand pieces burs</p> <p>3) preparation of cavities on plaster models, typhadonts and mounted teeth</p>
	Preclinical orthodontics	a) Knowledge and skills
		Preclinical basic wire bending exercises enable the candidate to get accustomed with the orthodontic wire, learn the basic skills of wire bending, learn how to construct various components of removable appliances and to acrylicise various removable appliances
	Preclinical prosthodontics and crown and bridge	a) Knowledge and skills
		<ol style="list-style-type: none"> 1) Impression and model preparation 2) Preparation of special trays in shellac base plates – trimmed margin. Maxillary & Mandibular 3) Special tray in self-cured acrylic resin. Maxillary & Mandibular 4) Preparation of heat cured acrylic permanent bases. Maxillary & Mandibular 5) Preparation of Self cured acrylic temporary bases Maxillary & Mandibular 6) Preparation of occlusion rims 7) Articulating the model in Mean value articulator 8) Teeth arrangement in Mean value articulator (Class I) 9) Processing trial denture in heat cured acrylic 10 10) Repair of fractured Denture 11) Fabrication of heat cured acrylic Partial Dentures 12) Preparation of wax pattern on models for cast RPD
Third year BDS	General medicine	a) Knowledge
		<ol style="list-style-type: none"> 1) Special precautions/ contraindication for anaesthesia in oral and dental procedures in different systemic diseases. 2) Oral manifestations of systemic diseases. 3) Medical emergencies in dental practice



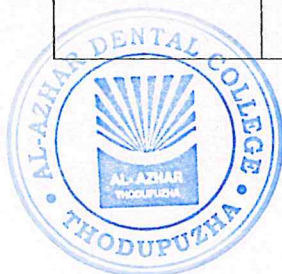

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		b) Skills
		<p>1)Able to record the arterial pulse, blood pressure</p> <p>2)Capable of suspecting by sight and superficial examination of the body, diseases of the heart, lungs, kidneys, blood etc.</p> <p>3)Capable of handling medical emergencies encountered in dental practice</p>
	General surgery	a)Knowledge
		<p>1)To acquaint the student with various diseases which may require surgical intervention.</p> <p>2)to train the student to analyze the disease history and be able to do a thorough physical examination of the patient with due importance given to diseases related to head and neck, at the same time other relevant surgical problems are also to be addressed.</p> <p>3) A good theoretical knowledge of various ailments, be able to practically differentiate benign and malignant diseases and to decide which patient requires further evaluation.</p>
		b) Skills
		Examine a routine swelling, ulcer and other related diseases and to perform minor surgical procedures such as draining an abscess, taking a biopsy etc
	Oral pathology and oral microbiology	a) Knowledge
		<p>1)Comprehend the different types of pathological processes that involve the Orofacial tissues.</p> <p>2)Comprehend the manifestations of common diseases, their diagnosis & correlation with clinical pathological processes.</p> <p>3) Understand the oral manifestations of systemic diseases and correlate with the systemic physical signs & laboratory findings.</p> <p>4)Understand the underlying biological principles governing treatment of oral diseases.</p>



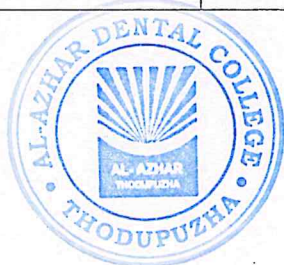

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		5) Understand the principles of certain basic aspects of Forensic Odontology.
		b) Skills
		1) Microscopic study of common lesions affecting oral tissues through microscopic slides & projection slides 2) Study of the disease process by surgical specimens 3) Study of teeth anomalies/polymorphisms through tooth specimens & plaster casts. 4) Microscopic study of plaque pathogens 5) Study of haematological preparations (blood films) of anaemias & leukemias 6) Basic exercises in Forensic Odontology such as histological methods of age estimation and appearance of teeth in injuries.
Final year BDS Part -1	Public health dentistry	a) Knowledge
		Knowledge of the basis of public health, preventive dentistry, public health problems in India, palliative care, Nutrition, Environment and their role in health, basics of dental statistics, epidemiological methods, National oral health policy with emphasis on oral health policy
		b) Skills
		1) The skill of identifying health problems affecting the society, conducting health surveys, conducting health education classes and deciding health strategies. 2) A positive attitude towards the problems of the society and must take responsibilities in providing health and palliative care 3) Communicate the needs of the community efficiently, inform the society of all the recent methodologies in preventing oral disease.
	Periodontology	a) Knowledge
		1) Impart the preventive measures namely, the prevention of periodontal diseases and prevention of the progress of the disease 2) Perform the treatment with full aseptic precautions



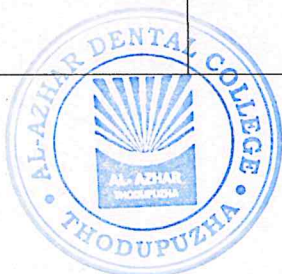

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		<p>3) Shall develop an attitude to prevent iatrogenic diseases</p> <p>4) To conserve the tooth to the maximum possible time by maintaining periodontal health</p> <p>5)To refer the patients who require specialist's care</p>
		b) Skills
		<p>1)Perform dental scaling diagnostic tests of periodontal diseases</p> <p>2)To use the instruments for periodontal therapy and maintenance of the same.</p>
	Oral medicine & radiology	a) Knowledge
		<p>1)Diagnose the common disorders of Orofacial region by clinical examination and with the help of such investigations as may be required and medical management of oro-facial disorders with drugs and physical agents.</p> <p>2)To train the students about the importance, role, use and techniques of radiographs and other imaging methods in diagnosis.</p> <p>3)The principles of the clinical and radiographic aspects of Forensic Odontology.</p>
		b) Skills
		<p>1) Diagnose diseases pertaining to oral cavity</p> <p>2) Diagnose oral manifestations of systemic disorders</p> <p>3) Interpretation of various investigations</p> <p>4) Management of oral lesions</p>
	Orthodontics	a) Knowledge
		Diagnose, analyze and treat common orthodontic problems by preventive, interceptive and corrective orthodontic procedures
		b) Skills
		<p>1)To diagnose a case of malocclusion and formulate a treatment plan</p> <p>2)To make a good alginate impression</p>



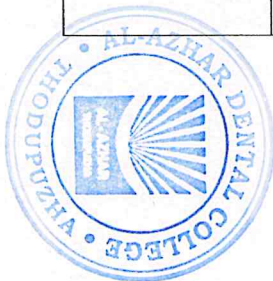

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		<p>3)To fabricate a good study model</p> <p>4)To perform various model analysis and cephalometric analysis</p> <p>5)To construct routine removable and myofunctional appliances using cold cure acrylic</p> <p>6)Insertion and management of appliance</p>
Final year BDS Part -2	Oral and maxillofacial surgery	a) Knowledge
		<p>1)Able to apply the knowledge gained in the preclinical subjects and related medical subjects like general surgery and general medicine in the management of patients with oral surgical problem.</p> <p>2)Able to diagnose, manage and treat (understand the principles of treatment of) patients with oral surgical problems.</p> <p>3) Knowledge of range of surgical treatments.</p> <p>4) Ability to decide the requirement of a patient to have oral surgical specialist opinion or treatment.</p> <p>5) Understand the principles of in-patient management.</p> <p>6) Understand the principles of emergency management of maxillofacial injuries, BLS measures and the medico legal responsibilities and formalities.</p> <p>7) Understanding of the management of major oral surgical procedures and principals involved in patient management. 8) Be able to decide the need for medical/ surgical consultations and the method of doing so.</p> <p>9) Should know ethical issues and have communication ability.</p> <p>10) Should know the common systemic and local diseases, drugs used and drug interactions</p> <p>11)Death Certification & legal aspects of forensic medicine</p>
		b) Skills
		1)Examine any patient with an oral surgical problem in an orderly manner.




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		<p>2) Be able to understand requisition of various clinical and laboratory investigations and is capable of formulating differential diagnosis.</p> <p>3) Should be competent in the extraction of teeth under both local and general anesthesia.</p> <p>4) Should be able to carry out certain minor oral surgical procedures under L.A. simple impactions, draining of abscesses, simple dental wiring, biopsies etc.</p> <p>5) Ability to assess, prevent and manage various complications during and after surgery.</p> <p>6) Able to provide primary care and manage medical emergencies in the dental office.</p> <p>7) Understanding of the management of major oral surgical problems and principals involved in inpatient management.</p> <p>8) Should be competent in measures necessary for homeostasis and wound closures.</p>
	Conservative dentistry and endodontics	a) Knowledge
		<p>1) To diagnose and treat simple restorative work for teeth.</p> <p>2) To gain knowledge about aesthetic restorative material and to translate the same to patient's needs.</p> <p>3) To gain the knowledge about endodontic treatment on the basis of scientific foundation.</p> <p>4) To carry out simple endodontic treatment.</p> <p>5) To carry out simple luxation of tooth and its treatment and to provide emergency endodontic treatment.</p>
		b) Skills
		<p>1) To use medium and highspeed hand pieces to carry out restorative work.</p> <p>2) Posses the skills to use and familiarize endodontic instruments and materials needed for carrying out simple endodontic treatment.</p> <p>3) To achieve the skills to translate patients' aesthetic needs along with function.</p>



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		4) Able to motivate the patient for proper dental treatment and maintenance of oral hygiene should be emphasise which will help to maintain the restorative work and prevent future damage.
	Prosthodontics, crown and bridge	a) Knowledge and skills
		1)able to diagnose and treat partially edentulous and completely edentulous patients with removable dentures 2) take proper impressions 3) proper knowledge in jaw relations 4) tooth selection and arrangement 5) lab procedures 6) insertion of dentures and treating denture related issues 7) relining and rebasing
	Pediatric and preventive dentistry	a) Knowledge and skills
		1)Proper diagnosis by following a scientific and systematic procedure of history taking and examination of orofacial region. 2)Management of deciduous and permanent teeth in children under 13 years 3)Child phycology 4)Dental Health Education and school dental health programmes 5) Dental emergencies in children and their management 6) Setting up of paediatric dental practice including ethics




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