KMCT
DENTAL COLLEGE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the information in the attached document is verified by me and is true to the best of my knowledge.

K.M.C.T. DENTAL COLLEGE
CALICUT

Principal

Dr. MANOJ KUMAR K.P
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COURSE OUTCOMES FOR ALL COURSES

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YEAR OF STUDY	COURSE	COURSE OUT COME
FIRST YEAR	GENERAL HUMAN ANATOMY INCLUDING EMBRYOLOGY AND HISTOLOGY	1) Learn to dissect & demonstrate the cadavers & the knowledge is correlated with living subjects during medical examinations. 2l Know the anatomical basis of disease &injury. 3) Know the microscopic structure of the various tissues, a pre- requisite for understanding of the disease processes. 4l Have an idea about the nervous system to locate the site of lesions, an idea about the basis of abnormal development, critical stage of development, effect of teratogens, genetic mutations. Know the sectional anatomy of head, neck & brain to read the features in radiosraphs
FIRST YEAR BDS	GENERAL HUMAN PHYSIOLOGY	The broad goal of the teaching undergraduate students in Physiology aims at providing the student

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		comprehensive knowledge of the normal functions of the organ systems of the body to facilitate an understanding of the physiological basis of health and disease. At the end of the course, the student will be able to: (L) Explain the normal functioning of all the organ systems and their interactions for well coordinated 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. The student shall be able to: (1) Conduct experiments designed for the study of physiological phenomena. (2) Interpret experimental and investigative data (3) Distinguish between normal and abnormaldata

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INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CENTRE
INSTITUTION'S INNOVATION COUNCIL

		derived as a result of tests which he/she has oerformed and observdlrrthe laboratorv
IRST YEAR BDS	BIOCHEMISTRY, NUTRITION AND DIETETICS	o The major aim is to provide a sound but crisp knowledge on the biochemical basis of the life processes relevant to the human system and to dental/medical ptactice o The chemistry portion should strivdtowards providing information on the functional groups, hydrophobic and hydrophilic moieties and weak valence forces that organise macromolecules r An overview of metabolic regulation is to be taught by covering hormonal action, second messengers and regulation of enzyme activities. At the end of the course the student would be able to acquire a useful core of information, which can be retained for a long tim

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FIRST BDS	DENTALANATOMY, EMBRYOLOGY AND ORAL HISTOLOGY	. Appreciate the normal developmen! morphology, structure & functions of oral tissues. o Basic knowledge of various laboratory techniques used in oral histology r ldentifying physiologic ageing process in the dental tissues. o Appreciate the histology of dental tissues.
SECOND YEAR BDS	GENERAL PATHOLOGY	At the end of the course the student should be competent to: Apply the scientific study of disease processes, which result in morphological and functional alterations in cells, tlssues and organs to the study of pathology and the practice of dentistry. r To demonstrate and analyze pathological changes macroscopically explain their observations in terms of disease processes. o To integrate knowledge from the basic sciences, clinical medicine and dentistry in the study of Pathology. ..t._:-. ... o To demonstrate Rdihe;- , of thecapabilities and limitations of morphological

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		Pathology in its contribution to medicine, dentistry and biological research . To demonstrate ability to consult resource materials outside lectures, laboratory and tutorial classes
SECOND YEAR BDS	GENERAL MICROBIOLOGY	Understand the basics of various branches of Microbiology and able to apply the knowledge relevantly. Apply the knowledge gained, in related medicalsubjects 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. Understand and practice various methods of Sterilisation and disinfection in dental clinics and to carry out proper aseptic procedures in the dental clinic.

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		Have a sound understanding ofvarious infectious diseases and lesions in the oral cavity and acquire the skill to diagnose and differentiate various oral lesions. to select, collect and transport clinical specimens to the laboratory. L
SECOND YEAR BDS	DENTAL MATERIALS	o Teaching the science and use of various dental materials used in dentistry and also about the materials used for treatment of craniofacial disorders and defects o Clinical treatment and laboratory materials, Associated materials, Technical consideration, Shelf life, Storage, Manipulations, Sterilization, and Waste management.
SECOND YEAR BDS	GENERALAND DENTAL PHARMACOLOGY AND THERAPEUTiCS	1. Should be able to explain the pharmacokinetics and pharmacodynamics of essential and commonly used drugs in dental practice.

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		Gain knowledge and ability to identify indications, contraindications, interactions, and adverse reactions of commonly used drugs in dental practice. Know prescription and prescription errors. Prescribe drug for common dental ailments as well to know the drugs used for medical emergencies and common ailments. Evaluate pharmacy preparations and drug formulations. Identify and comment on the labelled information. Analyse and interpret certain clinical problems and therapeutic exercises. Calculate the dose and percentage calculation pertaining to dental practice. Able to be a part of pharmacovigilance
SECOND YEAR BDS	PRE CLINICAL	Cavity preparation

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	CONSERVATIVE DENTISTR	o Hand instruments identification o Manipulation of cements o Matricing and wedging o Manipulation of amalgam
SECOND YEAR BDS	PRE CLINICAL ORTHODONTICS	r BASICS OF STAINLESS STEEL, ALLOYS & IMPRESSION MATERIALS o STRAIGHTENING OF WIRE, o FABRICATION OF CLASPS r FABRICATION OF ACTIVE COMPONENTS (sPRINGS, BOWS, RETRACTOR) FABRICATION OF APPLIANCE LIKE HAWLEYS APPLIANCE, EXPANSION APPLIANCE, EXPANSION APPLIANCE, TONGUE GUARD APPLIANCE, CATALANS APPLIANCE
SECOND YEAR BDS	PRECLINICAL PROSTHODONTICS AND CROWN AND BRIDGE	o Students are given hands-on training on idealmodels for all procedures to be performed in the clinical appointments in coming years

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THIRD YEAR BDS	GENERAL MEDICINE	Special emphasis should be given throughout on the importance of various diseases as applicable to dentistry. i. Special precautions/ contraindication for anaesthesia in oraland dental procedures in different systemic d iseases. ii Oral manifestations of systemic diseases. iii. Medicalemergencies in dentalpractice. A dental student is taught in such a manner that he/she is able to record the arterial pulse, blood pressure and be capable ofsuspecting by sight and superficial examination of the body, diseases of the heart, lungs, kidneys, blood etc. He should be capable of handling medical emergencies encountered in dental oractice.
THIRD YEAR BDS	GENERAL SURGERY	To acquaint the student with various diseases which

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		may require surgical intervention.And to train the student to analyze the disease history and be able to do a thorough physical examination of the patient. The diseases as related to head and neck region are to be given due importance, at the same time other relevant surgical problems are also to be addressed. At the end of one year of study the student should have a good theoretical knowledge of various ailments, and be practically trained to differentiate benign and malignant diseases and be able to decide which patient requirds further evaluation.
THIRD YEAR BDS	ORAL PATHOLOGY AND ORAL MICROBIOLOGY	. Appreciate the clinical and microscopic features of common leslons affecting oral tissues r ldentify the teeth anomalies . Appreciate the haematological preparations of

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		common disorders like anaemia t'l . Understanding of the basic exercises in Forensic Odontology such as histological methods of age estimation and personal identification with chelioscopy.
FOURTH YEAR PART 1	ORAL MEDICINE & RADIOLOGY	• Be able to identify the common dental problems like dental caries and periodontal • disease and their sequelae • Be able to differentiate the normal variations and oral mucosal lesions • Be able to identify pre cancerous and cancerous lesions of the oral cavity and refer to the concerned specialty for their management. • Have an adequate knowledge about common laboratory investigations and interpretation of their results. • Have adequate knowledge about medical complications that can arise while treating systemically compromised patients and

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		take prior precautions/ consent from the concerned medical specialist. • To formulate a clinical diagnosis, order investigations, seek expert consultations to come to a final diagnosis and chart out a proper treatment plan for patients with oral lesions. • Have adequate knowledge about radiation health hazards, radiation safety and protection. • Be competent to take intra-oral radiographs and interpret the radiographic findings • Gain adequate knowledge of various extra-oral radiographic procedures, TMJ radiography and sialography. • Be aware of the importance of intra- and extra-oral radiographs in forensic identification and age estimation. • Be familiar with jurisprudence, ethics and understand the significance of dental records with respect to law.
FOURTH YEAR PART 1	PERIODONTOLOGY	• On completion of the undergraduate training programme the graduate will:

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		• Be able to diagnose the patient's periodontal problem, plan and perform appropriate periodontal treatment. • Be Competent to educate and motivate the patient. • Be Competent to perform thorough oral prophylaxis, subgingival scaling, root planning and minor periodontal surgical procedures. • Give proper post treatment instructions and do periodic recall and evaluation. • Be Familiar with concepts of osseointegration and basic surgical aspects of implantology.
FOURTH YEAR PART 1	ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS	• Understand about normal growth and development of facial skeleton and dentition. • Be able to pinpoint aberrations in growth process both dental and skeletal and plan necessary treatment • Be able to diagnose the various malocclusion categories • Be able to motivate and explain to the patient and parent/guardian about the necessity of treatment

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		• Be able to plan and execute preventive orthodontics (space maintainers or space regainers) • Be able to plan and execute interceptive orthodontics (habit breaking appliances) • Be able to manage treatment of simple malocclusion such as anterior spacing using removable appliances • Be able to handle delivery and activation of removable orthodontic/myofacial appliances. • Be able to diagnose and appropriately refer patients with complex malocclusion to the specialist.
FOURTH YEAR PART 1	PUBLIC HEALTH DENTISTRY	• Apply the principles of health promotion and disease prevention. • Have knowledge of the organization and provision of health care in community and in the hospital service • Have knowledge of the prevalence of common dental conditions in India

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		• Have knowledge of community based preventive measures • Have knowledge of the social, cultural and environmental factors, which contribute to health or illness. • Be able to administer hygiene instructions, topical fluoride therapy and fissure sealing. • Be able to educate patients concerning the etiology and prevention of oral disease and encourage them to assure responsibility for their oral health.
FOURT YEAR PART 2	PROSTHODONTICS AND CROWN & BRIDGE	• Be able to understand and use various dental materials. • Be competent to carry out treatment of conventional Simple complete and partial removable dentures and anterior crowns. • Be able to carry out Prosthodontic laboratory procedures. • Be familiar with the concepts of osseointegration and the value of implant supported Prosthodontic procedures. • Be able to diagnose and appropriately refer

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		patients requiring complex treatment procedures to the specialist.
FOURT YEAR PART 2	PAEDIATRIC AND PREVENTIVE DENTISTRY	• Be able to instill a positive attitude and behavior in children towards oral health and understand the principles of prevention and preventive dentistry right from birth to adolescence. • Be able to guide and counsel the parents/guardian in regards to various treatment modalities including different facets of preventive dentistry. • Be able to treat dental diseases occurring in child patient. • Be able to manage the physically and mentally challenged / disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions. Detailed history taking & clinical examination, formulating diagnogis and planning comprehensive treatment for the child Detailed history taking & clinical examination,

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		formulating diagnosis and planning comprehensive treatment for the chlld Permanent Restorations: Permanent and deciduous teeth Amalgam or glass ionomer cement Removable orthodontic appliances Space maintainers / Habit breakers / Hawley's appliance Dental Extractions under LA Extraction of deciduous and Permanent teeth Application of conscious sedation unit
FOURT YEAR PART 2	CONSERVATIVE DENTISTRY AND ENDODONTICS	• Be Competent to diagnose all carious lesions. • Be Competent to perform Class I and Class II cavities and their restoration with amalgam. • Be able to restore class V and Class III cavities with glass ionomer cement. • Be able to diagnose and appropriately treat pulpally involved teeth (pulp capping procedures).

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		• Be able to perform RCT for anterior teeth • Be competent to carry out small composite restorations • Understand the principles of aesthetic dental procedures
FOURT YEAR PART 2	ORAL & MAXILLOFACIAL SURGERY	• Be able to apply the knowledge gained in the basic medical and clinical subjects in the management of patients with surgical problems. • Be able to diagnose, manage and treat patients with basic oral surgical problem • Have a broad knowledge of maxillofacial surgery and oral Implantology. • Be familiar with legal, ethical and moral issues pertaining to patient care and communication skills. • Have acquired the skill to examine any patient with an oral surgical problem in an orderly manner. • Understand and practice the basic principles of asepsis and sterilization.

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		• Be competent in the extraction of the teeth under local anesthesia. • Be Competent to carry out certain minor oral surgical procedures under Local anesthesia like trans-alveolar extraction, frenectomy, Dentoalveolar procedures,simple impaction, biopsy, etc. • Be competent to assess, prevent and manage common complications that arise during and after minor oral surgery. • Able to provide primary care and manage medical emergencies in the dental office. • Be familiar with the management of major oral surgical problems and principles involved in the in-patient management. • Be able to Certify Death

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