


## PROGRAM OUTCOMES OF BACHELOR OF DENTAL SURGERY [BDS]

Programme Outcome	The graduate should able to
<b>PO-1</b>	Describe normal and abnormal human structure, development, function and behaviour that is relevant to the practice of Dentistry.
<b>PO-2</b>	Apply basic knowledge of biomedical, technical and clinical sciences for the effective practice of Dentistry.
<b>PO-3</b>	Elicit detailed Dental and relevant Medical history, perform an oral and general physical examination and choose relevant laboratory diagnostic tests for identification of oral disorders, prevention of oral disease and promotion of oral health.
<b>PO-4</b>	Demonstrate the ability to interpret available clinical and laboratory data and effective clinical problem solving, in order to generate differential diagnoses and to manage oral health disorders.
<b>PO-5</b>	Perform and interpret a basic oral radiological examination safely.
<b>PO-6</b>	Plan and administer, safely, appropriate treatments, including surgical procedures, for common oral disorders in adults as well as children.
<b>PO-7</b>	Identify and manage common medical emergencies encountered in general dental practice.
<b>PO-8</b>	Identify and refer patients who may require specialist care.
<b>PO-9</b>	Demonstrate knowledge of global and national needs, policies and regulatory frameworks relevant to oral health.
<b>PO-10</b>	Function effectively as an oral health care team member in health care settings.
<b>PO-11</b>	Communicate effectively and sensitively with patients, care-givers, colleagues and the public in a manner that will improve health care outcomes and patient / client satisfaction.
<b>PO-12</b>	Demonstrate the ability to continue refining existing knowledge / skills and acquire new knowledge/skills.
<b>PO-13</b>	Select and pursue an appropriate career pathway that is professionally rewarding and personally fulfilling.
<b>PO-14</b>	Recognize and manage medico-legal, ethical and professional issues in dental practice.
<b>PO-15</b>	Demonstrate and practice integrity, responsibility, respect and Selflessness.

  
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## PROGRAM SPECIFIC OUTCOMES OF BACHELOR OF DENTAL SURGERY [BDS]

Programme Specific Outcome	The graduate should able
PSO-1	To recognize and apply cross infection control guidelines in dental practice.
PSO-2	To Know the basic principles of cone beam CT scan.
PSO-3	To prepare and restore teeth using amalgam and tooth-coloured restorations.
PSO-4	To successfully extirpate the pulp and perform root canal treatment of single rooted teeth.
PSO-5	To treat patients indicated for simple removable partial dentures and complete dentures.
PSO-6	To prepare teeth for single metal ceramic crowns and 3 unit metal-ceramic bridge.
PSO-7	To describe clinical indications for veneers, metal free ceramics.
PSO-8	To successfully diagnose patients with periodontal diseases and successfully apply phase I therapy.
PSO-9	To identify the need for orthodontic treatment in dental patients and develop a limited skill in orthodontic appliance treatment.
PSO-10	To provide routine dental care for cooperative healthy children.
PSO-11	To successfully give local anaesthesia in the oral cavity.
PSO-12	To successfully perform non-surgical extractions and intra-oral incisional biopsies.
PSO-13	To successfully deal with medical emergencies in the dental office.
PSO-14	To select the best treatment option based on medical, dental, social consideration of the patient as well as the available resources.
PSO-15	To recognize advanced cases that need specialist care and refer to the appropriate specialist.
PSO-16	The undergraduate student acquires adequate knowledge, understanding and skill to perform exodontias (extraction of teeth), alveoloplasty and suturing.
PSO-17	The undergraduate should understand the general surgical principles like pre and post surgical management, particularly evaluation, post surgical care, and post surgical pain management.
PSO-18	To show increased participation in voluntary community dental activities.



<b>PSO-19</b>	To recognize the basic steps of the research process.
<b>PSO-20</b>	To volunteer in current research projects pertinent to the faculty.

  
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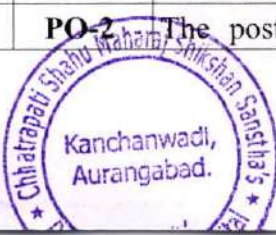
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## PROGRAMME OUTCOME MDS

Prosthodontics, Crown and Bridge	PO-1	The candidate should be able to examine the patients requiring Prosthodontic therapy, investigate the patient systemically, analyse the investigation results, radiographs, diagnose the ailment, plan the treatment, communicate it with the patient and execute it.
	PO-2	To understand the prevalence and prevention of diseases of craniomandibular system related to prosthetic dentistry.
	PO-3	The candidate should be able to restore lost functions of stomatognathic system like mastication, speech, appearance and psychological comforts by understanding biological, biomedical, bioengineering principles and systemic conditions of the patients to provide quality health care in the craniofacial regions.
	PO-4	The candidate should be able to demonstrate good interpersonal, communication skills and team approach in interdisciplinary care by interacting with other specialties including medical specialty for planned team management of patients for craniofacial & oral acquired and congenital defects, temporomandibular joint syndromes, esthetics, Implant supported Prosthetics and problems of Psychogenic origins.
	PO-5	Should be able to demonstrate the clinical competence necessary to carry out appropriate treatment at higher level of knowledge, training and practice skills currently available in their specialty area with a patient centered approach.
	PO-6	Should be able to interpret various radiographs like IOPA, OPG, CBCT and CT. Should and be able to plan and modify treatment plan based on radiographic findings
	PO-7	Should be able to critically appraise articles published and understand various components of different types of articles and be able to gather the weight of evidence from the same
	PO-8	To identify target diseases and create awareness amongst the population regarding Prosthodontic therapy.
	PO-9	To perform Clinical and Laboratory procedures with a clear understanding of biomaterials, tissue conditions related to prosthesis and have required dexterity & skill for performing clinical and laboratory all procedures in fixed, removable, implant, maxillofacial, TMJ and esthetics Prosthodontics.
	PO-10	To carry out necessary adjunctive procedures to prepare the patient before prosthesis like tissue preparation and preprosthetic surgery and to prepare the patient before prosthesis / prosthetic procedures
Periodontology	PO-1	The postgraduate should take a proper clinical history, thorough examination of intra oral, extra oral, medical history evaluation, advice essential diagnostic procedures and interpret them to come to a reasonable periodontal diagnosis.
	PO-2	The postgraduate should do effective motivation and education

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		regarding periodontal disease maintenance after the treatment
	<b>PO-3</b>	The postgraduate should be able to perform both non-surgical and surgical procedures independently
	<b>PO-4</b>	The postgraduate should be able to provide Basic Life Support Service (BLS) recognizes the need for advance life support and does the immediate need for that.
	<b>PO-5</b>	The postgraduate should be able to apply high moral and ethical standards while carrying out human or animal research.
	<b>PO-6</b>	The postgraduate should be able to learn the principles of lip repositioning and perio esthetics surgeries.
	<b>PO-7</b>	The postgraduate should be able to identify the clinical indications for using different dental implant systems.
<b>Conservative Dentistry &amp; Endodontics</b>	<b>PO-1</b>	The postgraduate should be able to take proper chair side history, examine the patient and perform medical and dental diagnostic procedures as well as perform relevant tests and interpret to them to come to a reasonable diagnosis about the dental condition in general and Conservative Dentistry Endodontics in particular. And undertake complete patient monitoring including preoperative as well as post operative care of the patient.
	<b>PO-2</b>	The postgraduate should be able to perform all levels of restorative work, surgical and non-surgical Endodontics as well as endodontic periodontal surgical procedures as part of multidisciplinary approach to clinical condition.
	<b>PO-3</b>	The postgraduate should be able to manage acute pulpal and pulpo periodontal situations.
<b>Orthodontics &amp; Dentofacial Orthopaedics</b>	<b>PO-1</b>	The postgraduate should be able to obtain proper clinical history, methodical examination of the patient, perform essential diagnostic procedures, and interpret them and arrive at a reasonable diagnosis about the Dento-facial deformities.
	<b>PO-2</b>	The postgraduate should be able to be competent to fabricate and manage the most appropriate appliance intra or extra oral, removable or fixed, mechanical or functional, and active or passive for the treatment of any orthodontic problem to be treated singly or as a part of multidisciplinary treatment of oro-facial deformities.
<b>Oral &amp; Maxillo Facial Surgery</b>	<b>PO-1</b>	The postgraduate should acquire adequate knowledge and understanding of the etiology, pathophysiology and diagnosis, treatment planning of various common Oral and Maxillofacial surgical problems both minor and major in nature.
	<b>PO-2</b>	The postgraduate should understand the general surgical principles like pre and post surgical management, particularly evaluation, post surgical care, fluid and electrolyte management, blood transfusion and post surgical pain management.
	<b>PO-3</b>	The postgraduate should able to perform with competence minor oral surgical procedures and common maxillofacial surgery and

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		treat both surgically and medically the problems of the oral and Maxillofacial and the related area.
	<b>PO-4</b>	The specialist in Oral & Maxillofacial Surgery can deal with the diagnosis and management of the diseases of stomatognathic system, jaw bones, cranio-maxillofacial region, salivary glands and temporomandibular joints etc.
	<b>PO-5</b>	The Oral & maxillofacial Surgeon should be competent in the management of cleft lip & cleft palate, orthognathic surgery, micro vascular surgery, reconstructive and oncological surgical procedures of maxillofacial region.
<b>Oral Medicine And Radiology</b>	<b>PO-1</b>	The postgraduate should be able to acquire adequate theoretical, clinical and practical knowledge of all oral mucosal lesions, skeletal involvement of maxillofacial region, diagnostic procedures pertaining to them and latest information of imaging modules.
	<b>PO-2</b>	The postgraduate should be able to develop skill in recognition of oral diseases with radiographic diagnosis and their management
	<b>PO-3</b>	The postgraduate should acquire research skills in handling scientific problems pertaining to oral treatment



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## COURSE OUTCOMES OF BACHELOR OF DENTAL SURGERY[BDS]

<b>I BDS</b>		
<b>Course</b>	<b>Course Code</b>	<b>The students will be able to :</b>
<b>Gen. Human Anatomy including Embryology &amp; Histology</b>	CO-1	Describe the normal disposition, functional and cross-sectional anatomy of various structures in the head and neck.
	CO-2	Explain the microscopic structure of various tissues and organs related to head and neck.
	CO-3	Describe the principles and sequential development of the organs and systems related to head and neck.
	CO-4	Describe the appearance of normal ski grams of head and neck region.
	CO-5	Identify the various structures of the head and neck region.
	CO-6	Identify the basic tissues of the body and organs related to head and neck under the microscope.
	CO-7	Identify the features of normal ski grams of head and neck region.
	CO-8	Demonstrate the topography of various structures of head and neck on the surface of the body.
	CO-9	Identify the embryology models
<b>Human Physiology</b>		
	CO-1	Explain the normal functioning of organ systems.
	CO-2	Describe the inter-relationships and interactions among various organs and systems for maintaining Homeostasis.
	CO-3	Assess the relative contribution of each organ systems towards the maintenance of constant internal environment
	CO-4	Differentiate between normal and abnormal functioning of organs and systems.
	CO-5	Explain the physiological basis of pathogenesis and treatment of diseases and disorders.
	CO-6	Apply the physiological basis in the practice of dentistry.
	CO-7	Perform experiments designed for the better understanding of Physiological phenomenon.
	CO-8	Interpret experimental and investigative data.
	CO-9	Distinguish between normal and abnormal data derived during the practicals or observed at the laboratory
	CO-10	Apply ethical behavior to professional practice.
	CO-11	Apply effective communication skills while interacting with patients.
<b>Biochemistry</b>		
	CO-1	Enlist and describe the cell organelles with their molecular and functional organization
	CO-2	Delineate structure, function and interrelationships of various

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		biomolecules and consequences of deviation from the normal
	CO-3	Understand basic enzymology and emphasize on its clinical applications where in regulation of enzymatic activity is disturbed
	CO-4	Describe digestion and assimilation of nutrients and consequence of malnutrition
	CO-5	Describe and integrate metabolic pathways of various biomolecules with their regulatory mechanisms
	CO-6	Explain the biochemical basis of inherited disorders with their associated sequelae
	CO-7	Describe mechanisms involved in maintenance of water, electrolyte and acid base balance and consequences of their imbalances
	CO-8	Outline the molecular mechanisms of gene expression and regulation, basic principles of biotechnology and their applications in medicine
	CO-9	Understand the basic immunology involving molecular concepts of body defence mechanisms and their applications in medicine
	CO-10	Continue to learn advancements in biochemistry and apply the same in medical practice
	CO-11	Understand different types of Bio –medical waste, their potential risks and their management
<b>Dental Anatomy, Embryology and Oral Histology</b>		
	CO-1	Recognize normal development, morphology, structure and functions of oral tissues and variations in different pathological/ non-pathological states and understand the histological basis of various dental treatment procedures and physiologic ageing process in the dental tissues.
	CO-2	Define, describe and classify morphologic features of oro-facial structures.
	CO-3	Describe the histogenesis of oro-facial structures.
	CO-4	Categorize the orofacial structures.
	CO-5	Diagnose the slides based on the microscopic structures
	CO-6	Identify and distinguish normal from abnormal structures
	CO-7	Categorize ground section, HE stained slides and slides stained with special stains.
	CO-8	Student is able to handle the tissue specimen properly
<b>II BDS</b>		
<b>Pre- Clinical Prosthodontics, Crown &amp; Bridge</b>		
	CO-1	Understand the properties and use of various materials used in



		fabricating complete and removable partial dentures.
	CO-2	To carry out various clinical and laboratory procedures to fabricate complete dentures and removable partial dentures.
	CO-3	Prepare special trays - Self cured acrylic (Maxillary / mandibular)
	CO-4	Prepare Shellac Special trays (Maxillary/Mandibular)
	CO-5	Prepare temporary, Shellac and permanent denture bases
	CO-6	Prepare occlusion rims
	CO-7	Orient occlusion rims on articulator
	CO-8	Arrange teeth for - Class I, Class II & Class III occlusion
	CO-9	Pack and Dewax the dentures
	CO-10	Deflask the dentures
	CO-11	Polishing of dentures
	CO-12	Do surveying of partially edentulous models and preparing modified master cast, designing with color pencils
<b>Pre Clinical</b>		
<b>Conservative Dentistry</b>		
	CO-1	Identify and study of hand cutting instruments chisels, gingival margin trimmers, excavators and hatchet..
	CO-2	Identify and use of rotary cutting instruments in contra angle hand pieces burs (Micromotor)
	CO-3	Understand the importance of Pulp- Dentin Complex in Restorative Dentistry.
	CO-4	Make Cavity outlines on Plaster Models.
	CO-5	Prepare class I and extended class I and class II and MOD's and class V in plaster models.
	CO-6	Prepare and restore all categories of teeth on the Plaster Models.
	CO-7	Prepare and restore all categories of cavity on extracted Teeth.
	CO-8	Prepare and restore all categories of cavity on Ivorine Teeth.
	CO-9	Dispense and manipulate materials for restorative work.
	CO-10	Plan and execute various indirect restorations.
<b>General Pathology</b>		
	CO-1	Describe the normal homeostatic mechanisms and the pathological process in their derangement and the effects on human systems.
	CO-2	Discuss the concepts of cell injury and pathological and immunological responses produced thereby in different tissues and organs and the body's capacity for healing.
	CO-3	Demonstrate basic Knowledge and understanding of the immune system in health and disease.
	CO-4	Explain the etiology, pathogenesis, pathological effects and clinic pathological correlation of common infectious and non-infectious diseases.
	CO-5	Describe the concept of hemodynamic disorders, thromboembolic

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		disease and shock and their clinical application.
	CO-6	Describe the concept of neoplasia with reference to the etiology, morphological features, diagnosis and prognosis in different tissues and organs of the body.
	CO-7	Discuss the epidemiology, gross and microscopic features, clinical presentation and diagnostic techniques associated with different diseases in different organ systems to the extent needed for the understanding of disease processes and their clinical significance.
	CO-8	Recognise and interpret the common hematological disorders and the
		investigations, blood banking as well as cytological procedures.
	CO-9	Perform and interpret the basic bed-side clinical pathology procedures on blood and urine samples.
<b>General Microbiology</b>		
	CO-1	Understand the basics of various branches of microbiology and able to apply the knowledge relevantly.
	CO-2	Understand and practice various methods of Sterilisation and disinfection in dental clinics.
	CO-3	Have a sound understanding of various infectious diseases and lesions in the oral cavity.
	CO-4	Select, collect and transport clinical specimens to the laboratory.
	CO-5	Carry out proper aseptic procedures in the dental clinic.
<b>General &amp; Dental Pharmacology</b>		
	CO-1	The pharmacokinetics and pharmacodynamics of essential and commonly used drugs in general and in dentistry in particular.
	CO-2	The indications, contraindications; interactions, and adverse reactions of commonly used drugs with reason
	CO-3	The use of appropriate drugs in disease with consideration to its cost, efficacy, safety for individual and mass therapy needs.
	CO-4	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.
	CO-5	The rational drug therapy in clinical pharmacology.
	CO-6	Indications the principles underlying the concepts of "Essential drugs.
	CO-7	How to prescribe drugs for common dental and medical ailments.
	CO-8	Adverse reactions and drug interactions of commonly used drugs.
	CO-9	The experiments designed for study of effects of drugs.
	CO-10	The application of his knowledge to contemporary practices in Pharmacology as applied to the practice of dentistry.
	CO-11	Critically evaluate drug formulations and be able to interpret the clinical pharmacology of marketed preparations commonly used in

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		dentistry.
	CO-12	Follow prescribing rationale as advised by regulatory bodies from time to time
<b>Dental Materials</b>		
	CO-1	The student has knowledge about the use and properties of all dental materials.
	CO-2	The student has knowledge about the biocompatibility of dental materials and their clinical applications.
	CO-3	The student shall choose, manipulate and use appropriate dental materials in a given clinical scenario and laboratory procedures.
	CO-4	The student is now able to use dental material without causing injury to
		the patient and use the material without wastage.
	CO-5	The student is now able to adopt ethical principles in all dental practice.
	CO-6	The student is now willing to adopt new methods and techniques in prosthodontics from time to time based on scientific research which is in the patient's best interest.
<b>III BDS</b>		
<b>General Medicine</b>		
	CO-1	Has basic knowledge about signs and symptoms of various diseases.
	CO-2	Has basic Knowledge about recording a general case history of medical cases.
	CO-3	Has basic Knowledge about general investigations like blood pressure recording, inspection, palpation of medical cases.
	CO-4	Has basic knowledge about the dental management of medically compromised cases.
	CO-5	Be able to record a detail case history of medical cases.
	CO-6	Be able to identify oral manifestation of medically compromised cases.
	CO-7	Be able to record blood pressure and other basic investigation required.
	CO-8	Be able to Identify sign and symptoms of various diseases.
	CO-9	Be willing to apply current knowledge of General medicine in the best interest of patients and community.
	CO-10	Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
<b>General Surgery</b>		
	CO-1	Student now has knowledge of general surgical principles pertaining to acute & chronic infections.
	CO-2	Student now has knowledge of general surgical principles pertaining to inflammation.
	CO-3	Student now has knowledge of general surgical principles pertaining

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		to wound healing.
	CO-4	Student now has knowledge of general surgical principles pertaining to blood, blood transfusion and management of blood loss.
	CO-5	Student now has knowledge of general surgical principles pertaining to cysts & benign & malignant tumors.
	CO-6	Student now has knowledge of general surgical principles pertaining to trauma.
	CO-7	Student now has knowledge of general surgical principles pertaining to developmental anomalies
	CO-8	Student now has knowledge of general surgical principles pertaining to nerve injuries and management.
	CO-9	Student is able to demonstrate and apply principles of suturing.
	CO-10	The student is now able to diagnose & do basic management of Patient with surgical problem.
	CO-11	The student is now able to develop good rapport with patient & Relatives.
<b>Oral Pathology &amp; Microbiology</b>		
	CO-1	Describe and identify various orofacial pathologies.
	CO-2	Know about etiopathogenesis of various oral pathologies.
	CO-3	Enumerate and describe different detection and diagnostic methods and treatment options for oral pathologies.
	CO-4	Define, classify and describe various aspects of forensic odontology and its applied aspects.
	CO-5	Detect and diagnose various oral pathologies.
	CO-6	Diagnose various microscopic slides using light microscope.
	CO-7	Diagnose various oral pathologies and syndromes using casts and specimens.
	CO-8	Classify and apply various techniques of identification.
	CO-9	Handle the tissue specimens and casts properly.
	CO-10	Develop right aptitude to apply knowledge in clinical set up.
<b>IV BDS</b>		
<b>Public Health Dentistry</b>		
	CO-1	The student now knows about the concept of health, various health indicators and history of Dental Public Health, its definition and the basic concept of dental public health.
	CO-2	The student now is able to understand various types of epidemiological studies and knows the epidemiology of various oral diseases.
	CO-3	The student now knows regarding the Planning of a survey and Indices for dental diseases and conditions.

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	CO-4	The student now knows regarding the influence of nutrition and diet on general and oral health.
	CO-5	The student now knows the principles, methods of identification, evaluation and control of health hazards.
	CO-6	The student now knows the basic principles of law in respect to health sciences and should know the recent laws regarding patient doctor relationship and its legal implications.
	CO-7	The student now knows the definitions, types of research, designing of the written protocol, objectivity, methodology, quantification of records and analysis.
	CO-8	The student now knows regarding the payment for dental care and health insurance.
	CO-9	The student is now able to take history, conduct clinical examination to arrive at diagnosis at individual level and conduct survey at community level to arrive at community diagnosis.
	CO-10	The student is now able to plan and perform all necessary treatment, prevention and promotion of oral health at individual and community level.
	CO-11	The student is now able to plan appropriate community oral health program.
	CO-12	The student makes use of knowledge of epidemiology to identify causes and plan appropriate preventive and control measures.
	CO-13	The student is able to develop ways of helping community towards easy payment plan, and followed by evaluation for their oral health care needs.
	CO-14	The student adopts ethical principles in all aspects of community oral health activities.
	CO-15	The student is able to apply ethical and moral standards while carrying out epidemiological research.
	CO-16	The student is able to develop communication skills, in particular to explain the causes and prevention of oral diseases to the patient.
	CO-17	The student respects patient's rights and privilege including patients right to information and right to seek a second opinion.
<b>Periodontology</b>		
	CO-1	The student now knows the normal anatomy of Oral mucosa, Gingiva and supporting structures of the teeth & differentiation between the normal and diseased structures of periodontium.
	CO-2	The student is now able to classify Gingival and Periodontal diseases according to Etiology.
	CO-3	The student can analyse and understand the epidemiology and statistics related to Periodontal disease.
	CO-4	The student knows the pathogenesis of periodontal disease and role of microorganisms and their interaction with the host in Etiology of

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		Periodontal Disease.
	CO-5	The student knows potential predisposing factors of periodontal disease and methods to manage them.
	CO-6	The student knows the effects of smoking and parafunctional habits in pathogenesis of periodontal disease.
	CO-7	The student knows the dynamics related to interdisciplinary periodontics and management of cases involving periodontal tissues.
	CO-8	The student knows the periodontal conditions that could be manifestations of systemic conditions in the body and knowledge to refer patients to Specialists and Physicians whenever needed.
	CO-9	The student can now take Case history records of patients with periodontal disease, formulate provisional diagnosis, advise appropriate investigations to come to a final diagnosis.
	CO-10	The student can now formulate statistical analysis of the common and rare conditions occurring in the given populations.
	CO-11	The student can now undertake preventive programs in the community.
	CO-12	The student now diagnoses periodontal conditions based on risk factors and formulate treatment plan to eliminate those risk factors.
	CO-13	The student can perform treatment procedures like Scaling, Root Planing, Prescribe patients antimicrobial and host modulation therapy and Motivate patient for plaque control.
	CO-14	The student understands the interdisciplinary association with other specialties of dentistry and correlate diagnosis and treatment parameters in proper management of dental conditions.
	CO-15	The student can diagnose periodontal disease in the society and maintain the privacy regarding patient diagnosis and investigations.
	CO-16	The student is able to understand the need to reach the common public regarding the prevention and control of periodontal disease.
	CO-17	The student is able to understand the importance of motivation and education in society to improve the overall periodontal status in general populations.
	CO-18	The student can identify social, economic, environmental and emotional determinants in periodontal health and disease conditions and take them into account for planned treatment.
	CO-19	The student is able to understand ill effects of various deleterious habits on periodontium and take adequate methods to prevent them.
	CO-20	The student is able to understand ethical and moral values in managing any periodontal conditions and treating the individual

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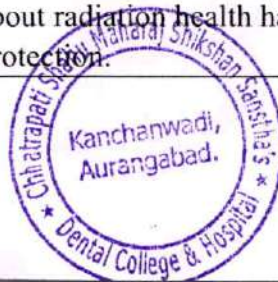


as a whole, rather than the specific condition.

<b>Orthodontics &amp; Dentofacial Orthopaedics</b>		
	CO-1	The student now knows about normal growth and development of facial skeleton and dentition.
	CO-2	The student now knows about the various diseases or conditions affecting normal growth process.
	CO-3	The student can now diagnose the various malocclusion categories.
	CO-4	The undergraduate Student will be able to pinpoint aberrations in the growth process of both dental and skeletal structures and plan necessary treatment.
	CO-5	The student is able to motivate and explain to the patient (and parent) about the necessity of treatment.
	CO-6	The student can plan and execute preventive orthodontics (space maintainers or space retainers).
	CO-7	The student can plan and execute interceptive orthodontics (habit breaking appliances).
	CO-8	The student is able to manage treatment of simple malocclusion such as anterior spacing using removable appliances.
	CO-9	The student is able to handle delivery and activation of removable orthodontic appliances
	CO-10	The student can diagnose and appropriately refer patients with complex malocclusion to the specialist.
	CO-11	The student will have highest regard for professional ethics and strive to deliver best possible treatment to patients.
	CO-12	The student will continuously seek to update his knowledge with new advances in diagnosis and treatment procedures.
<b>Oral Medicine, Diagnosis &amp; Radiology</b>		
	CO-1	The student has the knowledge about differentiating normal oral mucosa with diseased mucosa in oral lesions.
	CO-2	The student educates patients with common dental problem like dental caries and periodontal diseases and their sequelae.
	CO-3	The student can advise common and advanced laboratory investigations and interpret their results.
	CO-4	The student knows about medical complications that can arise while treating systemically compromised patients and takes prior precaution/consent from concerned medical specialist.
	CO-5	The student knows about basic radiation physics and knows about radiation health hazards, radiation safety and protection.

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	CO-6	The student knows about intraoral and extraoral radiography techniques and knows about their application in oral lesions and trauma management.
	CO-7	The student knows about the importance of oral radiographs in forensic identification and age estimation.
	CO-8	The student knows infection control protocols in hospital dentistry and knows its ill effects if not followed.
	CO-9	The student is able to identify normal oral mucosa and can differentiate it from diseased mucosa in oral lesions.
	CO-10	The student can record a detailed case history and perform clinical examination of patients to arrive at a provisional diagnosis.
	CO-11	The student can identify a pre malignant and malignant lesions and conditions and observe a chair side investigation done by a postgraduate student.
	CO-12	The student can perform intraoral radiography and observe and assess a post graduate in extraoral and advance radiographic techniques like CBCT, Sialography to formulate a final diagnosis and differential diagnosis.
	CO-13	The student can write a radiographic interpretation report for intraoral radiographs.
	CO-14	The student can refer the cases to concerned specialties.
	CO-15	The student is willing to apply current knowledge of Oral medicine and Radiology in the best interest of patients and community.
	CO-16	The student is able to handle patients with great compassion, explain them the required treatment options and also to educate about the preventive aspects of oral diseases.
	CO-17	The student maintains a high standard of professional ethics and conduct and apply these in all aspects of professional life.
	CO-18	The student can maintain meticulous dental records.
<b>Oral &amp; Maxillo- facial Surgery</b>		
	CO-1	The student is able to understand the indications, contraindications, advantages, disadvantages, composition, techniques and complications of local anaesthesia & general anaesthesia.
	CO-2	The student is able to understand the indications, contraindications, principles, techniques and complications of dental extractions.
	CO-3	The student is able to do minor oral surgical procedures such as alveoloplasty, surgical extraction of impacted teeth, dentoalveolar infections and Apicectomy.
	CO-4	The student is able to complex Oral & Maxillofacial surgical

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		procedures.
	CO-5	The student is able to demonstrate and apply principles of administration of various local anaesthesia techniques, extraction of teeth and simple minor surgical procedures in dentistry.
	CO-6	The student can diagnose and manage various medical emergencies and dental management of medically compromised patients.
	CO-7	The student is able to develop good rapport with patients.
	CO-8	Student is able to follow High Professional ethics.
	CO-9	The student can serve the community.
	CO-10	The student can serve in best interest of the patients.
	CO-11	The student can refer complex surgical cases to specialist.
	CO-12	The student continuously upgrades knowledge.
<b>Conservative Dentistry &amp; Endodontics</b>		
	CO-1	Students are now capable of identifying the Carious process.
	CO-2	Students are now capable of diagnosing various pulpal diseases.
	CO-3	Students are now able to prepare Class -1 cavities in human teeth and restore them.
	CO-4	Students are able to differentiate between various disease processes.
	CO-5	Students are now able to interpret radiographs.
	CO-6	Students are able to make treatment plans.
	CO-7	Students are now able to prepare Class -2 cavities in human teeth and restore them.
	CO-8	Students are now able to prepare Class -3 and Class 5, cavities in human teeth and restore them.
	CO-9	Students are now able to use Glass Ionomer Cements and Composite Resins to restore teeth.
	CO-10	Students are able to test teeth for vitality.
	CO-11	Students are now able to perform pulp protection procedures, in order to preserve the vitality of the teeth.
	CO-12	Students are able to discuss disease prevention with the patients.
	CO-13	Students are able to advise appropriate anti-carries measure for the patients.
	CO-14	Students are now able to perform Root Canal Therapy in the Anterior Teeth.
	CO-15	Students are now able to perform Root Canal Therapy in Posterior Teeth.
	CO-16	Students are able to allay the concerns of the patients.



	CO-17	Students are able to effectively understand the symptoms of the patients.
	CO-18	Students are able to communicate the treatment plans to the patients effectively
	CO-19	Students are now able to refer patients as per the need of the particular case.
	CO-20	Students are able to obtain consent from the patient or an accompanying care-taker for all the procedures to be carried out
	CO-21	Students are able to develop a rapport with the patient, teaching and non-teaching staff and the auxiliary staff.
	CO-22	Students are able to create Social Awareness about the Disease Process in the Society.
	CO-23	Students are able to reach out to the under privileged section of the society and render treatment to patients who do not have access to oral health care.
<b>Prosthodontics ,Crown &amp; Bridge</b>		
	CO-1	The student has knowledge about the use, properties of all dental materials.
	CO-2	The student can now choose, manipulate and use appropriate dental materials in a given clinical scenario and laboratory procedures.
	CO-3	The student is now able to use dental materials without causing injury to the patient and use the material without wastage.
	CO-4	The student adopts ethical principles in all dental practice.
	CO-5	The student fosters professional honesty and integrity and delivers treatment irrespective of social status, caste, creed or religion of patient.
	CO-6	The student is willing to share the knowledge and clinical experience with professional colleagues.
	CO-7	The student is willing to adopt new methods and techniques in prosthodontics from time to time bases on scientific research which is in patient's best interest.
	CO-8	The student respects patient's rights and privileges including patient's right to information and right to seek second opinion.
	CO-9	The student has knowledge about physical and mechanical properties of dental materials.
	CO-10	The student knows about Ethics, laws and Jurisprudence and forensic odontology in Prosthodontics.
	CO-11	The student knows about Personal hygiene, infection control, prevention of cross infection and safe disposal of waste keeping in view the risks of transmission of Hepatitis and HIV.
	CO-12	The student knows about the applications of pharmacology and



		effects of drugs on oral tissue and system of a body and for medically compromised patients.
	CO-13	The student can diagnose and plan treatment for patients requiring simple Prosthodontic therapy.
	CO-14	The student can read and interpret a radiograph and other investigations for the purpose of diagnosis and treatment plan.
	CO-15	The student can diagnose failed restorations and provide Prosthodontic therapy and after care.
	CO-16	The student can refer complex cases to specialist.
<b>Pedodontics &amp; Preventive Dentistry</b>		
	CO-1	Students now know the development, structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and their relationship and effect on general-state of health and also the bearing on physical and social well-being of the patient.
	CO-2	Students now know the principles of prevention and preventive dentistry right from birth to adolescence.
	CO-3	Students now have adequate experience required for pedodontic dental practice.
	CO-4	The students now have the skills necessary for practice of pediatric dentistry. Students are now able to obtain clinical history, methodological examination of the child patient, perform essential diagnostic procedures and interpret them and arrive at a reasonable diagnosis and treat appropriately.
	CO-5	Students are now able to treat dental diseases which are occurring in child patient.
	CO-6	Students are now able to repair and restore the lost or fractured tooth structures so as to maintain harmony between both hard and soft tissues of the oral cavity.
	CO-7	Students are now able to acquire skills in managing efficiently life-threatening condition with emphasis on basic life support measures.
	CO-8	Students are now able to adopt ethical principles in all aspects of pedodontic practice.
	CO-9	Students are now able to foster honesty and integrity in clinical practice.
	CO-10	Students are now able to deliver quality care service irrespective of a person's religion, caste, creed and ethnicity.
	CO-11	Students are now able to share the knowledge and clinical experience with professional colleagues.
	CO-12	Students are now able to adopt, after a critical assessment, new

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		methods and techniques of pedodontic management time to time.
	<b>CO-13</b>	Students are now able to develop alliances with other areas of health profession.



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**COURSE OUTCOME MASTER OF DENTAL  
SURGERY (MDS)**

<b>Prosthodontics, Crown &amp; Bridge</b>		
<b>Applied Anatomy, Pathology physiology and Dental Material</b>	CO-1	The candidate would possess knowledge about applied basic and systematic medical sciences.
	CO-2	The candidate would be able to examine the patients requiring Prosthodontics therapy, investigate the patient systemically, analyze the investigation results.
	CO-3	The candidate would diagnose the ailment, plan a treatment, communicate it with the patient and execute it.
<b>Removable Prosthodontics and Oral Implantology</b>	CO-1	The candidate would possess knowledge about age changes Prosthodontic Therapy for the aged related to removable Prosthodontics and oral Implantology
	CO-2	The candidate would be able to demonstrate the clinical competence to restore lost functions of stomatognathic system namely mastication, speech, appearance and psychological comforts by removable prosthesis.
	CO-3	The candidate would be able to adopt ethical principles in prosthodontic practice. Professional honesty and integrity are to be fostered. Treatment to be delivered irrespective of social status, caste, creed or religion of patient.
<b>Fixed Prosthodontics</b>	CO-1	The candidate would be understand the prevalence and prevention of diseases of craniomandibular system related to fixed prosthetic dentistry.
	CO-2	The candidate would be willing to adopt new methods and techniques in fixed prosthodontics from time to time based on scientific research, which is in patient's best interest.
	CO-3	The candidate would be able to communicate in simple understandable language with the patient and explain the principles of fixed prosthodontics to the patient
<b>Essay</b>	CO-1	The candidate would be able to outline the knowledge, procedural and operative skills needed in Masters Degree in Prosthodontics.
	CO-2	The candidate would possess comprehensive knowledge and the ability to apply the same in all the sub branches of Prosthodontics in toto.
<b>Periodontology</b>		
<b>Applied basic sciences</b>	CO-1	Should have abroad overview of the current research and methods used in studying problems in periodontal disease.
	CO-2	Should have an understanding of the broad range of infection diseases affecting the oral cavity .

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	CO-3	Should have an understanding the clinical and biological factors to be considered in the appropriate use of antimicrobial drugs
	CO-4	Be aware of the contemporary principles and practices of laboratory diagnostic techniques and interpretation of laboratory reports.
	CO-5	Should have an understanding of hospital acquired infections and infections in the compromised host
	CO-6	Should have a basic knowledge on research methodology, biostatistics and be able to apply it in various research projects as well as dissertations.
<b>Normal periodontal structure and etiopathogenesis and epidemiology</b>	CO-1	Should have a understanding on the normal structure of periodontium and the contributing etiological factors resulting in the pathogenesis of periodontal diseases and be able to apply this knowledge in the diagnosis.
	CO-2	Should be able to record indices and plan out epidemiological survey to assess the prevalence and incidence of early onset periodontitis and adult periodontitis in Indian Population
<b>Periodontal Diagnosis, Therapy and Oral Implantology</b>	CO-3	Should have a sound knowledge of the etiopathogenesis and apply it in diagnosing various periodontal diseases and should be familiar with various periodontal therapies available to treat those cases.
	CO-4	Should have an updated knowledge on the recent advancements and be able to modify their treatment accordingly.
	CO-5	Develop knowledge skill and the science of oral implantology. Should be aware of the various designs and placement of oral implants and follow up of implant restorations.
<b>Essay</b>	CO-1	Should be knowledgeable to provide clinical care for patients with complex problems that are beyond the treatment skills of general dentist and demonstrate evaluative and judgment skills in making appropriate decision regarding prevention, correction and referral to deliver comprehensive care to patients.
	CO-2	Should be able to analyse various clinical scenarios and apply their knowledge accordingly.

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<b>Conservative Dentistry &amp; Endodontics</b>		
<b>Applied Basic Science</b>	CO-1	Students should demonstrate understanding of basic sciences as relevant to conservative / restorative dentistry and Endodontics
	CO-2	Students would demonstrate infection control measures in the dental clinical environment and laboratories
	CO-3	Student would adopt ethical principles in all aspects of restorative and contemporary Endodontics including non-surgical and surgical Endodontics
	CO-4	Students would be able to demonstrate communication skills in particular to explain various options available management and to obtain a true informed consent from the patient
	CO-5	Students would be able to apply high moral and ethical standards while carrying on human or animal research
<b>Conservative Dentistry</b>	CO-1	Students would be able to describe aetiology, pathophysiology, diagnosis and management of common restorative situations, that will include contemporary management of dental caries, non-carious lesions and hypersensitivity.
	CO-2	Students would be able to take proper chair side history, examine the patient and perform medical and dental diagnostic procedures; as well as perform relevant tests and interpret them to come to a reasonable diagnosis about the dental condition
	CO-3	Perform all levels of restorative work including Aesthetic procedures and treatment of complicated restorative procedures
<b>Endodontics</b>	CO-1	Students would be able to describe etiology, pathophysiology, periapical diagnosis and management of common endodontic situations that will include contemporary management of trauma and pulpal pathoses including endo-periodontal situations.
	CO-2	Students would be able to master differential diagnosis and recognize conditions that may require multidisciplinary approach or a clinical situation outside the realm of the specialty, which he or she should be able to recognize and refer to appropriate specialist



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	CO-3	Students would undertake complete patient monitoring including preoperative as well as post operative care of the patient.
	CO-4	Students would perform all levels of surgical and non-surgical Endodontics including endodontic endosseous implants,retreatment as well as endodontic-periodontal surgical procedures as part of multidisciplinary approach to clinical condition
	CO-5	Students would be able to manage acute pulpal and pulpo periodontal situations
Essay	CO-1	Students would diagnose , plan and execute challenging clinical cases requiring comprehensive management strategies using contemporary materials and techniques in the specialty of conservative dentistry and endodontics
<b>Orthodontics &amp; Dentofacial Orthopaedics</b>		
<b>Applied Basic Sciences</b>	CO-1	Anatomy they would have learnt about Prenatal and post natal growth of head, bone growth, assessment of growth and development, muscles of mastication, Development of dentition and occlusion.
	CO-2	Physiology they would have learnt about Endocrinology and its disorders, Calcium and its metabolism, Nutrition-metabolism and their disorders, Muscle physiology, craniofacial biology, bleeding disorders.
	CO-3	Dental Materials they would have learnt about Gypsum products, impression materials, acrylics, composites, banding and bonding cements, wrought metal alloys, orthodontic arch wires, elastics, applied physics, specification and tests methods, survey of all contemporary and recent advances of above.
	CO-4	Physical Anthropology they would have learnt about Evolutionary development of dentition, Evolutionary development of jaws
	CO-5	Pathology they would have learnt about inflammation, and necrosis
	CO-6	Biostatistics they would have learnt about Statistical principles, Sampling and Sampling technique, Experimental models, design and interpretation, Development of skills for preparing clear concise and cogent scientific abstracts and Publication.

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	CO-7	Applied research methodology in Orthodontics they would have learnt about Experimental design, Animal experimental protocol, Principles in the development, execution and interpretation of methodologies in Orthodontics, Critical Scientific appraisal of literature.
<b>Diagnosis &amp; Treatment planning</b>	CO-1	Orthodontic History they would have learnt about Historical perspective, Evolution of orthodontic appliances, Pencil sketch history of Orthodontic peers, History of Orthodontics in India.
	CO-2	Structure and function of all anatomic components of occlusion, Mechanics of articulation, Recording of masticatory function, Diagnosis of Occlusal dysfunction, Relationship of TMJ anatomy and pathology and related neuromuscular physiology.
	CO-3	A comprehensive review of the local and systemic factors in the causation of Malocclusion and Various classifications of malocclusion.
	CO-4	Anatomical, physiological and pathological characteristics of major groups of developmental defects of the orofacial structures.
	CO-5	Stages of child development, Theories of psychological development, Management of child in orthodontic treatment, Management of handicapped child, Motivation and Psychological problems related to malocclusion / orthodontics, Adolescent psychology, Behavioural psychology and communication.
	CO-6	Stages of child development, Theories of psychological development, Management of child in orthodontic treatment, Management of handicapped child, Motivation and Psychological problems related to malocclusion / orthodontics, Adolescent psychology, Behavioural psychology and communication.
	CO-7	Instrumentation, Image processing, Tracing and analysis of errors and applications, Radiation hygiene, Advanced Cephalometrics techniques, Comprehensive review of literature, Video imaging principles and application.
	CO-8	Economics and dynamics of solo and group practices, Personal management, Materials management, Public relations, Professional relationship, Dental ethics and jurisprudence, Office sterilization procedures, Community based Orthodontics
<b>Clinical Orthodontics</b>	CO-1	The strategies to treat developing malocclusion at a younger age.
	CO-2	Treatment regimes using orthopaedic appliances to the appropriate cases.

	CO-3	The strategies to treat the CL/ CP cases with empathy starting with Naso alveolar moulding at the infant stage and then systematically treat the malocclusion using removable / fixed orthodontics during the mixed & permanent dentition by harmonizing the treatment plan with the other members of the multidisciplinary cleft team.
	CO-4	Applied anatomy & physiology regarding to tooth & its surrounding structures will be inculcated into the student, so that the results of application of orthodontic forces can be understood and clinically used.
	CO-5	Diagnosis & treatment planning of cases requiring surgical intervention.
	CO-6	Management of complicated cases requiring a multi-disciplinary approach in patient management.
	CO-7	The designing , construction , fabrication & management of cases using both removable & fixed orthodontics .
	CO-8	A comprehensive view of diagnosing & preventing caries, periodontal diseases to maintain proper inter arch relationship.
	CO-8	Growth guidance, diagnosing & treatment planning of early malocclusion both at mixed/ permanent dentition.
	CO-9	Inculcating the acumen to analyze post treatment stability to prevent any relapse.
<b>Essay</b>	CO-1	The Students would be trained in above mentioned topics in detail, so that the student would know the recent updates along with the previous literature available.
<b>Oral Maxillo Facial Surgery</b>		
<b>Applied Basic Sciences</b>	CO-1	Understand development and growth of face, teeth and jaws, age changes and evaluation of mandible in detail
	CO-2	Understand the surgical anatomy of head and neck region.
	CO-3	Understand Nervous system –physiology of nerve conduction, pain pathway, sympathetic and parasympathetic nervous system, hypothalamus and mechanism of controlling body temperature.

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	CO-4	Study blood - its composition hemostasis, blood dyscrasias and its management, hemorrhage and its control, blood grouping, cross matching, blood component therapy, complications of blood transfusion, blood substitutes, auto transfusion, cell savers. Digestive system - composition and functions of saliva, mastication, deglutition, digestion, assimilation, urine formation, normal and abnormal constituents.
	CO-5	Respiratory system – respiration control of ventilation, anoxia, asphyxia, artificial respiration, hypoxia – type and management
	CO-6	CVS - cardiac cycle, shock, heart sounds, blood pressure, hypertension
	CO-7	Endocrinology - metabolism of calcium , endocrinal activity and disorder relating thyroid gland, parathyroid gland, adrenal gland, pituitary gland, pancreas and gonads.
	CO-8	Nutrition – general principles balanced diet, effect of dietary deficiency, protein energy malnutrition, nutritional assessment, metabolic responses to stress, need for nutritional support ,entails nutrition, roots of access to GIT, parenteral nutrition, access to central veins, nutritional support
	CO-9	Fluid and electrolytic balance / acid base metabolism – the body fluid compartment, metabolism of water and electrolytes, factors maintaining homeostasis causes for treatment of acidosis and alkalosis.
	CO-10	Inflammation – acute and chronic inflammation, repair and regeneration, necrosis and gangrene and role of component system in acute inflammation, role of arachidonic acid and its metabolites in acute inflammation, growth factors in acute inflammation role of NSAIDS in inflammation, cellular changes in radiation injury and its manifestations.
	CO-11	Wound management - wound healing factors influencing healing, properties of suture materials, and appropriate uses of sutures.
	CO-12	Hemostasis - role of endothelium in thrombogenesis, arterial and venous thrombi, disseminated intravascular coagulation.
	CO-13	Hypersensitivity - shock and pulmonary failure, types of shock, diagnosis, resuscitation, pharmacological support, ARDS and its causes and prevention, ventilation and support

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	CO-14	Neoplasia - classification of tumours, carcinogens and carcinogenesis, spread of tumors, characteristics of benign and malignant tumors, grading and staging of tumours various laboratory investigation.
	CO-15	Chromosomal abnormalities with oro- facial manifestations.
	CO-16	Basics of immunology – primary and acquired immuno deficiencies.
<b>Minor Oral Surgery and Trauma</b>	CO-1	The students would be well trained in the assessment and management of: <ol style="list-style-type: none"> <li>1. Basic Exodontia</li> <li>2. Complicated Exodontia</li> <li>3. Surgical management of Impacted teeth</li> <li>4. Ectopically positioned and unerupted teeth</li> <li>5. Tooth Reimplantation and Transplantation</li> <li>6. Surgical uprighting and Repositioning</li> <li>7. Periodontal Considerations for Oral Surgery</li> <li>8. Procedures Involving the Dentogingival Junction</li> <li>9. Pediatric Dentoalveolar Surgery</li> <li>10. Lasers in Oral and Maxillofacial Surgery</li> <li>11. Complications of Dentoalveolar Surgery</li> </ol>
	CO-2	<b>The students would be able to diagnose and manage Medical emergencies like,</b> prevention and management of altered consciousness (syncope, orthostatic hypotension, seizures, diabetes mellitus, adrenal insufficiency), hypersensitivity reactions, chest discomfort, and respiratory difficulty
	CO-3	The students would be knowledgeable about <ol style="list-style-type: none"> <li>1. Diagnosis and Perioperative Management of Head and Neck Injuries</li> <li>2. Basic Principles of Treatment: Hard and Soft Tissue injuries</li> </ol>
	CO-4	The students would be acquainted with the knowledge and clinical skills in the management of . <ol style="list-style-type: none"> <li>1. Dentoalveolar Injuries</li> <li>2. Mandibular Fractures</li> <li>3. Temporomandibular Joint Region Injuries</li> <li>4. Zygomatic Complex Fractures</li> <li>5. Orbital Trauma</li> <li>6. Midface Injuries</li> <li>7. Frontal Sinus Fractures and associated Injuries</li> <li>8. Nasal Injuries</li> <li>9. Soft Tissue Injuries</li> <li>10. Special Soft Tissue Injuries</li> </ol>



11. Avulsive Hard Tissue Injuries
12. Maxillofacial Injuries in Children
13. Maxillofacial Injuries in the Elderly
14. Complex Facial Trauma Patient



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<p><b>Maxillofacial Surgery</b></p>	<p>CO-1</p>	<p><b>The students would be acquainted with the knowledge and clinical skills in the management of</b></p> <p><b>Salivary gland:</b> Sialography, Salivary fistula and management diseases of salivary gland - developmental disturbances, cysts, inflammation and sialolithiasis, Mucocele and Ranula, Tumors of salivary gland and their management, Staging of salivary gland tumors,</p> <p>Parotidectomy</p> <p><b>Temporomandibular Joint:</b> Etiology, history signs, symptoms, examination and diagnosis of temporomandibular joint disorders, Ankylosis and management of the same with different treatment modalities, MPDS and management, Condylectomy - different procedures, Various approaches to TMJ, Recurrent dislocations</p> <p>-</p> <p>Etiology and Management</p> <p><b>Oncology:</b> Biopsy, Management of pre-malignant tumors of head and neck region, Benign and Malignant tumors of Head and Neck region,</p> <p>Staging of oral cancer and tumor markers</p> <p><b>Laser surgery:</b> The application of laser technology in surgical treatment of lesions</p> <p><b>Cryosurgery:</b> Principles, applications of cryosurgery in surgical management</p> <p><b>Cleft lip and palate surgery:</b> Detailed knowledge of the development of the face, head and neck, Diagnosis and treatment planning Current concepts in the management of cleft lip and palate deformity Knowledge of Naso endoscopy and other diagnostic techniques in the evaluation of speech and hearing Concept of multidisciplinary team management</p> <p><b>Aesthetic facial surgery:</b> Detailed knowledge of the structures of the face and neck including skin and underlying soft tissue, Diagnosis and treatment planning of deformities and conditions affecting facial skin, Underlying facial muscles, bone. Eyelids external ear Surgical management of post acne scarring, facelift, blepharoplasty, otoplasty, facial bone recontouring, etc</p> <p><b>Craniofacial surgery:</b> Basic knowledge of developmental anomalies of the face, head and neck, Basic concepts in the diagnosis and planning of various head and neck anomalies including facial clefts, craniosynostosis syndromes, etc. Current concept in the management of Craniofacial anomalies</p> <p><b>Implantology:</b> Principles for the Surgical Placement Of Endosseous Implants, Subperiosteal Implants, The Transmandibular Implant Reconstruction System, Single-tooth</p>
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CO-2

Replacement in Oral Implantology, Posterior Implant Restorations For Partially Edentulous Patients, Maxillary Sinus Grafts and Implants, Surgical Implant Failures, Soft Tissue Considerations

**The students would be acquainted with the knowledge and clinical skills in the management of** oral cancer, Radial Neck dissection, Modes of spread of tumors, Diagnosis and management of tumors of nasal, paranasal, neck, tongue, cheek, maxilla and mandible

Radiation therapy in maxillofacial regions, Lateral neck swellings  
**Orthognathic surgery:** Diagnosis and treatment planning, Cephalometric analysis, Model surgery, Maxillary and mandibular repositioning procedures, Segmental osteotomies, Management of apertognathia, Genioplasty, Distraction osteogenesis

**Cysts and tumor of oro facial region:** Odontogenic and nonOdonfogenic tumors and their management ,Giant lesions of jawbone, Fibro osseous lesions of jawbone, Cysts of jaw



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<b>Essay</b>	CO-1	The students would be able to diagnose, meticulously plan and manage competently various conditions in maxillofacial surgery including challenging cases.
	CO-2	They would be knowledgeable about conventional and recent advances in the diagnosis and management of oral and maxillofacial conditions.
	CO-3	The students would be well versed in basic surgical techniques and knowledgeable about the advanced skills required in maxillofacial surgery.
<b>Oral Medicine and Radiology</b>		
<b>Applied Anatomy, Physiology, Pathology and Pharmacology</b>	CO-1	The student would demonstrate sound theoretical knowledge and understanding of basic relevant sciences namely, the applied anatomy of the face and oral cavity, the basic physiologic processes, pathologic processes and the basics of pharmacologic applications
	CO-2	The student would be proficient in physical examination of the patient, identification of normal and abnormal functioning of the various systems of the body.
<b>Diagnosis, diagnostic methods and imageology and Applied Oral Pathology</b>	CO-1	The student would possess ample understanding and knowledge of diagnosis and diagnostic methods, ionizing radiation, its applications in dentistry and its limitations.
	CO-2	The student would be proficient in detailed physical examination of the oral and paraoral structures, identification of pathologies and techniques involved in conventional and advanced diagnostic radiographic examination.
	CO-3	Apply high moral and ethical standards while carrying out clinical and radiographic examinations.
<b>Oral Medicine, therapeutics and laboratory investigations.</b>	CO-1	The student would be proficient in describing the etiology, pathophysiology, principles of diagnosis and management of common oro facial disorders.
	CO-2	The student would be proficient in formulating a differential diagnosis and investigations plan and frame the treatment strategy.

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*[Signature]*

DIRECTOR

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	CO-3	The student would develop communication skills and ability to explain the disease process to the patient and to obtain a informed consent from the patient.
<b>Essay</b>	CO-1	The student would be proficient ineffectively and freely analyzing the problem presented by recalling factually.
	CO-2	The student would be an expert at synthesizing ideas and rendering a suitable opinion of the problem presented.



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