



Mahatma Gandhi Vidyamandir's
Karmaveer Bhausaheb Hiray Dental College & Hospital
Panchavati Nashik, 422003



SELF STUDY REPORT CYCLE - 1



Criterion 2- Teaching- Learning and Evaluation

Key Indicator – 2.6 Student Performance and Learning Outcome

- 2.6.3** The teaching learning and assessment processes of the
Institution are aligned with the stated learning outcomes.
- QIM**



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Index for Program Specific Learning Outcomes

| Sr.No | Topic | Pg.no |
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| 1 | Program outcomes for BDS | 2-30 |
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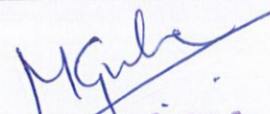


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PROGRAM OUTCOMES FOR BDS PROGRAM

The Program Outcomes given by the institution are formulated as per BDS Course regulations 2007 given by DCI and are based on 'Bloom's Taxonomy'. These learning outcomes are in accordance with 3 domains Knowledge, Skills and Attitude. At the end of the Program, a student should be able to

| PO | PROGRAM OUTCOMES |
|-----|--|
| PO1 | Recognise, remember and possess adequate knowledge of the scientific foundations on which dentistry is based related to development, structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and its effect on general state of health along with physical and social well being of the patient. |
| PO2 | Understand methods which provide a coherent picture of anomalies, lesions and diseases of the teeth, mouth and jaws and preventive diagnostic and therapeutic aspects of dentistry. |
| PO3 | Understand the constitution, biological function and behaviour of persons in health and sickness as well as the influence of the natural and social environment on the state of health in so far as it affect dentistry. |
| PO4 | Apply the knowledge acquired to diagnose and manage various common dental problems encountered in general dental practice .and to apply the current knowledge of dentistry in the best interest of the patients and the community. |
| PO5 | Acquire the skill to prevent and manage complications if encountered while carrying out various surgical and other procedures as well as to possess skill to carry out certain investigative procedures,develop skill to control pain and anxiety among patients during dental treatment. |
| PO6 | Analyse and explain scientifically various established facts and data and should be able to interpret laboratory findings. |
| PO7 | Evaluate effectiveness of patients treatment and gain adequate clinical experience required for general dental practice. |
| PO8 | Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life and to help and participate in the implementation of the national oral health policy. |
| PO9 | Create awareness and provide possible solutions for oral health problems and needs throughout the community, willingness to participate in various programmes, research activities and studies to update the knowledge and professional skill from time to time |


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COURSE OUTCOMES

CO-PO MAPPING

| NAME OF PROGRAM | BDS |
|-----------------|---|
| NAME OF COURSE | HUMAN ANATOMY, EMBRYOLOGY, HISTOLOGY AND MEDICAL GENETICS |

| COURSE OUTCOME (CO) | TOPICS | PROGRAM OUTCOME (PO) |
|---------------------|---|----------------------|
| CO1 | Knowledge and understanding of the general anatomy and general embryology, scalp, face, salivary glands, cervical region, triangles of neck in head and neck | PO1 |
| CO2 | Knowledge and understanding of the anterior midline structures of neck, thyroid and parathyroid gland, deep cervical fascia, supra hyoid and infra hyoid muscles, back of neck, cranio-vertebral joints, cranial nerves, blood vessels and lymphatic drainage of neck, pharynx and larynx in head and neck. | PO1 |
| CO3 | Knowledge and understanding of the temporal and infra temporal regions, teeth, oral cavity, palate, tongue, nose and paranasal air sinuses, orbital cavity and ear in head and neck region | PO1 |
| CO4 | Knowledge and understanding of the cranial cavity, neuroanatomy, thorax and abdomen, development of head & neck region of the human body | PO1 |
| CO5 | Competent in identifying the anatomical structures in osteology related to head & neck and its clinical applications | PO2 |
| CO6 | Competent in identifying the normal anatomical structures in cadaver specimens related to head & neck, thorax & abdomen and its clinical applications | PO2 |
| CO7 | Competent in identifying the developmental, structural and function correlation of the microscopic anatomy of cells and tissues forming organ systems. | PO1, PO2, PO6 |

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|-----|--|-------------|
| CO8 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge to display expertise in the anatomy of head & neck. | PO5,PO6,PO7 |
| CO9 | Ability to critically appraise their own performance across multiple formative assessment completed during the course | PO9 |

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CO-PO MAPPING

| | |
|------------------------|---|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | HUMAN PHYSIOLOGY AND BIOCHEMISTRY, NUTRITION & DIETICS |

| COURSE OUTCOME (CO) | Topics | Program outcomes (PO) |
|----------------------------|---|------------------------------|
| CO1 | Knowledge and understanding of basics of cell physiology, transport mechanisms, blood cells, their functions, and their applied aspects | PO1, PO2 |
| CO2 | Knowledge and understanding of neurons, degeneration and regeneration changes in neurons, neuromuscular transmission, molecular basis of muscle contraction, organization of central nervous system, functions of sensory and motor systems, physiology of special senses and applied aspects. | PO1, PO2 |
| CO3 | Knowledge and understanding about the physiology of heart and blood vessels, body fluids, formation of urine, countercurrent mechanism, physiology of respiratory system, exercise and high altitude physiology, applied aspects, integrated and clinical physiology | PO1, PO2, PO3, PO4 |
| CO4 | Knowledge and understanding about the secretion, functions and regulation of digestive juices, gastro-intestinal motility and applied aspects, general endocrinology, physiological actions, regulation and altered secretion of endocrine hormones, physiology of male and female reproductive system. | PO1 |
| CO5 | Should be competent in interpretation of test results of hematology and recording of blood pressure and pulse rate. | PO4, PO6 |
| CO6 | Should be competent in clinical examination and vital signs, basic life support techniques. | PO3, PO4, PO7, PO8 |
| CO7 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence-based knowledge to display expertise in physiology. | PO7, PO8 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessments completed during the course | PO9 |


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CO-PO MAPPING

| | |
|------------------------|--|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | BIOCHEMISTRY, NUTRITION AND DIETICS |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|---------------------|--|----------------------|
| CO1 | Knowledge and understanding of basic structure of cell and Chemistry of Biomolecules, Enzymes, Salivary biomarkers and biotransformation of metabolites. Biochemistry of Teeth and Dental Caries | PO1 |
| CO2 | Knowledge on Metabolism of Carbohydrates, Lipids, Hemoglobin Proteins, its energetics and associated disorders | PO1, PO2 |
| CO3 | Knowledge and understanding of Dietary requirement, Biochemical functions, Deficiency manifestations of Vitamins and Minerals, Assimilation of Nutrients, Obesity and Malnutrition | PO1 |
| CO4 | Knowledge about Nucleic acid, Nucleotides, Central Dogma, Replication, Transcription, Translation and Genetic code. Disorders of nucleotide metabolism. | PO1, PO2 |
| CO5 | Qualitative and Quantitative Analysis of Normal and Abnormal constituents in Blood and Urine | PO6 |
| CO6 | Diagnostic tests related to Liver, Renal function and Analysis of Electrolytes | PO4, PO6 |
| CO7 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge to display knowledge about the concepts in Biochemistry | PO7, PO9 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessment completed during the course | PO9 |

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CO-PO MAPPING

| | |
|------------------------|---|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | DENTAL ANATOMY, ORAL PHYSIOLOGY, ORAL EMBRYOLOGY, DENTAL HISTOLOGY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|---------------------|--|----------------------|
| CO1 | A sound understanding of nomenclature, development and eruption of teeth, topographic anatomy of primary and secondary dentition, anatomy of pulp chambers & canals and comparative anatomy including form & function. | PO1 |
| CO2 | An in-depth knowledge of concepts of occlusion, mineral metabolism, theories of mineralization, oral sensation, mastication, deglutition and speech. | PO1 |
| CO3 | A thorough understanding of general embryology, embryology of head, face and oral cavity in particular with applied aspects | PO1, PO2 |
| CO4 | Understanding of histological features of hard tissues of the oral and maxillofacial region with emphasis on histochemical techniques, age changes, eruption and shedding | PO1, PO2, PO6 |
| CO5 | Knowledgeably awareness and understanding of the anatomy, functions and histological features and applied aspects of soft tissues of oral and maxillofacial region | PO1, PO2 |
| CO6 | Capability to observe and identify the provided cast (type of arch, dentition, number and age) and tooth specimen | PO1, PO2 |
| CO7 | Display adequate dexterity in carving various types of teeth. | PO5 |
| CO8 | Skills in identification of microscopic features of dental lamina, stages of tooth development, hard and soft tissues of oral and maxillofacial region; in particular the named cells and different types of tissues | PO6 |
| CO9 | Skills to conduct basic Oral Physiology experiments - Salivary pH, Taste Mapping, Saliva Flow Rate | PO4, PO6 |

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|------|---|-----------------|
| CO10 | Consolidate all above mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of dental anatomy | PO4,PO7, PO9 |
| CO11 | Ability to critically appraise their own performance across multiple formative assessments completed during the course | PO9 |



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CO-PO MAPPING

| | |
|------------------------|--------------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | GENERAL PATHOLOGY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|---------------------|---|----------------------|
| CO1 | Knowledge and Understanding of Basic cell injury, its morphological changes and functional abnormalities, Inflammation, healing and hemodynamic disorders | PO1, PO2 |
| CO2 | Knowledge and understanding of classification and pathogenesis to analyze the Congenital, Environmental, Nutritional and Autoimmune diseases and Neoplasia | PO1, PO2 |
| CO3 | Knowledge and understanding of pathogenesis of Hematological diseases and systemic pathology. | PO1 |
| CO4 | Should be capable of reading and understanding pathological slides as well as be proficient in disease grading, staging, and diagnosis. | PO2, PO4, PO6 |
| CO5 | Should be capable of understanding and executing fundamental Laboratory techniques such as tissue processing, staining, blood sample handling and reporting. | PO6 |
| CO6 | Should be capable of communicating with other health professionals, laboratories, and technical experts in order to comprehend and interpret the subsequent treatment | PO4, PO7, PO8 |
| CO7 | Consolidating and applying newly acquired knowledge in evidence-based practices for pathological conditions and disease processes. | PO3, PO5, PO8, PO9 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessment completed during the course | PO9 |

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CO-PO MAPPING

| | |
|------------------------|-----------------------------|
| Name of Program | BDS |
| Name of Course | GENERAL MICROBIOLOGY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|---|-----------------------------|
| CO1 | Knowledge and understanding of the general aspects of microbiology, infection and immunity with the ability to apply the knowledge relevantly and practically in dental practice. | PO1,PO2 |
| CO2 | Should be able to understand the virulence, pathogenesis and laboratory diagnosis of gram positive bacteria, gram negative bacteria anaerobic bacteria, spirochetes and acid-fast bacilli | PO1,PO2,PO6 |
| CO3 | Should imbibe the knowledge on the mechanistic pathways behind the pathogenesis and virulence pertained to viral, mycotic and parasitic infections | PO6,PO7 |
| CO4 | Should be able to follow the aseptic procedures, should be able to demonstrate the proper infection control measures/PPE, hand hygiene measures and bio-medical waste management. | PO4,PO7,PO8 |
| CO5 | Should be able to perform staining methods, proper collection of specimens, selection of appropriate culture medium and specific identification of the pathogens. | PO6 |
| CO6 | Competent in acquiring patient consent and to interpret the microbiological case reports, serological tests and antimicrobial susceptibility tests | PO6,PO7, PO8 |
| CO7 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge to display expertise in the science of Microbiology | PO9 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessments completed during the course | PO9 |

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CO-PO MAPPING

| | |
|------------------------|---|
| Name of Program | BDS |
| Name of Course | GENERAL AND DENTAL PHARMACOLOGY AND THERAPEUTICS |

| COURSE OUTCOME (CO) | TOPICS | PROGRAM OUTCOME (PO) |
|----------------------------|--|-----------------------------|
| CO1 | Knowledge and understanding on General Principles of Pharmacology – Different dosage forms, various routes of administration, pharmacokinetics, pharmacodynamics and adverse effects of drugs in general and dental practice | PO1, PO2 |
| CO2 | Knowledge and understanding Systemic Pharmacology (Drugs acting on CNS, PNS, ANS, and CVS) | PO1 |
| CO3 | Knowledge and understanding Systemic Pharmacology (Drugs acting on renal, respiratory, GIT, endocrine system and blood) | PO1 |
| CO4 | Knowledge on drugs used for Chemotherapy of Infections (bacterial, fungal, viral), immunomodulators, cancer therapy and chelating agents and Dental Pharmacology | PO1 |
| CO5 | Process of making solutions for sterilizing root canals, plaque disclosing solutions, paste for pulp mummification, styptic dusting powder. | PO4, PO6 |
| CO6 | Preparations of saline and potassium permanganate mouthwashes, gum paint. Demonstrating the process of making paste for pulp capping, pulp mummification, and dental caries. Demonstrating the process of making powders to reduce hypersalivation, denture cleaning powder, analgesic powder to have a strong foundation on dental pharmacology | PO1, PO2, PO6 |
| CO7 | Pharmacology to Practice in Dental Clinic - To inculcate the knowledge of prescription writing for oral candidiasis, pericoronitis, apical periodontitis, post-extraction medication, xerostomia, and oral ulcers | PO2, PO3, PO4, PO5, PO7 |
| CO8 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence-based knowledge to treat patients with appropriate drugs without any side effects for various dental diseases. | PO7, PO9 |

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| CO9 | Ability to critically appraise their own performance across multiple formative assessments completed during the course | PO9 |
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CO-PO MAPPING

| | |
|------------------------|-------------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | DENTAL MATERIALS |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|--|-----------------------------|
| CO1 | Should have knowledge and understanding about basic properties of dental materials and Indications, Composition, Chemistry, Properties and use of auxiliary dental materials (Impression materials, Gypsum products, Waxes, Casting investment and casting procedures, materials for finishing and polishing | PO1 |
| CO2 | Should have knowledge on the Indications, Composition, Chemistry, Properties and use of direct restorative materials (Bonding, Composites, Cements Direct filling gold and amalgam | PO1 |
| CO3 | Should have knowledge on the Indications, Composition, Chemistry, Properties and use of indirect restorative materials (Ceramics, Casting alloys, Wrought alloys), denture base resins and oral and maxillofacial prosthetic materials | PO1 |
| CO4 | Knowledge of scope and use of preventive materials- fluorides, pit and fissure. Sealants, dentifrices, mouthwashes, obtundants and desensitizing agents | PO1,PO2 |
| CO5 | Ability to manipulate and utilize restorative dental materials for clinical procedures | PO5 |
| CO6 | Ability to manipulate impression materials and gypsum products for diagnostic and laboratory purposes in dentistry | PO5 |
| CO7 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge to display expertise in the application of various dental materials into clinical practice | PO6,PO7 |
| CO8 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge to display expertise in the application of various dental materials into clinical practice | PO9 |

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CO-PO MAPPING

| | |
|------------------------|--|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | PRE CLINICAL CONSERVATIVE DENTISTRY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|--|-----------------------------|
| CO1 | Demonstrate knowledge and understanding of operative dentistry, dental anatomy, histology and occlusion. | PO1,PO5 |
| CO2 | Demonstrate knowledge and understanding of various concepts in cariology and explain the etiology and formulate of treatment plan | PO2 |
| CO3 | Demonstrate knowledge and understanding of restorative materials, hand and rotary cutting instruments and principles | PO1,PO2,PO5 |
| CO4 | Understanding the fundamentals of tooth preparation, isolation techniques and identification of basic endodontic instruments | PO1 |
| CO5 | Demonstrate class I, class I extended, class II,III, V cavity preparations including various methods of tooth separation, pulpal protection and restoration (amalgam, composite, glass ionomer) on plaster models, natural teeth, typodont on phantom heads, including selection of armamentarium for conservative treatment | PO1,PO5 |
| CO6 | Ability to identify various restorative and endodontic instruments and demonstrate their use. Demonstrate rubber dam isolation | PO1,PO2 |
| CO7 | Demonstrate coronal access cavity preparation on extracted incisors, canines, premolars, maxillary and mandibular molars. Perform complete endodontic therapy for maxillary central incisor. | PO1,PO2,PO4 |
| CO8 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of preclinical conservative dentistry | PO5,PO7 |
| CO9 | Ability to critically appraise their own performance across multiple formative assessments completed during the course | PO9 |

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CO-PO MAPPING

| | |
|------------------------|------------------------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | PRE CLINICAL PROSTHODONTICS |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|--|-----------------------------|
| CO1 | knowledge and understanding of the anatomy of denture bearing areas, materials used, armamentarium and the process of complete denture fabrication | PO1 |
| CO2 | Demonstrate knowledge and understanding of various classifications of partial edentulism, surveying, components and the process of removable partial denture fabrication. | PO1, PO2 |
| CO3 | Demonstrate knowledge and understanding of parts of fixed partial dentures, implants and various types of maxillofacial prosthesis including materials used. | PO1, PO2 |
| CO4 | Demonstrate instrument handling and laboratory skills of complete denture fabrication. | PO1, PO2, PO6 |
| CO5 | Demonstrate surveying and laboratory skills of removable partial denture fabrication. | PO2, PO6 |
| CO6 | Demonstrate skills in identification of various parts of fixed partial denture, Principles of tooth preparation, implants and various maxillofacial prosthesis including the materials used. Demonstrate skill in performing tooth preparation on typodont model | PO5 |
| CO7 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of preclinical prosthodontics | PO5, PO7, PO9 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessments completed during the course | PO9 |

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CO-PO MAPPING

| | |
|------------------------|-------------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | GENERAL MEDICINE |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|---|-----------------------------|
| CO1 | A sound understanding of pathophysiology, clinical features, radiographic characteristics (wherever applicable) and Treatment of the viral infections, parasitic infections, bacterial infections with special emphasis on oral manifestations, including dental infections, gingival hyperplasia and stomatitis. | PO1, PO2, |
| CO2 | In-depth knowledge of pathophysiology, clinical features, radiographic characteristics (wherever applicable) and treatment of dysphagia, peptic ulcer, jaundice, cirrhosis, GERD, malabsorption and inflammatory bowel disease, nephrotic syndrome and renal failure | PO1, PO2 |
| CO3 | Proficiency in understanding and identification of the clinical features, radiographic characteristics (wherever applicable) and treatment of facial palsy, facial pains, headaches, cerebrovascular accidents, movement and mood disorders, syncope, short trauma, pneumonia, COPD, asthma, sleep disorders, pulmonary diseases and cardiovascular disorders | PO1, PO2 |
| CO4 | Sensitisation to the basics of blood disorders, nutrition, endocrine disorders with special emphasis on oral manifestations and treatment aspects. | PO2, PO4, PO5 |
| CO5 | Ability to perform history taking and general examination of all systems and reach a diagnosis with special emphasis on oral manifestations of systemic disorders | PO3, PO4, PO5 |
| CO6 | Ability to identify various emergencies during dental procedures and perform basic life support procedures and referral. | PO3, PO4, PO5, PO7 |
| CO7 | Consolidate all above mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of general medicine. | PO9 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessments completed during the course | PO9 |

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CO-PO MAPPING

| | |
|------------------------|------------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | GENERAL SURGERY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|---------------------|---|----------------------|
| CO1 | A sound understanding of basic human anatomy, principles of general surgery and various types of orodental diseases and knowledge about the normal woundhealing, various types of wounds and its management, complications of woundhealing, infectious diseases and its management. | PO1,PO2 |
| CO2 | Understanding the pathophysiology of various types of shock, hemorrhage andtheir management | PO1,PO2, |
| CO3 | Proficiency in understanding the clinical features, investigations and management of various types of ulcers, tumors, cyst, diseases of the lymphatic and nervous system and salivary gland disorders | PO1,PO2,PO4,PO5, PO7 |
| CO4 | Knowledge about clinical features, investigations and treatment of various fractures affecting the head and neck, diseases of oral cavity, larynx, nasopharynx, thyroid disorders | PO1,PO2,PO4,PO5, PO7 |
| CO5 | Ability to elicit history, perform clinical examination and diagnose the variouspathologies. | PO2,PO4,PO5, PO7 |
| CO6 | Skills in interpreting the radiographic and histologic findings and correlating with clinical findings. | PO6,PO7 |
| CO7 | Identify various instruments used in general surgical procedures, and demonstrate first aid steps and correct infection control practices | PO1,PO6,PO4 |

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| CO9 | Ability to critically appraise their own performance across multiple formative assessments completed during the course | PO9 |
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CO-PO MAPPING

| | |
|------------------------|---|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | ORAL & MAXILLOFACIAL PATHOLOGY AND ORAL MICROBIOLOGY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|---|-----------------------------|
| CO1 | A sound understanding of pathophysiology, clinical features, radiographic characteristics (wherever applicable), histological features and treatment of the preneoplastic and neoplastic lesions affecting the oral and maxillofacial regions with special emphasis on the recent concepts in the pathogenesis of neoplasia | PO1,PO2 |
| CO2 | In-depth knowledge of pathophysiology, clinical features, radiographic characteristics (wherever applicable), histological features and treatment of developmental disorders and non neoplastic conditions including infectious diseases, injuries and cysts affecting the head and neck region. | PO,PO2 |
| CO3 | Proficiency in understanding and identification of the clinical features, radiographic characteristics (wherever applicable), histological features and treatment of oral manifestations of systemic diseases. | PO1,PO2 |
| CO4 | Ability to identify and interpret the anomalies in the provided tooth specimen and casts | PO1,PO6 |
| CO5 | Skills in identification of microscopic features of all the diseases and cytological smears pertaining to the craniofacial region along with drawing histopathological features with legible labeled diagrams. | PO1,PO6 |
| CO6 | Consolidate all above mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of oral pathology and microbiology. | PO7,PO9 |
| CO7 | Ability to critically appraise their own performance across multiple formative assessments completed during the course. | PO9 |

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CO-PO MAPPING

| | |
|------------------------|----------------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | FORENSIC ODONTOLOGY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME |
|---------------------|--|--------------------|
| CO1 | Obtain comprehensive knowledge about Forensic Odontology and its implementation in practice of dentistry. | PO1, PO2 |
| CO2 | Ability to apply knowledge of facial reconstruction techniques using manual methods and recent softwares. | PO1, PO6 |
| CO3 | Thorough knowledge on identifying the age and gender of an individual using recent forensic identification methods. | PO3, PO4, PO6 |
| CO4 | Knowledge about the molecular analyses of blood, saliva and pulpal tissue for post mortem identification | PO6 |
| CO5 | Ability to assist and solve cases of forensic sciences with specific requirements of dental aids | PO3, PO4, PO6 |
| CO6 | Ability to identify cases of domestic violence including child abuse, elderly abuse and spousal abuse using the knowledge of oral clinical signs including bite marks and behavioural changes. | PO3, PO4, PO6, PO8 |
| CO7 | Consolidating and applying newly acquired knowledge in evidence-based practices in Forensic Dental Investigation and Medico Legal Cases. | PO8, PO9 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessments completed during the course. | PO9 |

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CO-PO MAPPING

| | |
|------------------------|--------------------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | PUBLIC HEALTH DENTISTRY |

| COURSE OUTCOME (CO) | Topics | PROGR AM OUTCO ME (PO) |
|----------------------------|---|-------------------------------|
| CO1 | Demonstrate knowledge on Health, disease and its psychosocial and ecological dimensions, epidemiology, Health care delivery system and administration | PO1,PO2 |
| CO2 | Demonstrate knowledge on Epidemiology of oral diseases, dental health care delivery, Finance and practice management, biostatistics and research methodology pertaining to dental public health. | PO2,PO3, PO4 |
| CO3 | Demonstrate knowledge on prevention of oral diseases and also to be competent enough to interpret signs and symptoms and also to investigate and diagnose common oral diseases | PO1,PO2, PO4,PO6 |
| CO4 | Demonstrate segregation of Biomedical waste and its management and related regulations, Preparedness to be part of disaster relief team | PO3,PO8, PO9 |
| CO5 | Demonstrate skills for recording indices for oral diseases formulating surveys, analyzing and publishing research, recording a comprehensive case history and formulate treatment plan at individual level and community. | PO3,PO4,P O6,PO8 |
| CO6 | Demonstrate skills for performing preventive dentistry procedures like pit and fissure sealant, PRR, Topical Fluoride and also to carry out counseling sessions | PO5,PO7, PO9 |
| CO7 | Integrate the knowledge acquired in the entire program and apply it towards newer modifications as evidence based concepts in practicing principles of public health dentistry and preventive care. | PO9, |
| CO8 | Ability to critically appraise their own performance across multiple formative assessments completed during the course. | PO9 |

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CO-PO MAPPING

| | |
|------------------------|-----------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | PERIODONTOLOGY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|--|-----------------------------|
| CO1 | Knowledge and understanding of basic tissues of periodontium, age changes and defense mechanisms. | PO1 |
| CO2 | Knowledge and understanding of diseases of periodontium, etiopathogenesis, risk factors associated with periodontal disease and various diagnostic aids for diagnosis of periodontal disease. | PO1,PO2 |
| CO3 | Knowledge about the treatment plan, various modes of periodontal therapy(including laser therapy) and implant therapy. | PO1 |
| CO4 | Should be competent in periodontal charting, interpretation of radiographs and other investigations | PO6 |
| CO5 | Should be competent in correct diagnosis, prognosis and framing a comprehensive treatment plan for various periodontal and peri-implant diseases. Also should be able to convince patients of the need for therapy and obtain consent. | PO2,PO3,PO5 |
| CO6 | Competent in acquiring patient consent and executing nonsurgical periodontal therapy and minor surgical procedures (including laser assisted procedures) | PO3,PO4,PO5 |
| CO7 | Able to educate patients regarding oral hygiene maintenance and successful followup to maintain and improve periodontal health. | PO3,PO4 |
| CO8 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge to display expertise in the science of Periodontology. | PO7,PO8,PO9 |
| CO9 | Ability to critically appraise their own performance across multiple formative assessments completed during the course. | PO9 |

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CO-PO MAPPING

| | |
|------------------------|--|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|------------------------------------|--|-------------------------------------|
| CO1 | Knowledge and understanding of Instruments & Materials used in Orthodontics. | PO1 |
| CO2 | Understand the impact of Growth & development of cranio facial structures, dental arches / occlusion and predict their impact on malocclusion. | PO1 |
| CO3 | Etiology of various malocclusions, diagnostic aids used and the principles used in the treatment planning of the malocclusions. | PO1 |
| CO4 | Knowledge about the biology and biomechanics behind the orthodontic tooth movement. | PO1 |
| CO5 | Able to communicate with patients, in diagnosing various skeletal and dental malocclusions, self correcting anomalies, TMJ conditions, deforming Habits and other craniofacial deformities. | PO3,PO4 |
| CO6 | Should be competent in interpreting an OPG, cephalograms for diagnosis of malocclusions, assess the growth status and dental eruptive status, | PO6 |
| CO7 | Should be competent in different procedures performed in preventive, interceptive and corrective orthodontics and be able to create awareness and convince patient for treatment with their consent. | PO4,PO6,PO7 |
| CO8 | Should demonstrate skills for wire bending and fabrication of removable appliances. Independently perform procedures like impression making, fabrication and clinical management of removable appliances, bonded and removable retainers and orthodontic emergencies | PO5,PO6 |
| CO9 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge to display expertise in the science of Orthodontics | PO7,PO8, PO9 |
| CO10 | Ability to critically appraise their own performance across multiple informative assessments completed during the course. | PO9 |

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CO-PO MAPPING

| | |
|------------------------|---------------------------------------|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | ORAL AND MAXILLOFACIAL SURGERY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|---|-----------------------------|
| CO1 | Knowledge and understanding basic concepts of sterilization and asepsis and its clinical implications; pathophysiology, management and prevention of medical emergencies; neurophysiology, pharmacology, applied anatomy, armamentarium, techniques and complications of local anesthesia, conscious sedation and general anesthesia, Emergency management. | PO1,PO2 |
| CO2 | Knowledge and understanding of principles and techniques of extractions and transalveolar extractions, pathophysiology and management of odontogenic infections, maxillofacial space infections, pathophysiology of maxillary sinus diseases and management, basics of dental implantology, basics of preprosthetic surgery, biopsy techniques. | PO1,PO2 |
| CO3 | Understanding clinical features, radiological diagnosis and management of maxillofacial trauma; Understanding treatment planning and procedures performed in orthognathic surgery; diagnosis and management of Temporomandibular Disorders | PO1,PO2 |
| CO4 | Understanding and describing the theories, classification and management of cleft lip, alveolus and palate, clinical features and management of cysts of jaws, benign tumors, salivary gland pathologies, precancerous conditions and lesions, Oral cancer, neurological disorders and head and neck pain | PO1 |
| CO5 | Should be competent in oral and maxillofacial surgery case history taking, interpretation of radiographs and other investigations, diagnosing and formulating appropriate treatment plan. | PO2,PO4,PO5, PO6 |
| CO6 | Should be competent in identification of basic | PO2,PO7 |

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| | surgical armamentarium, perform suturing, incision, flap elevation, local anesthesia, basic dental wiring techniques. | |
| CO7 | Competent in executing minor oral surgical procedures - atraumatic dental extraction | PO5,PO7 |
| C08 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of Oral and Maxillofacial Surgery. | PO7,PO8,PO9 |
| CO9 | Ability to critically appraise their own performance across multiple formative assessments completed during the course. | PO9 |

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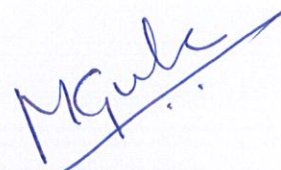
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CO-PO MAPPING

| NAME OF PROGRAM | BDS |
|-----------------|---|
| NAME OF COURSE | CONSERVATIVE DENTISTRY AND ENDODONTICS |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|---------------------|---|----------------------|
| CO1 | Knowledge and understanding of aetiopathogenesis, risk assessment, minimally invasive management and prevention of dental caries. Deep caries management. Understanding the importance of infection control in the operating area and the instruments used. Knowledge about the isolation protocols and gingival tissue management during restorative procedures. | PO1 |
| CO2 | Knowledge and understanding of the use of tooth colored restorative materials for anterior teeth (glass ionomer restoration or composite restoration). Knowledge and understanding of the use of restorative materials for posterior teeth (amalgam, pin-retained amalgam, composite, direct filling gold and indirect restoration). Non carious disfigurement of teeth and dentin hypersensitivity. | PO1,PO2 |
| CO3 | Knowledge and understanding about pulpal and periapical diseases, diagnosis, patient management for root canal procedure. Materials, instruments and equipment used for endodontic procedures. Knowledge and understanding about the mishaps, re-treatment procedures and the surgical endodontic management of teeth. | PO1,PO2 |
| CO4 | Knowledge and understanding about the diagnosis and the treatment planning for post endodontic restoration. Management of teeth with open apex, root resorption, endodontic emergencies, traumatic injuries and management of discolored teeth. Knowledge about management of medically compromised patients, pediatric, geriatric endodontics, use of lasers, financial management and ethics in endodontics | PO1,PO2 |
| CO5 | Skill development on the risk assessment and diagnosis of dental caries. Perform direct/indirect pulp capping for deep caries management | PO5,PO7 |
| CO6 | Demonstrate the skill in the restoration of anterior teeth with tooth colored restorative materials like glass ionomer or composite | PO5,PO7 |

| | | |
|------|---|-------------|
| CO7 | Demonstrate the skill in the restoration of posterior teeth with amalgam or composite or indirect restoration including hypersensitivity. | PO5,PO7 |
| CO8 | Skill development in diagnosis, access cavity preparation, working length determination, biomechanical preparation and obturation of root canal system. | PO5,PO6,PO7 |
| CO9 | Skill development in the restoration of endodontically treated teeth. | PO5,PO7 |
| CO10 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge to display expertise in the science of Conservative Dentistry & Endodontics. | PO7,PO8,PO9 |
| CO11 | Ability to critically appraise their own performance across multiple formative assessments completed during the course. | PO9 |



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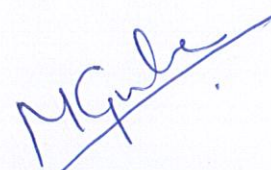
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CO-PO MAPPING

| | |
|------------------------|--|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | ORAL AND MAXILLOFACIAL PROSTHODONTICS |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|---------------------|--|----------------------|
| CO1 | Knowledge and understanding of orofacial applied anatomy, pathophysiology & biomechanics of stomatognathic system, patient's mental attitude, diagnosis, treatment planning and rehabilitation of various completely edentulous clinical scenarios including the materials and armamentarium prescribed. | PO1, PO2 |
| CO2 | Knowledge and understanding of various classifications of partial edentulism, surveying, types of removable partial dentures, components of cast partial dentures, diagnosis, treatment planning and rehabilitation of partial edentulous state including the laboratory procedures. Demonstrate knowledge of various maxillary and mandibular defects and its rehabilitation. | PO1, PO2 |
| CO3 | Knowledge and understanding of various terminologies, components of fixed partial dentures, principles of tooth preparation of various clinical scenarios including the materials and armamentarium used. Demonstrate knowledge on implant biomaterials, implant designs and treatment options of various clinical scenarios. Knowledge and understanding of principles of digital dentistry and its uses in prosthodontics. | PO1, PO2 |
| CO4 | Able to communicate with patients and acquire informed consent, record case history, treatment plan, perform clinical skills like Impression making, Jaw relation, Trial or Insertion skills in the rehabilitation of completely edentulous state including the troubleshoot management. | PO3, PO4, PO5 |
| CO5 | Patient evaluation, clinical diagnosis, treatment planning and perform clinical and laboratory procedures for the fabrication of removable partial dentures including surveying and designing of the prosthesis. | PO2, PO5, PO7 |
| CO6 | Able to perform clinical examination, diagnosis, treatment planning, | PO5, PO7 |

| | | |
|-----|---|--------------|
| | clinical and laboratory procedures for the fabrication of fixed partial denture including shade selection and luting agents. Demonstrate skill on identification of various implant superstructure components and able to assist in implant prosthetic restoration. | |
| CO7 | Consolidate all above-mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of prosthodontics. | PO7,PO8, PO9 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessments completed during the course. | PO9 |



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CO-PO MAPPING

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|------------------------|--|
| NAME OF PROGRAM | BDS |
| NAME OF COURSE | PAEDIATRIC AND PREVENTIVE DENTISTRY |

| COURSE OUTCOME (CO) | Topics | PROGRAM OUTCOME (PO) |
|----------------------------|---|-----------------------------|
| CO1 | Demonstrate knowledge on essentials of Pediatric Dentistry, theoretical basis of Child Psychology and Behaviour management | PO1,PO3 |
| CO2 | Demonstrate knowledge on growth and development, preventive and interceptive orthodontics, trauma management and surgical pediatric dentistry | PO1,PO2 |
| CO3 | Demonstrate knowledge on diagnosis, management and prevention of dental caries | PO2 |
| CO4 | Demonstrate skills on diagnosing dental problems in children, fabricating comprehensive treatment plan, assessing the attitude of child's behaviour towards dental practice, judge the required behaviour management protocol and obtain consent. | PO4,PO5 |
| CO5 | Demonstrate skills on assessing growth & development and provide preventive & interceptive orthodontics, management of dental trauma & surgical pedodontics. | PO5 |
| CO6 | Demonstrate skills on diagnosis, management and prevention of dental caries. | PO5 |
| CO7 | Consolidate all above-mentioned major competencies acquired during the course and integrate new evidence based knowledge in displaying expertise in the science of Pedodontics. | PO7,PO8, PO9 |
| CO8 | Ability to critically appraise their own performance across multiple formative assessments completed during the course. | PO9 |

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PROGRAM OUTCOMES FOR M.D.S.

The Program Outcomes for M.D.S given by the institution are formulated as per MDS Course regulations 2017 given by D.C.I and are based on "Bloom's Taxonomy". These outcomes are in accordance with 3 domains Knowledge, Skills and Human values, ethical practice and communication skills. At the end of the Program, a Post-graduate student should be able to

| PO | PROGRAM OUTCOMES |
|-----|--|
| PO1 | Remember and describe etiology, pathophysiology, principles of diagnosis and management of common problems within the speciality in adults and children; as well as identify social, economic, environmental and emotional determinants in a given case and take them into account for planned treatment |
| PO2 | Recognise conditions that may be outside the area of speciality or competence and to refer them to the concerned specialist and update knowledge by self study and by attending courses, conferences and seminars pertaining to speciality. |
| PO3 | Demonstrate understanding of basic sciences relevant to speciality. |
| PO4 | Take a proper clinical history, examine the patient, perform essential diagnostic procedures and order relevant tests and interpret them to come to a reasonable diagnosis about the condition and acquire adequate skills and competence in performing various procedures as required in the speciality. |
| PO5 | Adopt ethical principles in all aspects of practice; foster professional honesty and integrity; deliver patient care irrespective of social status, caste, creed, or religion of the patient; develop communication skills, to explain various options available and obtain a true informed consent from the patient |
| PO6 | Undertake audit, use information technology and carry out research in both basic and clinical with the aim of publishing or presenting the work at various scientific gathering |
| PO7 | Provide leadership and get the best out of his team in a congenial working atmosphere; apply high moral and ethical standards while carrying out human or animal research; be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed; respect patient's rights and privileges including patient's right to information and right to seek a second opinion. |

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PROGRAM OUTCOME FOR M.D.S CONSERVATIVE DENTISTRY AND ENDODONTICS

The following outcomes are laid out to achieve the goals of the course. These are to be achieved by the time the candidate completes the course.

These outcomes may be considered under the following subtitles.

PO1- Knowledge:

At the end of the program, a postgraduate should be able to:

1. Describe etiology, pathophysiology, periapical diagnosis and management of common restorative situations, endodontic situations that will include contemporary management of dental caries, management of trauma and pulpal pathosis including periodontal situations.
2. Demonstrate understanding of basic sciences as relevant to conservative / restorative dentistry and Endodontics.
3. Identify social, economic, environmental and emotional determinants in a given case or community and take them into account for planning and execution at individual and community level.
4. Ability to master differential diagnosis and recognize conditions that may require multi disciplinary 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.
5. Update himself by self-study and by attending basic and advanced courses, conferences, seminars, and workshops in the specialty of Conservative Dentistry-Endodontics-Dental Materials and Restorative Dentistry.
6. Ability to teach/guide, colleagues and other students.
7. Use information technology tools and carry out research both basic and clinical with the aim of his publishing his work and presenting the same at scientific platform.

PO2- Skills:

1. 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.
2. 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.
3. Provide basic life saving support in emergency situations.
4. Manage acute pulpal and pulpo periodontal situations.
5. Have a thorough knowledge of infection control measures in the dental clinical environment and laboratories.
6. Should have proper knowledge of sterilization procedures

PO3- Human Values, Ethical Practice and Communication Abilities –

1. Adopt ethical principles in all aspects of restorative and contemporary Endodontics including non-surgical and surgical Endodontics.
2. Professional honesty and integrity should be the top priority.
3. Dental care has to be provided regardless of social status, caste, creed or religion of the patient.
4. Develop communication skills in particular to explain various options available for management and to obtain a true informed consent from the patient.
5. Apply high moral and ethical standards while carrying on human or animal research.
6. He/She shall not carry out any heroic procedures and must know his limitations in performing all aspects of restorative dentistry including Endodontics. Ask for help from colleagues or seniors when required without hesitation.
7. Respect patient's rights and privileges including patients right to information.

COURSE OUTCOMES- PART I

PART I- Applied Basic Sciences:

| Course Outcome (CO) | DESCRIPTION |
|---------------------|--|
| CO1 | Demonstrate understanding of basic sciences as relevant to conservative / restorative dentistry and Endodontic |
| CO2 | Should have proper knowledge of sterilization procedures |
| CO3 | Provide basic life saving support in emergency situations |

CO-PO MAPPING

| | |
|-----------------|--|
| Name Of Program | MDS Conservative Dentistry And Endodontics |
| Name Of Course | Part 1- Applied Basic Sciences |

| | PO1 | PO2 | PO3 |
|-----|-----|-----|-----|
| CO1 | √ | √ | √ |
| CO2 | √ | √ | |
| CO3 | √ | √ | √ |

COURSE OUTCOMES- PART II

| COURSE OUTCOMES (CO) | DESCRIPTION |
|----------------------|--|
| CO1 | Describe etiology, pathophysiology, periapical diagnosis and management of common restorative situations, endodontic situations that will include contemporary management of dental caries, management of trauma and pulpal pathosis including periodontal situations. . |
| CO2 | 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 |
| CO3 | Manage acute pulpal and pulpo periodontal situations. |
| CO4 | Ability to master differential diagnosis and recognize conditions that may require multi disciplinary 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. |
| CO5 | 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 |
| CO6 | Adopt ethical principles in all aspects of restorative and contemporary Endodontics including non-surgical and surgical Endodontics. Professional honesty and integrity should be the top priority. Apply high moral and ethical standards while carrying on human or animal research |
| CO7 | Develop communication skills in particular to explain various options available for management and to obtain a true informed consent from the patient. |

| CO-PO MAPPING | |
|----------------------|--|
| Name Of Program | MDS Conservative Dentistry And Endodontics |
| Name Of Course | Part II Paper I- Conservative Dentistry Paper II -Endodontics Paper III -Descriptive &Analysing Type Question |

| | PO1 | PO2 | PO3 |
|------------|------------|------------|------------|
| CO1 | √ | | |
| CO2 | | √ | |
| CO3 | √ | √ | |
| CO4 | √ | √ | |
| CO5 | √ | √ | √ |
| CO6 | | √ | √ |
| CO7 | | √ | |

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PROGRAM OUTCOME FOR M.D.S PROSTHODONTICS & CROWN AND BRIDGE

Training program for the dental graduates in Prosthetic dentistry– removable dental prosthodontics, fixed dental prosthodontics (Crown & Bridge), implantology, maxillofacial prosthodontics and esthetic dentistry and Crown & Bridge including Implantology is structured to achieve knowledge and skill in theoretical and clinical laboratory, attitude, communicative skills and ability to perform research with a good understanding of social, cultural, educational and environmental background of the society.

1. To have adequate acquired knowledge and understanding of applied basic and systemic medical sciences, both in general and in particularly of head and neck region.
2. The postgraduates should be able to provide Prosthodontic therapy for patients with competence and working knowledge with understanding of applied medical, behavioral and clinical science, that are beyond the treatment skills of the general BDS graduates and MDS graduates of other specialties,
3. To demonstrate evaluative and judgment skills in making appropriate decisions regarding prevention, treatment, after care and referrals to deliver comprehensive care to patients.

PO1- KNOWLEDGE:

The candidate should possess knowledge of applied basic and systemic medical sciences.

1. On human anatomy, embryology, histology, applied in general and particularly to head and neck, Physiology & Biochemistry, Pathology Microbiology & virology; health and diseases of various systems of the body (systemic) principles in surgery and medicine, pharmacology, nutrition, behavioral science, age changes, genetics, Immunology, Congenital defects & syndromes and Anthropology, Bioengineering, Bio-medical & Biological PrincipleS

2. The student shall acquire knowledge of various Dental Materials used in the specialty and be able to provide appropriate indication, understand the manipulation characteristics, compare with other materials available, be adept with recent advancements of the same.
3. Students shall acquire knowledge and practice of history taking, Diagnosis, treatment planning, prognosis, record maintenance of oral, craniofacial and systemic region.
4. Ability for comprehensive rehabilitation concept with pre prosthetic treatment plan including surgical re-evaluation and prosthodontic treatment planning, impressions, jaw relations, utility of face bows, articulators, selection and positioning of teeth, teeth arrangement for retention, stability, esthetics, phonation, psychological comfort, fit and insertion. Instructions for patients in after care and preventive Prosthodontics and management of failed restorations shall be possessed by the students.
5. Understanding of all the applied aspects of achieving physical, psychological well-being of the patients for control of diseases and / or treatment related syndromes with the patient satisfaction and restoring function of Cranio mandibular system for a quality life of a patient.
6. Ability to diagnose and plan treatment for patients requiring Prosthodontic therapy.
7. Ability to read and interpret radiographs, and other investigations for the purpose of diagnosis and treatment planning.
8. The theoretical knowledge and clinical practice shall include principles involved for support, retention, stability, esthetics, phonation, mastication, occlusion, behavioral, psychological, preventive and social aspects of Prosthodontics science of Oral and Maxillofacial Prosthodontics and Implantology.
9. Tooth and tooth surface restorations, Complete denture Prosthodontics, removable partial denture Prosthodontics, fixed prosthodontics and maxillofacial and Craniofacial Prosthodontics, implants and implant supported Prosthodontics, T.M.J. and occlusion, craniofacial esthetics, and biomaterials, craniofacial disorders, problems of psychogenic origin.
10. Should have knowledge of age changes, geriatric psychology, nutritional considerations and prosthodontic therapy in the aged population.
11. Should have ability to diagnose failed restoration and provide prosthodontic therapy and after care. Should have essential knowledge on ethics, laws, and Jurisprudence and Forensic Odontology in Prosthodontics.
12. Should know general health conditions and emergency as related to prosthodontics treatment like allergy of various materials and first line management of aspiration of prosthesis.

13. Should identify social, cultural, economic, environmental, educational and emotional determinants of the patient and consider them in planning the treatment.
14. Should identify cases, which are outside the area of his specialty / competence, refer them to appropriate specialists and perform interdisciplinary case management.
15. To advice regarding case management involving surgical and interim treatment. Should be competent in specialization of team management in craniofacial prosthesis design.
16. To have adequate acquired knowledge, and understanding of applied basic, and systemic medical science knowledge in general and in particular to head and neck regions.
17. Should attend continuing education programmes, seminars and conferences related to Prosthodontics, thus updating himself/herself. To teach and guide his/her team, colleagues and other students.
18. Should be able to use information technology tools and carry out research both in basic and clinical areas, with the aim of publishing his/ her work and presenting his/her work at various scientific forums.
19. Should have an essential knowledge of personal hygiene, infection control, prevention of cross infection and safe disposal of waste, keeping in view the risk of transmission of potential communicable and transmissible infections like Hepatitis and HIV.
20. Should have an ability to plan and establish Prosthodontics clinic/hospital teaching department and practice management.
21. Should have a sound knowledge (of the applications in pharmacology, effects of drugs on oral tissues and systems of body and in medically compromised patients.

PO2- SKILLS:

1. The candidate should be able to examine the patients requiring Prosthodontic therapy, investigate the patient systemically, analyze the investigation results, radiographs, diagnose the ailment, plan the treatment, communicate it with the patient and execute it .
2. To understand the prevalence and prevention of diseases of craniomandibular system related to prosthetic dentistry.
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.
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.

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.
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
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.
8. To identify target diseases and create awareness amongst the population regarding Prosthodontic therapy.
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
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 .
11. To understand demographic distribution and target diseases of Cranio mandibular region related to Prosthodontics.

PO3- ATTITUDES:

1. To adopt ethical principles in Prosthodontic practice, Professional honesty, credibility and integrity are to be fostered. Treatment to be delivered irrespective of social status, caste, creed or religion of patient.
2. Should be willing to share the knowledge and clinical experience with professional colleagues.
3. Should develop an attitude towards quality, excellence, ***non-compromising*** in treatment.
4. Should be able to self-evaluate, reflect and improve on their own.
5. Should pursue research in a goal to contribute significant, relevant and useful information, concept or methodology to the scientific fraternity.
6. Should be able to demonstrate ***evidence-based*** practice while handling cases.
7. Should be willing to adopt new methods and techniques in prosthodontics from time to time based on scientific research, which are in patient's best interest.
8. Should respect patient's rights and privileges, including patient's right to information and right to seek second opinion.

PO4- COMMUNICATIVE ABILITIES:

1. To develop communication skills, in particular **and** to explain treatment options available in the management.
2. To provide leadership and get the best out of his / her group in a congenial working atmosphere.
3. Should be able to communicate in simple understandable language with the patient and explain the principles of prosthodontics to the patient. He/She should be able to guide and counsel the patient with regard to various treatment modalities available.
4. To develop the ability to communicate with professional colleagues through various media like Internet, e-mails, videoconferences etc. to render the best possible treatment.
5. Should demonstrate good explanatory and demonstrating ability as a teacher in order to facilitate learning among students

COURSE OUTCOMES- PART I**PART I- Applied Basic Sciences:**

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|---|
| CO1 | Should possess knowledge of applied basic and systemic medical sciences. On human anatomy, embryology, histology, applied in general and particularly to head and neck, Physiology & Biochemistry, Pathology Microbiology & virology; health and diseases of various systems of the body (systemic) principles in surgery and medicine, pharmacology, nutrition, behavioral science, age changes, genetics, Immunology, Congenital defects & syndromes and Anthropology, Bioengineering, Bio-medical & Biological Principles |
| CO2 | To have adequate acquired knowledge, and understanding of applied basic, and systemic medical science knowledge in general and in particular to head and neck regions. |
| CO3 | The student shall acquire knowledge of various Dental Materials used in the specialty and be able to provide appropriate indication, understand the |

| | |
|------------|--|
| | manipulation characteristics, compare with other materials available, be adept with recent advancements of the same |
| CO4 | To adopt ethical principles in Prosthodontic practice, Professional honesty, credibility and integrity are to be fostered. Treatment to be delivered irrespective of social status, caste, creed or religion of patient |
| CO5 | Should have an essential knowledge of personal hygiene, infection control, prevention of cross infection and safe disposal of waste, keeping in view the risk of transmission of potential communicable and transmissible infections like Hepatitis and HIV and apply the knowledge in day to day practice |
| CO6 | To develop the ability to communicate with professional colleagues through various media like Internet, e-mails, videoconferences etc. to render the best possible treatment |

| CO-POMAPPING | |
|---------------------|---------------------------------------|
| Name Of Program | MDS PROSTHODONTICS & CROWN AND BRIDGE |
| Name Of Course | PART I- APPLIED BASIC SCIENCES |

| | PO1 | PO2 | PO3 | PO4 |
|------------|------------|------------|------------|------------|
| CO1 | √ | | | |
| CO2 | √ | | | |
| CO3 | √ | √ | | |
| CO4 | √ | | √ | |
| CO5 | | √ | | |
| CO6 | √ | | √ | √ |

COURSE OUTCOMES- PART II

| COURSE OUTCOMES (CO) | DESCRIPTION |
|----------------------|--|
| CO1 | Should have the ability for comprehensive rehabilitation concept with pre prosthetic treatment plan including surgical re-evaluation and prosthodontic treatment planning, impressions, jaw relations, utility of face bows, articulators, selection and positioning of teeth, teeth arrangement for retention, stability, esthetics, phonation, psychological comfort, fit and insertion. Instructions for patients in after care and preventive Prosthodontics and management of failed restorations shall be possessed by the students. |
| CO2 | Should have knowledge of Tooth and tooth surface restorations, Complete denture Prosthodontics, removable partial denture Prosthodontics, fixed prosthodontics and maxillofacial and Craniofacial Prosthodontics, implants and implant supported Prosthodontics, T.M.J. and occlusion, craniofacial esthetics, and biomaterials, craniofacial disorders, problems of psychogenic origin. |
| CO3 | Should identify cases, which are outside the area of his specialty / competence, refer them to appropriate specialists and perform interdisciplinary case management |
| CO4 | To identify target diseases and create awareness amongst the population regarding Prosthodontic therapy |
| CO5 | The candidate should be able to examine the patients requiring Prosthodontic therapy, investigate the patient systemically, analyze the investigation results, radiographs, diagnose the ailment, plan the treatment, communicate it with the patient and execute it . |
| CO6 | The candidate should be able to demonstrate good interpersonal, communication skills <i>and</i> 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. |
| CO7 | 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. |

| | |
|------------|--|
| CO8 | Should be willing to adopt new methods and techniques in prosthodontics from time to time based on scientific research, which are in patient's best interest. And Should respect patient's rights and privileges, including patient's right to information and right to seek second opinion. |
| CO9 | Should be able to communicate in simple understandable language with the patient and explain the principles of prosthodontics to the patient. He/She should be able to guide and counsel the patient with regard to various treatment modalities available |

| CO-POMAPPING | |
|---------------------|---|
| Name Of Program | MDS PROSTHODONTICS & CROWN AND BRIDGE |
| Name Of Course | Part II Paper 1-Removable Prosthodontics And Implant Supported Prosthesis(Implantology), Geriatric Dentistry And Cranio Facial Prosthodontics Paper II-Fixed Prosthodontics, Occlusion, TMJ And Esthetics Paper III-Descriptive &Analysing Type Question |

| | PO1 | PO2 | PO3 | PO4 |
|------------|-----|-----|-----|-----|
| C01 | √ | √ | | |
| C02 | √ | √ | | |
| C03 | √ | √ | | |
| C04 | √ | | √ | √ |
| C05 | √ | √ | | √ |
| C06 | | √ | √ | √ |
| C07 | √ | √ | √ | √ |
| C08 | | | √ | √ |
| C09 | | | | √ |

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PROGRAM OUTCOME FOR MDS ORAL MEDICINE AND RADIOLOGY

At the end of 3 years of training the candidate should be able to acquire following outcomes-

PO1 - KNOWLEDGE:

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.

PO2- SKILLS:

Three important skills need to be imparted in maxillofacial diseases

1. Diagnostic skill in recognition of oral diseases with radiographic diagnosis and their management.
2. Research skills in handling scientific problems pertaining to oral treatment.
3. Clinical and Didactic skills in encouraging younger doctors to attain learning objectives.

PO3- ATTITUDES:

The positive mental attitude and the persistence of continued learning need to be inculcated.

COURSE OUTCOMES- PART 1

PART I- Applied Basic Sciences:

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|--|
| CO1 | Should possess Theoretical, Clinical and practical knowledge of all oral mucosal lesions, skeletal involvement of maxillofacial region |

| | |
|------------|--|
| CO2 | The positive mental attitude and the persistence of continued learning need to be inculcated |
|------------|--|

| CO-POMAPPING | |
|---------------------|---------------------------------|
| Name Of Program | MDS ORAL MEDICINE AND RADIOLOGY |
| Name Of Course | PART I- APPLIED BASIC SCIENCES |

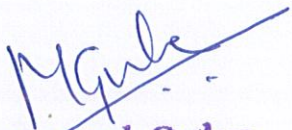
| | PO1 | PO2 | PO3 |
|------------|-----|-----|-----|
| CO1 | √ | √ | |
| CO2 | | | √ |

COURSE OUTCOMES- PART II

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|---|
| CO1 | Should possess diagnostic skill in recognition of oral diseases with radiographic diagnosis and their management. |
| CO2 | Research skills in handling scientific problems pertaining to oral treatment. |
| CO3 | The positive mental attitude and the persistence of continued learning need to be inculcated |

| CO-POMAPPING | |
|-----------------|---|
| Name Of Program | MDS ORAL MEDICINE AND RADIOLOGY |
| Name Of Course | PART II Paper I- Oral and Maxillofacial Radiology Paper II-Oral Medicine, therapeutics and laboratory investigations Paper III-Descriptive and analysing type question |

| | PO1 | PO2 | PO3 |
|-----|-----|-----|-----|
| CO1 | √ | √ | |
| CO2 | | √ | |
| CO3 | | | √ |


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**PROGRAM OUTCOME FOR MDS ORAL & MAXILLOFACIAL PATHOLOGY AND
 ORAL MICROBIOLOGY**

At the end of the program, a postgraduate student should be able to achieve the following outcomes.

PO1- Ensure higher competence in both general and special pathology dealing with the nature of oral diseases, their causes, processes and effects.

PO2- An oral pathologist is expected to perform routine histopathological evaluation of specimens relating to oral and perioral tissues, to carry out routine diagnostic procedures including hematological, cytological, microbiological, Immunological and ultra structural investigations.

PO3- He/she is expected to have an understanding of current research methodology, collection and interpretation of data, ability to carry out research projects on clinical and or epidemiological aspects, a working knowledge on current databases, automated data retrieval systems, referencing and skill in writing scientific papers.

PO4- He/she is expected to present scientific data pertaining to the field, in conferences both as poster and verbal presentations and to take part in group discussions.

COURSE OUTCOMES- PART 1

PART I- Applied Basic Sciences:

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-------------------------------------|--|
| CO1 | Understanding of histological features of hard tissues of the oral and maxillofacial region with emphasis on histochemical techniques. |
| CO2 | Knowledgeably awareness and understanding of the anatomy, functions and histological features and applied aspects of soft tissues of oral and maxillofacial region |

| CO-POMAPPING | |
|---------------------|---|
| Name Of Program | MDS ORAL & MAXILLOFACIAL PATHOLOGY AND ORAL MICROBIOLOGY |
| Name Of Course | PART I- APPLIED BASIC SCIENCE |

| | PO1 | PO2 | PO3 | PO4 |
|------------|-----|-----|-----|-----|
| CO1 | √ | √ | | |
| CO2 | √ | √ | | |

COURSE OUTCOMES- PART II

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|---|
| CO1 | A sound understanding of pathophysiology, clinical features, radiographic characteristics (wherever applicable), histological features and treatment of the preneoplastic and neoplastic lesions affecting the oral and maxillofacial regions with special emphasis on the recent concepts in the pathogenesis of neoplasia |
| CO2 | Proficiency in understanding and identification of the clinical features, radiographic characteristics (wherever applicable), histological features and treatment of oral manifestations of systemic diseases |
| CO3 | Skills in identification of microscopic features of all the diseases and cytological smears pertaining to the craniofacial region along with drawing histopathological features with legible labeled diagrams |
| CO4 | An oral pathologist is expected to perform routine histopathological evaluation of specimens relating to oral and perioral tissues, to carry out routine diagnostic procedures including hematological, cytological, microbiological, Immunological and ultra structural investigations. |
| CO5 | Is expected to have an understanding of current research methodology, collection and interpretation of data, ability to carry out research projects on clinical and or epidemiological aspects |

| CO-POMAPPING | |
|-----------------|---|
| Name Of Program | MDS ORAL & MAXILLOFACIAL PATHOLOGY AND ORAL MICROBIOLOGY |
| Name Of Course | PART II PAPER I- Oral pathology, Oral Microbiology and Immunology and Forensic Odontology PAPER II-Laboratory techniques and Diagnosis and Oral Oncology PAPER III-Descriptive and analysing type question |

| | PO1 | PO2 | PO3 | PO4 |
|-----|-----|-----|-----|-----|
| C01 | √ | √ | | |
| C02 | √ | √ | | |
| C03 | √ | √ | √ | |
| C04 | | √ | | |
| C05 | | | √ | |



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**PROGRAM OUTCOMES FOR MDS ORTHODONTICS AND DENTOFACIAL
ORTHOPEDICS**

At the end of the Program, a postgraduate student should be able to achieve following outcomes

PO1- KNOWLEDGE:

1. The dynamic interaction of biologic processes and mechanical forces acting on the stomatognathic system during orthodontic treatment
2. The etiology, pathophysiology, diagnosis and treatment planning of various common Orthodontic problems.
3. Various treatment modalities in Orthodontics – preventive, interceptive and corrective.
4. Basic sciences relevant to the practice of Orthodontics.
5. Interaction of social, cultural, economic, genetic and environmental factors and their relevance to management of oro – facial deformities.
6. Factors affecting the long-range stability of orthodontic correction and their management
7. Personal hygiene and infection control, prevention of cross infection and safe disposal of hospital waste, keeping in view the high prevalence of Hepatitis and HIV and other highly contagious diseases.

PO3- SKILLS:

1. 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.
2. 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.

PO4- ATTITUDE:

1. Develop an attitude to adopt ethical principles in all aspects of Orthodontic practice.
2. Professional honesty and integrity are to be fostered
3. Treatment care is to be delivered irrespective of the social status, cast, creed and religion of the patients.
4. Willingness to share the knowledge and clinical experience with professional colleagues
5. Willingness to adopt, after a critical assessment, new methods and techniques of orthodontic management developed from time to time based on scientific research, which are in the best interest of the patient
6. Respect patients' rights and privileges, including patients right to information and right to seek a second opinion
7. Develop attitude to seek opinion from allied medical and dental specialists as and when required

PO5- COMMUNICATION SKILLS:

1. Develop adequate communication skills particularly with the patients giving them the various options available to manage a particular Dento-facial problem and to obtain a true informed consent from them for the most appropriate treatment available at that point of time.
2. Develop the ability to communicate with professional colleagues, in Orthodontics or other specialties through various media like correspondence, Internet, e-video, conference, etc. to render the best possible treatment .

COURSE OUTCOMES- PART 1**PART I- Applied Basic Sciences:**

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|---|
| CO1 | Knowledge of . Basic sciences relevant to the practice of Orthodontics |
| CO2 | Basic knowledge of Personal hygiene and infection control, prevention of cross infection and safe disposal of hospital waste, keeping in view the high prevalence of Hepatitis and HIV and other highly contagious diseases |
| CO3 | Develop an attitude to adopt ethical principles in all aspects of Orthodontic practice |

| | |
|------------|--|
| CO4 | Develop attitude to seek opinion from allied medical and dental specialists as and when required |
|------------|--|

| CO-POMAPPING | |
|---------------------|---|
| Name Of Program | MDS ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS |
| Name Of Course | PART I- APPLIED BASIC SCIENCE |

| | PO1 | PO2 | PO3 | PO4 | PO5 |
|------------|-----|-----|-----|-----|-----|
| CO1 | √ | | | | |
| CO2 | √ | √ | | | |
| CO3 | | | | √ | |
| CO4 | | | | √ | √ |

COURSE OUTCOMES- PART II

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|---|
| CO1 | Knowledge of the dynamic interaction of biologic processes and mechanical forces acting on the stomatognathic system during orthodontic treatment The etiology, pathophysiology, diagnosis and treatment planning of various common Orthodontic problem |
| CO2 | Various treatment modalities in Orthodontics – preventive, interceptive and corrective. |
| CO3 | Factors affecting the long-range stability of orthodontic correction and their management |
| CO4 | 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. |

| | |
|------------|--|
| CO5 | Willingness to adopt, after a critical assessment, new methods and techniques of orthodontic management developed from time to time based on scientific research, which are in the best interest of the patient |
| CO6 | Develop adequate communication skills particularly with the patients giving them the various options available to manage a particular Dento-facial problem and to obtain a true informed consent from them for the most appropriate treatment available at that point of time. |

| CO-POMAPPING | |
|---------------------|---|
| Name Of Program | MDS ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS |
| Name Of Course | PART II PAPER I Orthodontic history, Concepts of occlusion and esthetics, Child and Adult Psychology, Etiology and classification of malocclusion, Dentofacial Anomalies, Diagnostic procedures and treatment planning in Orthodontics, Practice management in Orthodontic PAPER II-Clinical Orthodontics PAPER III-Descriptive and analysing type question |

| | PO1 | PO2 | PO3 | PO4 |
|------------|-----|-----|-----|-----|
| CO1 | √ | √ | | |
| CO2 | √ | √ | | |
| CO3 | √ | √ | √ | |
| CO4 | | √ | √ | |
| CO5 | | √ | | √ |


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PROGRAM OUTCOME FOR MDS PEDIATRIC AND PREVENTIVE DENTISTRY

At the end of 3 years of training the candidate should be able to possess the following outcomes

PO1- KNOWLEDGE-

1. Create not only a good oral health in the child but also a good citizen tomorrow.
2. Instill a positive attitude and behavior in children
3. Understand the principles of prevention and preventive dentistry right from birth to adolescence
4. Guide and counsel the parents in regards to various treatment modalities including different facets of preventive dentistry
5. Prevent and intercept developing malocclusion

PO2- SKILLS

1. Obtain proper clinical history, methodological examination of the child patient, perform essential diagnostic procedures and interpret them. and arrive at a reasonable diagnosis and treat appropriately
2. Be competent to treat dental diseases which are occurring in child patient.
3. Manage to repair and restore the lost / tooth structure to maintain harmony between both hard and soft tissues of the oral cavity.
4. Manage the disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions.
5. To acquire skills in managing efficiently life threatening conditions with emphasis on basic life support measures.

PO3- ATTITUDES

1. Develop an attitude to adopt ethical principles in all aspects of Pedodontic practice.
2. Professional honesty and integrity are to be fostered

3. Treatment care is to be delivered irrespective of the social status, cast, creed, and religion of the patients.
4. Willingness to share the knowledge and clinical experience with professional colleagues.
5. Willingness to adopt, after a critical assessment, new methods and techniques of Pedodontic management developed from time to time, based on scientific research, which are in the best interest of the child patient.
6. Respect child patient's rights and privileges, including child patients right to information and right to seek a second opinion.
7. Develop an attitude to seek opinion from allied medical and dental specialities, as and when required.

COURSE OUTCOMES- PART 1

PART I- Applied Basic Sciences:

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|---|
| CO1 | Knowledge of Basic science related to the practice of paediatric dentistry |
| CO2 | Create not only a good oral health in the child but also a good citizen tomorrow. |

| CO-POMAPPING | |
|---------------------|---|
| Name Of Program | MDS PAEDIATRIC AND PREVENTIC DENTISTRY |
| Name Of Course | PART I- APPLIED BASIC SCIENCE |

| | PO1 | PO2 | PO3 |
|------------|------------|------------|------------|
| CO1 | √ | | |
| CO2 | √ | | √ |

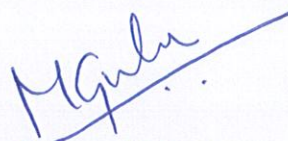
COURSE OUTCOMES- PART II

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|--|
| CO1 | Understand the principles of prevention and preventive dentistry right from birth to adolescence |
| CO2 | Be competent to treat dental diseases which are occurring in child patient. |
| CO3 | Manage to repair and restore the lost / tooth structure to maintain harmony between both hard and soft tissues of the oral cavity |
| CO4 | To acquire skills in managing efficiently life threatening conditions with emphasis on basic life support measures managing disabled children efficiently. |
| CO5 | Respect child patient's rights and privileges, including child patients right to information and right to seek a second opinion. |
| CO6 | Willingness to adopt, after a critical assessment, new methods and techniques of Pedodontic management developed from time to time, based on scientific research, which are in the best interest of the child patient. |

| CO-POMAPPING | |
|---------------------|--|
| Name Of Program | MDS PAEDIATRIC AND PREVENTIVE DENTISTRY |
| Name Of Course | PART II PAPER I -Clinical Pedodontics PAPER II- Preventive and Community Dentistry as applied to pediatric dentistry PAPER III-Descriptive and analysing type question |

| | PO1 | PO2 | PO3 |
|------------|-----|-----|-----|
| CO1 | √ | √ | |
| CO2 | √ | √ | |

| | | | |
|------------|---|---|---|
| C03 | √ | √ | √ |
| C04 | | √ | √ |
| C05 | | √ | |
| C06 | | | √ |



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PROGRAM OUTCOME FOR M.D.S PERIODONTOLOGY

On completion of the Program, a Post-graduate student should be able to possess the following outcomes

PO1- KNOWLEDGE:

Discuss historical perspective to advancement in the subject proper and related topics.

1. Describe etiology, pathogenesis, diagnosis and management of common periodontal diseases with emphasis on Indian population
2. Familiarize with the biochemical, microbiologic and immunologic genetic aspects of periodontal pathology.
3. Describe various preventive periodontal measures.
4. Describe various treatment modalities of periodontal disease from historical aspect to currently available ones.
5. Describe interrelationship between periodontal disease and various systemic conditions.
6. Describe periodontal hazards due to estrogenic causes and deleterious habits and prevention of it.
7. Identify rarities in periodontal disease and environmental/Emotional determinates in a given case.
8. Recognize conditions that may be outside the area of his/her Speciality/ competence and refer them to an appropriate Specialist.
9. Decide regarding non-surgical or surgical management of the case.
10. Update the student by attending courses, conferences and seminars relevant to periodontics or by self-learning process.
11. Plan out/ carry out research activity both basic and clinical aspects with the aim of publishing his/her work in scientific journals.
12. Reach to the public to motivate and educate regarding periodontal disease, its prevention and consequences if not treated.

13. Plan out epidemiological survey to assess prevalence and incidence of early onset periodontitis and adult periodontitis in Indian population (Region wise).
14. Shall develop knowledge, skill in the science and practice of Oral Implantology.
15. Shall develop teaching skill in the field of Periodontology and Oral Implantology.
16. Principals of Surgery and Medical Emergencies.
17. To sensitize students about inter disciplinary approach towards the soft tissues of the oral cavity with the help of specialist from other departments.

PO2- SKILLS:

1. 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 diagnosis.
2. Effective motivation and education regarding periodontal disease maintenance after the treatment.
3. Perform both non-surgical & education regarding periodontal disease, maintenance after the treatment.
4. Perform both non-surgical and surgical procedures independently.
5. Provide Basic Life Support Service (BLS) recognizes the need for advance life support and does the immediate need for that.

PO3- HUMAN VALUES, ETHICAL PRACTICE TO COMMUNICATION ABILITIES

1. .Adopt ethical principles in all aspects of treatment modalities; Professional honesty & integrity are to be fostered. Develop Communication skills to make awareness regarding periodontal disease Apply high moral and ethical standards while carrying out human or animal research, Be humble, accept the limitations in his/her knowledge and skill, and ask for help from colleagues when needed, Respect patients rights and privileges, including patients right to information and right to seek a second opinion.
2. To learn the principal of lip repositioning and perio esthetics surgeries.

COURSE OUTCOMES- PART 1

PART I- Applied Basic Sciences:

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|---|
| CO1 | Knowledge of . Basic sciences relevant to the practice of periodontics |
| CO2 | Basic knowledge of Personal hygiene and infection control, prevention of cross infection and safe disposal of hospital waste, keeping in view the high prevalence of Hepatitis and HIV and other highly contagious diseases |
| CO3 | Develop an attitude to adopt ethical principles in all aspects of periodontic practice |
| CO4 | Develop attitude to seek opinion from allied medical and dental specialists as and when required |

| CO-POMAPPING | |
|---------------------|--------------------------------------|
| Name Of Program | MDS PERIODONTICS |
| Name Of Course | PART I- APPLIED BASIC SCIENCE |

| | PO1 | PO2 | PO3 |
|------------|-----|-----|-----|
| CO1 | √ | | |
| CO2 | √ | √ | |
| CO3 | | | |
| CO4 | | | √ |


COURSE OUTCOMES- PART II

At the end of the course the postgraduate student should be able to

| COURSE OUTCOMES (CO) | DESCRIPTION |
|-----------------------------|--|
| CO1 | Familiarize with the biochemical, microbiologic and immunologic genetic aspects of periodontal pathology. |
| CO2 | Describe etiology, pathogenesis, diagnosis and management of common periodontal diseases with emphasis on Indian population |
| CO3 | Describe various treatment modalities of periodontal disease from historical aspect to currently available ones. |
| CO4 | Describe interrelationship between periodontal disease and various systemic conditions |
| CO5 | Perform both non-surgical & education regarding periodontal disease, maintenance after the treatment. Perform both non-surgical and surgical procedures independently |
| CO6 | Develop Communication skills to make awareness regarding periodontal disease Apply high moral and ethical standards while carrying out human or animal research, Be humble, accept the limitations in his/her knowledge and skill, and ask for help from colleagues when needed, |
| CO7 | Provide Basic Life Support Service (BLS) recognizes the need for advance life support and do the immediate need for that. |

| CO-POMAPPING | |
|------------------------|--|
| Name Of Program | MDS PERIODONTICS |
| Name Of Course | PART II PAPER I Normal Periodontal structure, Etiology and Pathogenesis of Periodontal diseases, epidemiology as related to Periodontics PAPER II-Periodontal diagnosis, therapy and Oral implantology PAPER III-Descriptive and analysing type question |

| | PO1 | PO2 | PO3 |
|-----|-----|-----|-----|
| CO1 | √ | √ | |
| CO2 | √ | √ | |
| CO3 | √ | √ | √ |
| CO4 | | √ | √ |
| CO5 | | √ | |
| CO6 | | √ | √ |
| CO7 | | √ | √ |


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