

## MNR DENTAL COLLEGE AND HOSPITAL POS AND COS

### PROGRAMME NAME: - DENTISTRY AND ENDODONTICS

<b>Course Outcome</b> <b>BDS – IV</b> <b>year</b>	<ol style="list-style-type: none"> <li>1. To educate and impart clinical skill to students which will help them in providing quality restorative treatment and basic endodontic procedures.</li> <li>2. To provide restorative care in dentistry in a competent and ethical manner which will contribute to the oral health and general well being of the individual and community.</li> <li>3. As a graduate, the dentist should exhibit professional behavior, basic skills to carry out range of restorative and endodontic procedures in general dental practice independently with consistency and accuracy.</li> <li>4. To instill the importance of life-long learning and updating knowledge in the field of restorative dentistry and endodontics.</li> <li>5. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>6. Willingness to participate in the CDE programme to gain knowledge and skills.</li> </ol>
<b>MDS</b>	<b>Applied basic science</b> <ol style="list-style-type: none"> <li>1. Understanding and correlation of basic sciences as relevant to conservative dentistry and endodontic.</li> <li>2. Students should be able to apply high moral and ethical standards while carrying on human or animal research.</li> </ol>

3. Students should be able to demonstrate communication skills in particular to explain various options available for management of tooth pain.
4. He/she should motivate the patient for proper dental treatment at the same time proper maintenance of oral hygiene should be emphasized which will help maintain the restorative work and prevent further damage.
5. Students would demonstrate infection control measures in dental clinical environment and laboratories.
6. Students would adopt ethical principles in all aspects of restorative and contemporary endodontics

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### **Conservative dentistry**

1. Perform all levels of restorative work including aesthetic procedures and treatment including complicated restorative procedures.
2. Students would be able to describe aetiology, pathophysiology, diagnosis and management of dental caries, non-carious lesions and hypersensitivity.
3. Students would be able to take proper chair side history, examine the patient and perform medical and dental diagnostic procedures; as well as perform relevant tests and interpret them to come to a reasonable diagnosis about the dental condition.
4. He/she should motivate the patient for proper dental

treatment at the same time proper maintenance of oral hygiene should be emphasized which will help maintain the restorative work and prevent further damage.

5. Student would be able to have an understanding on all the recent restorative materials and technology.

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### **Endodontics**

1. Students would be able to describe aetiology, pathophysiology periapical diagnosis and management of common endodontic situations that would include contemporary management of trauma and pulpal pathosis including endo-periodontal situations.
2. Students would undertake complete patient monitoring including pre-operative as well as post-operative care.
3. Students would be able to master differential diagnosis and recognize conditions that may require multidisciplinary approach or a clinical situation outside the realm of the specialty, which he or she would be able to recognize and refer to the appropriate specialist.
4. Students would perform all levels of surgical and non surgical endodontic procedures including Endosseous implants, retreatment as well as endo-periodontal surgical procedures as a part of multidisciplinary approach to clinical condition.
5. Students would be able to manage acute pulpal and

	<p>pulpoperiodontal situations.</p> <ol style="list-style-type: none"> <li>6. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>7. Student would be able to have an understanding on all the recent restorative materials and technology.</li> </ol> <hr/> <p style="text-align: center;"><b>Long essay</b></p> <ol style="list-style-type: none"> <li>1. Students would diagnose, plan and execute challenging clinical cases requiring comprehensive management strategies using contemporary materials and techniques in the speciality of Conservative dentistry and Endodontics.</li> <li>2. Have an in depth knowledge of pathophysiology, diagnosis, treatment planning of diseases of pulp and periradicular tissues.</li> </ol>
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**PROGRAMME NAME: - ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS**

<p><b>Course Outcome</b> <b>BDS- 4<sup>TH</sup></b> <b>year</b></p>	<ol style="list-style-type: none"> <li>1. Graduates emerging from this institute are pursuing post-graduation in our specialty at well- known institutes of India.</li> <li>2. Many of the graduates have established their own practicing centers in and around the city catering to the need of the society in terms of dental needs.</li> <li>3. Few of the graduates could procure the government jobs through merit and caste reservations.</li> </ol>
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	<p>4. A little number of them are planning to take international degrees / diploma programs through entrance exams</p> <p>5. Considerable number of the graduates have joined the well - established chains of dental clinics in and around the city for full time service.</p> <p>6. Two students have been reported to be preparing for the Civil Services exams in near future.</p>
<b>MDS</b>	<p style="text-align: center;"><b>Applied Basic sciences</b></p> <p><b>1. Genetics</b></p> <p>Under this part of curriculum it is expected that the students would be aware of cell structure DNA, RNA, protein synthesis, cell division, chromosomal abnormalities, principles of orofacial genetics, genetics in malocclusion, molecular basis of genetics, Recent advances in genetics related to malocclusion, Genetic counselling, Bioethics and relationship to Orthodontic management of patients</p> <p><b>1. Applied anatomy</b></p> <p>Here, the students are expected to have learnt about Prenatal and post-natal growth of head, bone growth, assessment of growth and development, muscles of mastication, Development of dentition and occlusion</p> <p><b>3. Applied physiology</b></p> <p>Under Physiology they would have learnt about Endocrinology and its disorders, Calcium and its metabolism, Nutrition-metabolism and their disorders, Muscle physiology, craniofacial biology, bleeding disorders.</p> <p><b>4. Dental materials</b></p>

Under Dental Materials they would have learnt about Gypsum products, impression materials, acrylics, composites, banding and bonding cements, wrought metal alloys, orthodontic arch wires, elastics, applied physics, specification and tests methods, survey of all contemporary and recent advances of above.

**5. Pathology**

Under Pathology they would have learnt about inflammation, and necrosis

**6. Biostatistics**

Under Biostatistics they would have learnt about statistical principles.

**7. Physical anthropology**

Under Physical Anthropology they would have learnt about Evolutionary development of dentition, Evolutionary development of jaws

**8. Applied research methodology in Orthodontics**

Under Applied research methodology in Orthodontics they would have learnt about Experimental design, Animal experimental protocol, Principles in the development, execution and interpretation of methodologies in Orthodontics, Critical Scientific appraisal of literature.

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**Diagnosis and treatment planning**

**1. Concepts of occlusion and esthetics**

Under this, the students would learn about Structure and function

of all anatomic components of occlusion, Mechanics of articulation, Recording of masticatory function, Diagnosis of Occlusal dysfunction, Relationship of TMJ anatomy and pathology and related neuromuscular physiology.

## **2. Orthodontic history**

Under Orthodontic History they would have learnt about Historical perspective, Evolution of orthodontic appliances, Pencil sketch history of Orthodontic peers, History of Orthodontics in India.

## **3. Etiology and Classification of malocclusion**

Under this, the students would learn about, a comprehensive review of the local and systemic factors in the causation of Malocclusion and Various classifications of malocclusion.

## **4. Child and Adult Psychology**

Under this, the students would learn about Stages of child development, Theories of psychological development, Management of child in orthodontic treatment, Management of handicapped child, Motivation and Psychological problems related to malocclusion / orthodontics, Adolescent psychology, Behavioral psychology and communication.

## **5. Diagnostic procedures and treatment planning in orthodontics**

Under this, the students would learn about Stages of child

development, Theories of psychological development, Management of child in orthodontic treatment, Management of handicapped child, Motivation and Psychological problems related to malocclusion / orthodontics, Adolescent psychology, Behavioral psychology and communication.

**6. Dentofacial Anomalies**

Under this, the students would learn about, anatomical, physiological and pathological characteristics of major groups of developmental defects of the orofacial structures.

**7. Cephalometrics**

Under this the students would learn about instrumentation, image processing, tracings, analysis of errors and applications, Radiation hygiene, advanced cephalometric techniques, comprehensive review of literature, video imaging principles and applications.

**8. Practice management in Orthodontics:**

Under this the student would learn about, Economics and dynamics of solo and group practices, Personal management, Materials management, Public relations, Professional relationship, Dental ethics and jurisprudence, Office sterilization procedures, Community based Orthodontics

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**Clinical Orthodontics**

### **1. Myofunctional Appliances**

The students will be capable of diagnosing and interpreting the knowledge obtained to treat developing malocclusion at a younger age.

### **2. Dentofacial Orthopaedics**

The students will develop acumen to identify and deliver treatment regimes using orthopaedic appliances to the appropriate cases.

### **3. Cleft Lip & Palate Rehabilitation**

The students will be trained to treat the CLCP cases with empathy starting with Naso-alveolar moulding at the infant stage and then systematically treat the malocclusion using removable / fixed orthodontics during the mixed & permanent dentition by harmonizing the treatment plan with the other members of the multidisciplinary cleft team.

### **4. Biology of tooth movement**

Basic understanding of the applied anatomy & physiology regarding to tooth & its surrounding structures will be inculcated into the student, so that the results of application of orthodontic forces can be understood and clinically used.

### **5. Orthodontics/ Orthogenetic Surgery**

Students will be thoroughly trained in conjoint diagnosis & treatment planning of cases requiring surgical intervention.

### **6. Ortho/ Perio/ Prosthodontics –inter relationship**

Students will be trained in treating complicated cases requiring a multidisciplinary approach in patient management.



	<p><b>7. Basic Principles of mechanotherapy</b></p> <p>Students will be trained in designing, construction, fabrication &amp; management of cases using both removable &amp; fixed orthodontics.</p> <p><b>8. Applied preventive aspects in Orthodontic</b></p> <p>A comprehensive view of diagnosing &amp; preventing caries, periodontal diseases to maintain proper inter arch relationship.</p> <p><b>9. Interceptive orthodontics</b></p> <p>Students will be trained in growth guidance, diagnosing &amp; treatment planning of early malocclusion both at mixed/ permanent dentition.</p> <p><b>10. Retention &amp; relapse</b></p> <p>Inculcating the acumen to analyse post treatment stability to prevent any relapse</p> <hr/> <p style="text-align: center;"><b>Essay</b></p> <p>The Students would be trained in above mentioned topics in detail, so that the student would know the recent updates along with the previous literature available.</p>
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**PROGRAMME NAME :- PAEDODONTICS & PREVENTIVE DENTISTRY**

<b>Course outcome</b>	<b>KNOWLEDGE:</b> Dental practitioners with the ability to diagnose
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<p><b>BDS-4<sup>th</sup> year</b></p>	<p>common dental problems and /or capability to assess growth and development variations and suggest necessary referrals or actions as needed timely.</p> <p><b>SKILL:</b> Clinicians who can effectively and efficiently perform basic dental treatments in children from birth to adolescence with proper behaviour management of child and the parent as well as instil positive dental attitude with preventive modalities.</p>
<p><b>MDS</b></p>	<p style="text-align: center;"><b>Applied Basic Sciences</b></p> <p>1) Students should be able to understand applied Anatomy, genetics, Applied physiology, Applied Pathology, Nutrition, Dietics, Growth and development, cariology and fluoride.</p> <p>2) Student will get acquainted with Dental Health Concepts, Effects of civilization and Environment, Dental Health Delivery systems, public health measures related to children along with principles of Paediatric preventive dentistry.</p> <p>3) Students should be able to develop an attitude of Counselling in Paediatric dentistry.</p> <p>4) Students should be able to do case history recording, outline of principles of examination, diagnosis and treatment plan.</p> <hr/> <p style="text-align: center;"><b>Clinical Paedodontics</b></p> <p>1) Students should be competent to treat dental diseases which are occurring in child patient. Students should be able to manage to repair and restore the lost /tooth structure to maintain harmony between both hard and soft tissues of oral cavity and to correct</p>

oral habits, spaces and occlusal problems using removable and fixed therapy.

2) Students should be able to manage the disabled children effectively and efficiently, tailored to needs of individual requirement and conditions.

3) Students should be able to acquire skills in managing efficiency life threatening condition with emphasis on basic life support measure and emerging concepts in paediatric dentistry

4) Students should be able to develop an attitude to adopt ethical principles in all aspects of paediatric dental practice along with professional honesty and integrity.

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**Preventive and community dentistry as applied to paediatric dentistry**

1) Students should be able to create a good oral health in the child with installing a positive attitude and behaviour in children.

2) Students should be able to understand the principles of prevention and preventive dentistry right from birth to adolescence.

3) Students should be able to guide and counsel parents in regards to various treatment modalities including different facets of preventive dentistry.

4) Students should be able to deliver care irrespective of social status, caste, creed, religion of the patients.

5) Students should be able to share the knowledge and clinical experience with professional colleagues with own willingness.

	<p>6) Camps are being conducted and awareness regarding oral hygiene maintenance is given.</p> <hr/> <p style="text-align: center;"><b>Essay</b></p> <p>1) For a given case, the student after the critical assessment should be able to adopt new methods and techniques of paediatric dentistry that is developed time to time, based on scientific researches, which are in best interest of the child and parent.</p> <p>2) Students should be able to respect child patient's rights and privileges, including child patient's right to information and right to seek a second opinion</p>
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**PROGRAMME NAME:- ORAL PATHOLOGY AND MICROBIOLOGY**

<p><b>Course outcome BDS – 1<sup>st</sup> year</b></p>	<ol style="list-style-type: none"> <li>1. The student will acquire basic knowledge of morphology &amp; structure of both permanent and deciduous teeth.</li> <li>2. The student is expected to appreciate the normal development, morphology, and structure of oral tissues, along with physiologic aging of the dental tissues.</li> </ol>
<p><b>BDS – 3<sup>rd</sup> year</b></p>	<ol style="list-style-type: none"> <li>1. The student acquires a basic knowledge on the microscopic study of common oral lesions through microscopic slides.</li> <li>2. Dental graduate with a birds eye view of the different pathological processes involving the oral cavity and also the oral manifestations of different systemic disorders.</li> <li>3. The dental graduate will acquire basic skills in preparation of</li> </ol>

	<p>ground sections, oral smears and teeth anomalies through tooth specimens &amp; plaster casts.</p>
<p><b>MDS</b></p>	<p style="text-align: center;"><b>APPLIED</b></p> <ol style="list-style-type: none"> <li>1. The post graduate must have applied knowledge in basic sciences like anatomy, histology physiology and biochemistry.</li> <li>2. The student also would have learnt the basics in general pathology and general microbiology along with molecular aspects involved in pathogenesis.</li> <li>3. The post graduate would know the basic principles of biostatistics and research methodology as applied to dentistry and research.</li> </ol> <hr/> <p style="text-align: center;">Immunology and Forensic Dentistry</p> <ol style="list-style-type: none"> <li>1. The post graduate must have attained profound understanding on the pathogenesis of various oral diseases so that he/she can arrive at a definitive diagnosis using clinical, radiographical, histopathological findings..</li> <li>2. Along with oral pathology the student also learns the skills in basic laboratory investigations involving hematology, microbiology and specialised histotechniques and special stains.</li> <li>3. The student would have thorough knowledge in oral immunology and oncology along with the molecular aspects of it.</li> </ol>

4. The student would have learnt in detail about the forensic odontology involving legal procedures, post mortem examination of violence around mouth and neck, identification of deceased individual – dental importance.

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**Laboratory Techniques,Diagnosis and Oncology**

1. The post graduate would have detailed knowledge in biopsy procedures, processing of paraffin sections, usage of microtome, different staining techniques and principles.
2. The student would also have profound knowledge about the microscopy, its principles including light microscopy to advanced optical designs.
3. Student should have learnt about immunohistochemistry, frozen sections and cytological smears.
4. The post graduate would be well aware of the chemicals and equipment used in the laboratories.
5. The student will get acquainted to microscopes and easily diagnos the lesions on microscopic slides.

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**ESSAY**

1. The post graduate must have attained in-depth knowledge and understanding on basic structure and histology of oral and paroral structures and their related pathologies.
2. The student would have deep insight on the recent advanced methodologies or techniques and molecular aspects.

**PROGRAMME NAME:- ORAL AND MAXILLOFACIAL SURGERY**

<p><b>Course outcome BDS-4<sup>th</sup> YEAR</b></p>	<ol style="list-style-type: none"> <li>1. Application of knowledge of related medical subjects in management of patients with oral surgical problem.</li> <li>2. Sufficient knowledge to diagnose, manage and treat minor oral surgical procedures.</li> <li>3. Understanding and exposure to the management of major oral surgical problems and principals involved in inpatient management.</li> <li>4. Application of knowledge of related application of local anesthesia.</li> <li>5. Sufficient knowledge to diagnose, manage and treat extraction of teeth and it's complications.</li> <li>6. Sufficient knowledge about the sterilization and asepsis protocol.</li> <li>7. Application of the principles of Emergency management of Maxillofacial injuries, BLS measures and the medico legal responsibilities and formalities.</li> <li>8. Should know Ethical issues and have communication ability.</li> <li>9. Be able to understand the requisition of various clinical and laboratory investigation and is capable of formulating differential diagnosis.</li> </ol>
<p><b>MDS</b></p>	<p style="text-align: center;"><b>Applied Basic sciences</b></p> <p>The student would be knowledgeable about :</p> <p>Development and growth of face , teeth and jaws,age changes and evaluation of Mandible in detail</p>

1. Congenital abnormality of Orofacial regions.
2. Surgical anatomy of scalp, temple and face
3. Anatomy and its applied aspects of triangles of neck and deep structures of neck.
4. Cranial Facial bones and surrounding soft tissues.
5. Cranial nerves.
6. Tongue.
7. Temporal and infratemporal region and Temporomandibular joint in detail.
8. Orbit and its contents.
9. Muscles of face and neck.
10. General consideration of the structure and function of brain and applied anatomy of intracranial venous sinuses.
11. Cavernous sinus and superior sagittal sinus.
12. Brief consideration of autonomous nervous system of head and neck.
13. Functional anatomy of mastication, deglutition and speech.
14. Respiration and circulation.
15. Histology of skin, oral mucosa, connective tissue, bone, cartilage, cellular elements of blood vessels, lymphatic , nerves, muscles.
16. Tooth and its surrounding structures.
17. Cross-sectional anatomy of the head and neck, as applied in CT, MRI interpretation.
18. Salivary glands-Anatomy, Embryology and Histology.

**APPLIED PHYSIOLOGY**

1. Nervous system - physiology of nerve conduction, pain pathway, sympathetic and parasympathetic nervous system, hypothalamus and mechanism of controlling body temperature.
2. Blood - its composition, hemostasis, blood dyscrasias and its management, hemorrhage and its control, blood grouping, cross matching, blood component therapy, complications of blood transfusion, blood substitutes, auto transfusion, cell savers.
3. Digestive system – composition and functions of saliva, mastication, deglutition, digestion, assimilation, urine formation, normal and abnormal constituents.
4. Respiratory system – respiration control of ventilation, anoxia, asphyxia, artificial respiration, hypoxia-type and management.
5. CVS – cardiac cycle, shock, heart sounds, blood pressure, hypertension.
6. Endocrinology – metabolism of calcium, endocranially activity and disorder relating to thyroid gland, parathyroid gland, adrenal gland, pituitary gland, pancreas and gonads.
7. Nutrition – general principles balanced diet, effect of dietary deficiency, protein energy malnutrition, nutritional assessment, metabolic responses to stress, need for nutritional support, entrails nutrition, roots of access to GIT, parenteral nutrition, access to central veins, nutritional support.
8. Fluid and electrolytic balance/acid base metabolism – the body fluid compartment, metabolism of water and electrolytes, factors maintaining hemostasis causes for treatment of acidosis and alkalosis.

**APPLIED PATHOLOGY**

1. Inflammation - acute and chronic inflammation, repair and regeneration, necrosis and gangrene and role of component system in acute inflammation, role of arachidonic acid and its metabolites in acute inflammation, growth factors in acute inflammation, role of NSAIDS in inflammation, cellular changes in radiation injury and its manifestations.
2. Wound management – wound healing factors influencing healing, properties of suture materials and appropriate use of sutures.
3. Hemostasis – role of endothelium in thrombogenesis, arterial and venous thrombi, disseminated intravascular coagulation.
4. Hypersensitivity – shock and pulmonary failure, types of shock, diagnosis, resuscitation, pharmacological support, ARDS and its causes and prevention, ventilation and support.
5. Neoplasia – classification of tumors, carcinogens and carcinogenesis, spread of tumors, characteristics of benign and malignant tumors, grading and staging of tumors, various laboratory investigations.
6. Chromosomal abnormalities with orofacial manifestations.
7. Basics of immunology – primary and acquired immunodeficiency.
8. Shock-Pathogenesis of hemorrhagic, neurogenic, septic, cardiogenic shock.

The students would be well trained in the assessment and

management of

1. Basic exodontia
2. Complicated exodontia
3. Surgical management of impacted teeth
4. Ectopically positioned and unerupted teeth
5. Tooth preimplantation and transplantation
6. Surgical up righting and repositioning
7. Principles of endodontic microsurgery
8. Periodontal considerations for oral surgery
9. Procedures involving the dent gingival junction
10. Pediatric dent alveolar surgery
11. Lasers in oral and maxillofacial surgery
12. Complications of dent alveolar surgery

The students would be able to diagnose and manage medical emergencies like prevention and management of altered consciousness (syncope, orthostatic hypotension, seizures, diabetes mellitus, adrenal insufficiency), hypersensitivity reactions, chest discomfort, and respiratory difficulty.

The students would be knowledgeable about

1. Diagnosis and perioperative management of head and neck injuries.
2. Basic principles of treatment: Hard and soft tissue injuries.

The students would be acquainted with the knowledge and clinical skills in the management of

1. Dentoalveolar injuries

2. Mandibular fractures
3. Temporomandibular joint region injuries
4. Zygomatic complex fractures
5. Orbital trauma
6. Mid face injuries
7. Frontal sinus fractures and associated injuries.
8. Nasal injuries
9. Soft tissue injuries
10. Special soft tissue injuries
11. Avulsive hard tissue injuries
12. Maxillofacial injuries in children
13. Maxillofacial injuries in elderly
14. Complex facial trauma patient

**The students would be acquainted with the knowledge and clinical skills in the management of**

1. Salivary gland: Sialography, salivary fistula and management.

Diseases of salivary gland – developmental disturbances, cysts, inflammation and sialolithiasis, mucocele and ranula, tumors of salivary gland and their management, staging of salivary gland tumors, parotidectomy.

2. Temporomandibular joint: etiology, history, signs, symptoms, examination and diagnosis of temporomandibular joint disorders. Ankyloses and management of the same with different treatment

modalities, MPDS and management, condylectomy-different procedures, various approaches to TMJ, recurrent dislocations- etiology and management.

3. Oncology: biopsy, management of pre-malignant tumors of head and neck region, benign and malignant tumors of head and neck region, staging of oral cancer and tumor markers.

Management of oral cancer, radial neck dissection, models of spread of tumors, diagnosis and management of tumors of nasal, paranasal, neck, tongue, cheek, maxilla and mandible.

Radiation therapy in maxillofacial regions, lateral neck swellings.

4. Orthognathic surgery: diagnosis and treatment planning, cephalometric analysis, model surgery, maxillary and mandibular repositioning procedures, segmental osteotomies, management of apertognathia, genioplasty, distraction oteogenesis.

5. Cysts and tumor of ore-facial region: odontogenic and non-odontogenic tumors and their management, giant lesions of jaw bone, fibro osseous lesions of jawbone, cysts of jaw.

6. Laser surgery: the application of laser technology in surgical treatment of lesions.

7. Cryosurgery: principles, applications of cryosurgery in surgical management

8. Cleft lip and palate surgery: Detailed knowledge of the



	<p>development of the face, head and neck, diagnosis and treatment planning, current concepts in the management of cleft lip and palate deformity, knowledge of naos endoscopy and other diagnostic techniques in the evaluation of speech and hearing, concept of multidisciplinary team management.</p> <p>9. Aesthetic facial surgery: detailed knowledge of the structures of the face and neck including skin and underlying soft tissues, diagnosis and treatment planning of deformities</p> <hr/> <p style="text-align: center;"><b>Essay</b></p> <p>The students would be able to diagnose, meticulously plan and manage competently various conditions in Maxillofacial surgery including challenging cases. They would be knowledgeable about conventional and recent advances in the diagnosis and management of Oral and Maxillofacial conditions.</p> <p>The student would be well versed in basic surgical techniques and knowledgeable about advanced skills required in Maxillofacial surgery.</p>
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**PROGRAMME NAME: - ORAL MEDICINE AND RADIOLOGY**

<p><b>Course outcome BDS</b></p>	<ol style="list-style-type: none"> <li>1. Under graduates who are efficient and trained to handle oral health issues.</li> <li>2. Under graduates skilled to diagnose patients with oral diseases and successful application of therapy.</li> <li>3. Under graduates with latest radiological techniques, which would help in diagnosing various oral problems.</li> </ol>
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	<ol style="list-style-type: none"> <li>4. Under graduates with practical skills, which would improve, doctor patient relationship having positive impact on society.</li> <li>5. To recognize advanced cases that need specialist care and refer to the specialist.</li> <li>6. Under graduate who is skilled to apply multidisciplinary approach for successful treatment outcome.</li> <li>7. Under graduate with a research mindset trained on par with international standards.</li> </ol>
<p><b>MDS</b></p>	<p><b>Applied Anatomy, Physiology, Pathology and Pharmacology</b>            On completion of the course,</p> <ol style="list-style-type: none"> <li>1. The student would be able to exhibit a better theoretical Knowledge and understanding of basic relevant sciences namely, the applied anatomy of the ore -facial region and applied aspects of basic pharmacy - therapeutics.</li> <li>1. The student will have skilled ability for identification of normal and abnormal functioning of various systems of the body for accurate prognostic diagnosis by the student.</li> <li>2. Student would be efficient enough to understand the basics of Applied Anatomy, Physiology, Pathology and Pharmacology for the better outcome of the subject.</li> </ol> <hr/> <p><b>Diagnosis, diagnostic methods and imagology and Applied Oral</b>            On completion of the course,</p> <ol style="list-style-type: none"> <li>1. The student will be able to execute diagnose &amp; deal with diseases affecting the ore- facial region &amp; apply high moral and ethical standards while carrying out clinical and radiographic examinations.</li> </ol>

2. They would be proficient enough to understand the diagnosis and diagnostic methods, ionizing radiation, its applications in dentistry and its limitations.
3. They will be trained enough for diagnostic methods and its application in dentistry.
4. They will also be having sufficient knowledge for radiographic diagnosis, techniques involved in conventional and advanced diagnostic radiographic examination.

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**Oral Medicine, therapeutics and laboratory investigations.**

On completion of the course,

1. The student would be efficient in arriving at precise diagnosis and treatment plan, affecting the oro- facial region.
2. They will also be instructed to inculcate the causes, principles, and frame the skeleton for management of oro-facial diseases.
3. They would be proficient to formulate the differential diagnosis, investigations treatment plan and design the therapeutics aspects as well.
4. Developing the communication Skills and ability to explain the disease process to the patient and to obtain an informed consent from the patient

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**Essay**

On completion of the course,

1. The student would be proficient in effectively and freely analyzing the problem presented by recalling factually.
2. The student would be an expert at synthesizing ideas and rendering a suitable opinion of the problem presented.

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### **Applied Basic Sciences**

- 1) Students should be able to understand applied Anatomy, genetics, Applied physiology, Applied Pathology, Nutrition, Dietics, Growth and development, cardiology and fluoride.
- 2) Student will get acquainted with Dental Health Concepts Effects of civilization and Environment, Dental Health Delivery systems, public health measures related to children along with principles of Paediatric preventive dentistry.
- 3) Students should be able to develop an attitude of Counselling in Paediatric dentistry.
- 4) Students should be able to do case history recording, outline of principles of examination, diagnosis and treatment plan.

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### **Clinical Pedodontics**

- 1) Students should be competent to treat dental diseases which are occurring in child patient. Students should be able to manage to repair and restore the lost /tooth structure to maintain harmony between both hard and soft tissues of oral cavity.
- 2) Students should be able to manage the disabled children effectively and efficiently, tailored to needs of individual requirement and conditions.

- 3) Students should be able to correct oral habits, spaces and occlusal problems using removable and fixed therapy.
- 4) Students should be able to acquire skills in emerging concepts in pediatric dentistry and To manage efficiently life threatening condition with emphasis on basic life support measure
- 5) Students should be able to develop an attitude to adopt ethical principles in all aspects of pediatric dental practice along with professional honesty and integrity.

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**Preventive and community dentistry as applied to pediatric dentistry**

- 1) Students should be able to create a good oral health in the child with installing a positive attitude and behavior in children.
- 2) Students should be able to understand the principles of prevention and preventive dentistry right from birth to adolescence.
- 3) Students should be able to guide and counsel parents in regards to various treatment modalities including different facets of preventive dentistry.
- 4) Students should be able to deliver care irrespective of social status, caste, creed, religion of the patients.
- 5) Students should be able to share the knowledge and clinical experience with professional colleagues with own willingness.
- 6) Students are trained to introduce concepts of dental health,

	<p>diet and trauma during sports and its prevention in schools and public health measures on ECC in community at large.</p> <hr/> <p style="text-align: center;"><b>Essay</b></p> <p>1) Students should be able to respect child patient's rights and privileges, including child patient's right to information and right to seek a second opinion.</p> <p>2) Every student after the critical assessment of a case should be able to provide best possible comprehensive treatment to the child patient singly or as a part of multidisciplinary team.</p>
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**PROGRAMME NAME:- PERIODONTOLOGY & IMPLANTOLOGY**

<p><b>Course outcome BDS -4<sup>th</sup> year</b></p>	<ol style="list-style-type: none"> <li>1. Dental graduates who are efficient and trained to handle oral health issues.</li> <li>2. Dental graduates skilled to diagnose patients with periodontal diseases and successfully apply phase 1 therapy.</li> <li>3. Dental graduates with latest technologies, which would develop them as professionals as well as help them in their employment opportunities.</li> <li>4. Dental graduates with practical skills, which would improve, doctor patient relationship having positive impact on society.</li> <li>5. To recognize advanced cases that need specialist care and refer to the specialist.</li> </ol>
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	<p>6. Dental graduate who is skilled to apply multidisciplinary approach for successful treatment outcome.</p> <p>Dental graduate with a research mindset trained on par with international standards.</p>
<p><b>MDS</b></p>	<p style="text-align: center;"><b>Applied basic sciences</b></p> <ol style="list-style-type: none"> <li>1. The Candidate should have a wide review of the current methods and research used in studying problems in periodontal disease.</li> <li>2. The candidate should have a basic knowledge of medical emergencies and basic life support devices.</li> <li>3. The candidate should have an understanding of the broad range of infectious diseases affecting the oral cavity.</li> <li>4. The candidate should have an understanding on clinical and biological factors to be considered in the appropriate use of antimicrobial drugs</li> <li>5. The candidate should have an understanding of hospital-acquired infections and its management.</li> <li>6. The candidate should be aware of the contemporary principles and practices of laboratory diagnostic techniques and interpretations of laboratory reports.</li> <li>7. The candidate should have a basic knowledge on research methodology, biostatistics and be able to apply it in various research projects as well as dissertations.</li> <li>8. The candidate should have basic knowledge about microbiology and immunology.</li> </ol> <hr/>

**Normal periodontal structure and etiopathogenesis and epidemiology**

1. The candidate should have a sound knowledge on the normal structure and functions of periodontium and its contributing etiological factors resulting in the pathogenesis of periodontal diseases and its application in the diagnosis.
2. The candidate should have broad overview of influence of systemic disease and disorders of the periodontium
3. The candidate should be able to record oral indices and plan out epidemiological survey to assess the prevalence and incidence periodontitis in Indian population.

**Periodontal Diagnosis ,Therapy and Oral Implantology**

1. The candidate would be able to understand the general principles of anti-infective therapy with special emphasis on infection control in periodontal practice
2. The candidate should have a sound knowledge of the etiopathogenesis and its application in diagnosing various periodontal diseases and should be familiar with various periodontal treatment modalities available to treat those cases.
3. The candidate should have an updated and recent knowledge on advancements and be able to modify their treatment accordingly.
4. The candidate should have knowledge about biological, clinical and surgical aspects of dental implants. Should be aware of the various designs and placement of oral implants



	<p>and follow up of implant prosthesis.</p> <hr/> <p style="text-align: center;"><b>Essay</b></p> <ol style="list-style-type: none"> <li>1. The candidate would be able to outline the knowledge, procedural and clinical skills needed in master's degree periodontics. Should be knowledgeable to provide clinical care for patients with complex problems that are beyond the treatment skills of general dentist and demonstrate evaluative and judgment skills in making appropriate decision regarding prevention, correction and referral to deliver comprehensive care to patients.</li> <li>2. The candidate should be able to analyze various clinical scenarios and apply their knowledge accordingly.</li> </ol>
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**PROGRAMME NAME :- PUBLIC HEALTH DENTISTRY**

<p><b>Course outcome BDS – 4<sup>TH</sup> YEAR</b></p>	<ol style="list-style-type: none"> <li>1. Dental graduates will be with thorough basic knowledge on case history recording , diagnosing the oral health problems and provide appropriate treatment plan.</li> <li>2. Dental graduates will have basic skills in Research methodology of methods in collecting data on oral health problems prevailing in the country.</li> <li>3. Dental graduates will have the potential to conduct surveys, Planning and Evaluation .</li> </ol>
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	<p>4. Students are well versed with their prompt knowledge on methods for prevention and control of oral health problems at individual and community levels.</p>
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