Maharashtra Institute of Dental Sciences and Research (Dental College), Latur.

Department Of Orthodontics

UNDER GRADUATE PROGRAMME OUTCOME

Graduates, on completion of programme will demonstrate command of the following learning outcome. Graduate will be able to:

- Develop critical skills in their practice and application of knowledge enabling them to make a valuable contribution to patient and health care as individuals and as responsible members of society.
- Be competent in diagnosis and management of common dental problems of the individual and the community.
- Communicate effectively in writing on a variety of topics related to dental health.
- Demonstrate and awareness and appreciation of the delivery of culturally competent health.
- Appreciate the socio-psychological, Cultural, Economic and environmental factors affecting health.
- Effectively communicate and acknowledge the impact of the legal, Ethical and political environment on health care policy and delivery.
- Describe and Demonstrate management /leadership skills.

Orthodontics and Dentofacial Orthopaedics	• **Understand about normal growth and development of facial skeleton and dentition.** • **Pinpoint aberrations in growth process both dental and skeletal and plan necessary treatment.** • **Diagnose the various malocclusion categories** • **Able to motivate and explain to the patients(and parents) about the necessary to treatment** • **Plan and execute interceptive orthodontics(habit breaking appliance)** • **Manage and treatment of simple malocclusion such as anterior spacing using removable appliances** • **Handle delivery and activation of removable orthodontic appliances** • **Diagnose and appropriately refer patients with complex malocclusion to the specialist**
BDS 4th YEAR	1. Graduates emerging from this from this **institute are excelling in academics and practice.** 2. **Many undergraduates from our institutes are pursuing post graduation in this specially**

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POST GRADUATE COURSE OUTCOME

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Department Of Orthodontics

POST GRADUATE PROGRAMME OUTCOME

OBJECTIVES:

The training programme in Orthodontics is to structure and achieve the following four objectives.

I. KNOWLEDGE :

- 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 problems.
- Various treatment modalities in Orthodontics preventive interceptive and corrective.
- Basic sciences relevant to the practice of Orthodontics.
- Interaction of social, cultural, economic, genetic and environmental factors and their relevance to management of oro-facial deformities.
- Factors affecting the long-range stability of orthodontic correction and their management.
- 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 disease.

II. SKILLS:

- 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 Dentofacial deformities.
- 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 orofacial deformities.

III. ATTITUDES:

- Develop an attitude to adopt ethical principles in all aspects of Orthodontics practice.

• Professional honesty and integrity are to be fostered.

• Treatment care is to be delivered irrespective of the social Status, cast, creed or colleagues.

• Willingness to share the knowledge and clinical experience with professional colleagues.

• 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.

• Respect patient's rights and privileges, including patient's right to information and right to seek a second opinion.

• Develop attitude to seek opinion from allied medical and dental specialists as and when required.

IV. <u>COMMUNICATION SKILLS:</u>

• Develop adequate communication skills particularly with the patients giving them the various options available to manage a particular Dentofacial problem and to obtain a true informed consent from them for the most appropriate treatment available at that point of time.

• 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.

MDS ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS	**Applied Basic science**	**1.Applied anatomy** **Under anatomy they would have learnt about Prenatal and postnatal growth of head, bone growth, assessment of growth and development muscles of mastication, development of dentition and occlusion.** **2.Applied physiology** **Undergraduate 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.** **3.Dental materials** **Under Dental Material they would have learnt about Gypsum products, impression materials, bonding cements, wrought metal alloys, orthodontic wires, elastics, applied physics, specification and tests methods, and survey of all contemporary and recent advances of above.** **4.Genetics** **Under genetics they would have learnt about Cell structure DNA, RNA ,protein synthesis ,cell division ,Chromosomal abnormalities, Principal of orofacial genetics, Genetics in malocclusion, molecular basis of genetics .Studies related to malocclusion .Recent advances in genetics related to**

		malocclusion. Specification and test methods survey of all contemporary and recent advances of above. **5.Physical anthropology** **Under Physical Anthropology they would have learnt about Evolutionary development of dentition ,Evolutionary development of jaws** **6.Pathology** **Under Pathology they would have learnt about inflammation and necrosis** **7.Biostatistics** **Under Biostatistics they would have learnt about statistical principle, sampling and sampling technique, Experimental models, design interpretation, Development of skill for preparing clear concise and scientific abstracts and publication.** **8. Applied research methodology in Orthodontics** **Under Applied research methodology in Orthodontics they would have learnt about Experimental design Animal experimental protocol Principal in the development execution and interpretation of methodologies in Orthodontics Critical Scientific appraisal of literature**
	Diagnosis and treatment planning	**1.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. **2.Concept of occlusion and aesthetic**s 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. **3.Etiology and classification of malocclusion** Under this students would learn about, a comprehensive review of the local and systemic factor in the causation of malocclusion and the various classification of malocclusion. **4.Dentofacial anomalies** Under this, the students would learn about, anatomical, physic pathological characteristics of developmental defects of orofacial str **5.Child and Adult Psychology** Under this, the students would learn about Stages of child development ,Theories of psychological development ,

		Management of an orthodontic treatment , Management of an orthodontic treatment , Management of handicapped child, motivation and Psychological problems related malocclusion orthodontics , Adolescent psychology Behavior psychology And communication. **6.Diagnostic procedure and treatment planning in orthodontics** Under this, the students would learn about stages of child development and management , orthodontic treatment ,Management of handicapped child, Motivation and psychological problem relation malocclusion/orthodontics, Adolescent psychology Behavioral psychology and communication **7. Cephalometric** Under this the student would learn about, Instrumentation, Image processing. Tracing and analysis of errors and application, Radiation hygiene. Advanced cephalometric techniques, review of literature, Video imaging principal and application **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 relation, professional relationship, Dental ethics and jurisprudence, office sterilization procedures, community based orthodontics
	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 orthopaedics appliance to the appropriate cases. **3.Cleft Lip and 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 and permanent dentition by harmonizing the treatment plan with the other member of the multidisciplinary cleft team. **4.Biology of tooth movement** Basic understanding of the applied anatomy and physiology regarding to tooth and its surrounding structure will be included into the student, so that the results of application of orthodontic forces can be understood and

		clinically used. **5. Orthodontics/ Orthognathic surgery** Student will thoroughly trained in conjoint diagnosis and treatment planning Of cases requiring surgical intervention. **6. Ortho/ Perio/ prostho interrelationship** Students will be trained in trained in treating complicated cases requiring a multidisciplinary approach in patient management **7. Basic principles of Mechanotherapy** Students will be trained in designing, construction, fabrication and management of cases using orthodontics **8. Applied preventive aspects in orthodontics** A comprehensive view of diagnosing and preventing caries, periodontal diseases to maintain proper inter arch relationship. **9. Interceptive orthodontics** Students will be trained in growth guidance, diagnosing and treatment planning of early malocclusion both at mixed/ permanent dentition. **10. Retention and relapse** To analyze post treatment stability prevent to any relapse.
	Essay	**1.Recent advances** 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