

M.S. Ramaiah University of Applied Sciences

New BEL Road, MSR Nagar, Bangalore – 560054



**RAMAIAH
UNIVERSITY**
OF APPLIED SCIENCES

PO, PSO, PEO & CO

Programme: MDS in Orthodontics and Dentofacial Orthopedics

Programme Code: 069

Programme Outcome (PO)

Programme Specific Outcome (PSO)

Program Educational Objectives (PEO)

Course Outcomes (CO)

Registrar
M.S. Ramaiah University of Applied Sciences
Bangalore - 560 054

Approved in 23rd ACM (Resolution 23.05) held on 15th July 2021



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Programme: MDS (Mater of Dental Surgery)

Programme Outcomes (POs)

M.D.S. (Orthodontics and Dentofacial Orthopedics) graduates will be able to:

- PO1.** Impart knowledge on supervision, guidance and correction of growing and mature dento-facial structures
- PO2.** Diagnose the common orthodontic problems such as dental malocclusion, skeletal jaw discrepancies, malformation & malfunctioning of oro-facial structures, understand the etiology and pathophysiology and describe the clinical signs and symptoms
- PO3.** Critically analyze the various treatment options and deliver it with most efficient manner based on evidence based dentistry
- PO4.** Achieve competency to fabricate/design and manage the most appropriate intra or extra oral, removable or fixed orthodontic, myo-functional and orthopedic appliance for a given orthodontic problem
- PO5.** Manage potential problems of mechanotherapy, post treatment relapse and effectively initiate corrective procedures
- PO6.** Provide a general perspective and opportunities for a career in Orthodontics and Dento-facial Orthopedics

Programme Specific Outcomes (PSOs)

At the end of the M.D.S (Orthodontics and Dentofacial Orthopedics) program, the graduate will be able to:

- PSO-1.** Analyze complex malocclusions and plan the appropriate treatment
- PSO-2.** Discuss advances in orthodontic tooth movement such as acceleratory orthodontics
- PSO-3.** Design and fabricate newer complex orthodontic appliances such as loops, fixed functional appliances etc.
- PSO-4.** Develop a social program to improve awareness among urban and rural populations regarding malocclusions

Program Educational Objectives (PEOs)

The objectives of the M.D.S. (Orthodontics and Dentofacial Orthopedics) Programme are to:

- PEO-1.** Provide students with a strong foundation in basic and applied medical and dental sciences to address oral health issues to enable them to devise and deliver efficient solutions to challenging orthodontic problems pertaining to oral and maxillofacial region
- PEO-2.** Impart analytic and cognitive skills required to develop innovative solutions for R&D, Industry, and societal requirements as related to pediatric dentistry



PEO-3. Provide sound theoretical and practical knowledge of oral health sciences, managerial and entrepreneurial skills to enable students to contribute to the well-being and welfare of the society

PEO-4. Inculcate strong human values and social, interpersonal and leadership skills required for professional success in evolving global professional environments

Course Outcomes (COs)

Course Title & Code: Preclinical and Clinical Phase Basics (ODC501A)

After the successful completion of this Course, the student will be able to:

- CO-1.** Describe dentofacial growth and development, general, local and genetic factors responsible for malocclusion and skeletal discrepancies
- CO-2.** Discuss preventive and interceptive orthodontic procedures including growth modulation and fabrication of removable appliances for functional jaw orthopedics
- CO-3.** Appraise recent advances in Orthodontic materials
- CO-4.** Execute Orthodontic clinical examination using model analysis, cephalometric analysis and recent diagnostic aids for diagnosis and treatment planning
- CO-5.** Discuss the role of basic biomechanics and its applications in clinical practice
- CO-6.** Plan appropriate fixed orthodontic appliance therapy with empathy

Course Outcomes (COs)

Course Title & Code: Clinical Phase Intermediate (ODC502A)

After the successful completion of this Course, the student will be able to:

- CO-1.** Discuss the biological and advanced biomechanical aspects of orthodontic tooth movement and its implications on the periodontium
- CO-2.** Assess the recent concepts in Occlusion and Gnathology and plan appropriate treatment for patients with Temporo- Mandibular Dysfunction and aberrant respiratory patterns including sleep apnea.
- CO-3.** Perform comprehensive variants of fixed orthodontic appliances incorporating recent advances.
- CO-4.** Formulate an interdisciplinary protocol for patients with complex malocclusions and special health care needs
- CO-5.** Estimate and plan treatment to minimize iatrogenic effects of orthodontics
- CO-6.** Analyze the treatment options and limitations of adult orthodontics



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Course Outcomes (COs)

Course Title & Code: Clinical Phase Advanced (ODC503A)

After the successful completion of this Course, the student will be able to:

- CO-1. Appraise current trends in retention and Identify skeletal and dental malocclusion types and its relation to potential relapse
- CO-2. Fabricate appropriate retention appliances following active orthodontic treatment
- CO-3. Interpret manual and digital superimposition of growth measurements and treatment changes with time
- CO-4. CO4. Apply recent advances in growth forecasting in orthodontic treatment planning
- CO-5. Analyse the appropriate pace and progress of treatment while incorporating recent advances in the treatment protocol
- CO-6. Assess the necessary components in terms of infrastructure, equipment, process and finances involved in setting up an exclusive orthodontic practice.

Course Outcomes (COs)

Course Title & Code: Clinical Photography (MF501A)

After the successful completion of this Module, the student will be able to:

- CO-1. Describe the basic parts and functions of the camera, Principles behind the working of a camera, types of camera and components of a SLR camera.
- CO-2. Demonstrate on how to use a DSLR.
- CO-3. Perform the skills of taking both intraoral and extraoral photographs of the module.

Course Outcomes (COs)

Course Title & Code: Basic and Advanced Life Support (MF502A)

- CO-1. Describe and demonstrate effective cardio pulmonary resuscitation with automatic External Defibrillator use for adults and children with 1 rescuer and 2 rescuers.
- CO-2. Describe and demonstrate effective cardio pulmonary resuscitation for infants with 1 rescuer and 2 rescuers.
- CO-3. Differentiate between adult, child and infant rescue techniques.
- CO-4. Demonstrate rescue breathing for adult, child and infant
- CO-5. Demonstrate bag mask technique for adult, child and infant
- CO-6. Demonstrate relief of choking for adult, child and infant



Course Outcomes (COs)

Course Title & Code: Personality Development and Communication Skills (MF503A)

After the successful completion of this Module, the student will be able to:

- CO-1. Explain the concept of interpersonal effectiveness
- CO-2. Identify the nuances of working in teams, conflict handling, and time management
- CO-3. Apply the principles of interpersonal communication towards professional betterment
- CO-4. Apply time management tools for optimal usage of time

Course Outcomes (COs)

Course Title & Code: Law for Dental Professionals (BDF101A)

After the successful completion of this course, the student will be able to:

- CO-1. Describe the structure and functioning of legal system of India
- CO-2. Differentiate between various laws relevant to dentistry
- CO-3. Identify clinical situations that pose ethical dilemma to be resolved with sound ethical principles
- CO-4. Apply principles of professionalism in the practice of dentistry
- CO-5. Communicate effectively with patients, colleagues and public to instill a positive dental attitude
- CO-6. Prepare plan of action in case of litigation against the doctor

Course Outcomes (COs)

Course Title & Code: Teacher Training Module (MF505A)

After the successful completion of this Module, the student will be able to:

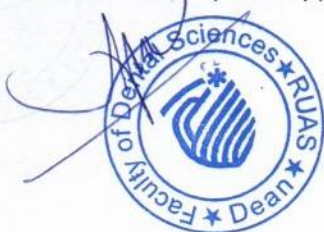
- CO-1. Develop teaching notes on the allotted topic
- CO-2. Deliver lecture to a group of students
- CO-3. Submit questions for assessment relevant to the allotted topic
- CO-4. Analyze student feedback to initiate corrective actions.

Course Outcomes (COs)

Course Title & Code: Research Methodology (MR501A)

After the successful completion of this Module, the student will be able to:

- CO-1. Describe the value, scope, relevance and mandatory steps of research, as well as principles of effective research
- CO-2. Apply the procedures outlined for systematic literature review
- CO-3. Develop and present well structured research proposal and research paper invoking clearly outlined principles
- CO-4. Identify and apply the essential skills desirable for an effective technical presentation



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Course Outcomes (COs)

Course Title & Code: Short Term Project/ Group Project (MR502A)

After the successful completion of this Module, the student will be able to:

- CO-1. Work in a team and undertake a project in their area of specialization
- CO-2. Apply the design methods and techniques for executing the project
- CO-3. Apply appropriate methodology while formulating a project

Course Outcomes (COs)

Course Title & Code: Library Dissertation (MR503A)

After the successful completion of this Module, the student will be able to:

- CO-1. Differentiate types of scientific literature, search strategies and research designs
- CO-2. Select topic relevant to the field of study
- CO-3. Select literature utilising different search engines
- CO-4. Review the selected literature and compile it
- CO-5. Formulate a research question based on the outcome of literature review
- CO-6. Prepare scientific manuscript for publication

Course Outcomes (COs)

Course Title & Code: Dissertation (MR504A)

After the successful completion of this Module, the student will be able to:

- CO-1. Critically review scholarly literature collected from various sources for the dissertation purpose and formulate a research problem
- CO-2. Prepare and present a research proposal
- CO-3. Conduct research to achieve research objectives
- CO-4. Propose new ideas/methodologies or procedures for further improvement of the research undertaken
- CO-5. Create research document and write research papers for publications
- CO-6. Defend the research findings in front of scholarly audience

Course Outcomes (COs)

Course Title & Code: Conference Presentation (PMR505A)

After the successful completion of this Module, the student will be able to:

- CO-1. Choose a contemporary topic in his/her area of study for research
- CO-2. Write a conference paper based on research and present in the conference



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Course Outcomes (COs)

Course Title & Code: Journal Publication (MR506A)

After the successful completion of this Module, the student will be able to:

- CO-1. Choose a contemporary topic in his/her area of study for research
- CO-2. Write a research paper based on research and publish in a journal

Course Outcomes (COs)

Course Title & Code: Interuniversity Module (MG501A)

After the successful completion of this Module, the student will be able to:

- CO-1. Apply tools and techniques proficiently in the area of the training undergone for efficient execution of the stated objective
- CO-2. Make presentation on training obtained



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