# Programme Structure

## School of Dental Sciences
## MDS
## (Master of Dental Surgery)
## Periodontology

**Programme code : SDS0105**
**Batch : 2023-2026**

**Programme Structure**
**School of Dental Sciences**
**Master of Dental Surgery (MDS)**
**Batch: 2023-2026**

| S. No. | Paper ID | Subject Code | Subjects | Teaching Load | | | Type of Course:<br>1. CC<br>2. AECC<br>3. SEC<br>4. DSE |
|---|---|---|---|---|---|---|---|
| | | | | L | T | P | |
| **Theory Subjects** | | | | | | | |
| 1. | MDS302 | MDS302 | Periodontology | **0** | **3** | **45** | **CC** |
| **Practical/Viva-Voce/Jury** | | | | | | | |
| 2. | MDS302 | MDS302 | Periodontology | **0** | **3** | **45** | **CC** |

## Module: Syllabus

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| **School:** | | **School of Dental Sciences** |
| **Programme:** | | **Master of Dental surgery (Periodontology)** |
| **Batch:** | | **2023-2026** |
| 1 | Course Code | MDS302 |
| 2 | Credits | NA |
| 3 | Contact Hours (L-T-P) | 0-3-45 |
| 4 | Course Type | Compulsory (CORE) |
| 5 | Course Objective | 1. Knowledge of aetiology, pathophysiology, diagnosis and management of periodontal and peri-implant diseases.<br>2. Knowledge of interrelationship between periodontal diseases and systemic conditions<br>3. Recognize conditions that may be the outside the area of Periodontology and Oral Implantology and refer them to the concerned specialist.<br>4. Motivate and educate the community regarding periodontal diseases, its prevention and consequences if not treated.<br>5. Update knowledge and enhance skills by attending courses, conferences, seminars and workshops pertaining to Periodontology and Oral Implantology<br>6. Carry out research in both basic and clinical aspects of Periodontology and Oral Implantology with the aim of publishing or presenting the work at various scientific gatherings. |
| 6 | Course Outcomes | |
| | 302.1 | • CO1 Should have an understanding on the structural anatomy and biology of the periodontium and be familiar with the biochemical, microbiologic and immunologic genetic aspects of periodontal pathology<br>• CO2 Should understand the clinical and biological factors to be considered in the appropriate use of antimicrobial drugs and be aware of the contemporary principles and practices of laboratory diagnostic techniques and interpretation of laboratory reports.<br>• CO3 Should have a basic knowledge on research methodology, biostatistics and be able to apply it in various research projects as well as dissertations. |

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| | 302.2 | • CO2 Should have a sound knowledge of the normal structure of the periodontium and etiopathogenesis of periodontal diseases and be able to apply it in diagnosing and deciding treatment of various periodontal diseases<br>• CO2 Should be able to record indices and plan out epidemiological survey to assess the prevalence and incidence of various gingival and periodontal diseases in the Indian Population | |
| | 302.3 | • CO3 Should be able torecord proper clinical history, perform thoroughintra-oral and extra-oral examination, adviseessential diagnostic procedures and interpret them to come to a reasonable diagnosis<br>• CO2 Should develop knowledge and skill of various non-surgicaland surgical periodontal therapies available for treatment of periodontal diseases including an updated knowledge on the recent advancements and be able to effectively educate and motivate the patient regarding periodontal maintenance after treatment<br>• CO3 Should develop knowledge and skill in the science and practice of oral implantology including Implant Maintenance and diagnosis and treatment of peri-implant complications | |
| | 302.4 | • CO4 Should adopt ethical principles in all aspects of treatment modalities and scientific research, adopt continuous learning by attending conferences and workshops, demonstrate evaluative and judgment skills in patient referral and be able to handle medical emergencies arising in periodontal practise including providing Basic Life Support | |
| 7 | Course Description | Periodontology is the science dealing with the health and disease of the investing and supporting structures of the teeth and oral mucous membrane. The objective of the post-graduate training is to train a student so as to ensure higher competence in both general and specialized areas, and prepare him or her for a career in teaching, research and speciality practice with a high degree of clinical proficiency in the field of Periodontology and Oral Implantology. | |
| 8 | Outline syllabus | | CO Mapping |
| | **Unit 1** | **Applied Basic Sciences** | |
| | A | Applied Anatomy including Normal Periodontal structure, Physiology and Biochemistry | CO1 |
| | B | Applied Pathology and Microbiology and Pharmacology | CO2 |
| | C | Applied Research Methodology and Biostatistics | CO3<br>CO1 |

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| | **Unit 2** | **Etiopathogenesis of Periodontal Diseases** | | | | |
| | A | Etiology, Epidemiology and Risk Factors of Periodontal Diseases | | | | CO1,CO2 |
| | B | Pathology, Microbiology and Immunology of Periodontal Diseases | | | | CO2 |
| | C | Relationship of Periodontal Diseases with systemic diseases | | | | CO2, CO3 |
| | **Unit 3** | **Clinical and Therapeutic Periodontology and Oral Implantology** | | | | |
| | A | Gingival and Periodontal Diseases, History, Examination, Diagnosis, Prognosis and Treatment Planning | | | | CO2, CO3 |
| | B | Non-Surgical and Surgical Periodontal Therapy including Recent advances in surgical Techniques andSupportive Periodontal Therapy | | | | CO2, CO3 |
| | C | Biological, Clinical and Surgical aspects of Dental Implants including Diagnosis and Treatment of peri-implant complication sand Implant Maintenance, Management of Medical Emergencies in Periodontal Practice including Basic Life Support | | | | CO3, CO4 |
| | **Unit 4** | **Long Essay** | | | | |
| | A | Applied Basic Sciences | | | | CO1 |
| | B | Etiopathogenesis of Periodontal Diseases | | | | CO2 |
| | C | Clinical and Therapeutic Periodontology and Oral Implantology including Management of Medical emergencies | | | | CO3,CO4 |
| 9 | Attendance | 75% Theory and Practical each | | | | |
| 10 | Presentation | Seminars, Journal Clubs, Clinical Case Presentations, Dissertation Presentation, Library Dissertation | | | | |
| 11 | Any Other | Short Studies, Inter-Departmental Research, Discussions and Demonstrations, Assignments | | | | |
| 12 | Mode of examination | Theory//Practical/ Viva voce and Pedagogy | | | | |
| | Weightage Distribution | 700 Marks | | 1st Year | 3rd Year | |
| | | | Theory | 100 Marks | 300 Marks | |
| | | | Practical | - | 200 Marks | |
| | | | Viva voce & Pedagogy | - | 100 Marks | |

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| 13 | Text book/s* | • Carranza's Clinical Periodontology - Newman, Takei Klokkevold, Carranza<br>• Clinical Periodontology and Implant Dentistry – Lang, Lindhe<br>• Contemporary Implant Dentistry – Misch<br>• Periodontal Medicine - Rose, Mealey, Genco<br>• Textbook of Preventive and Social Medicine – Park<br>• Atlas of cosmetic and Reconstructive Periodontal surgery - Cohen | |
| 14 | Other References | • Journal of Clinical Periodontology<br>• Journal of Periodontal Research<br>• Periodontology 2000<br>• Journal of Periodontology<br>• International Journal of Periodontics and Restorative Dentistry<br>• Journal of Oral Implantology<br>• EBSCO Host | |

**Mapping**

| COs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | 1 | 1 | 1 | 1 | 1 | - | - | 1 | - |
| **CO302.1.2** | 1 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 |
| **CO302.1.3** | - | - | 3 | 3 | 1 | 3 | - | - | - | - | - |
| **CO2** | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | - |
| **CO302.2.2** | - | - | 3 | 2 | 1 | 3 | - | - | - | - | - |
| **CO3** | 2 | 3 | 2 | - | 1 | 1 | 3 | 1 | 1 | 1 | 1 |
| **CO302.3.2** | 1 | 3 | 3 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | - |
| **CO302.3.3** | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | - |
| **CO4** | - | 1 | 1 | 2 | 3 | 3 | 3 | - | - | - | 3 |

**1-Slight (Low) 2-Moderate (Medium)3-Substantial (High)**

**TEACHING / LEARNING ACTIVITIES:**

**The post graduate is expected to complete the following at the end of :**

| S.No. | Year Wise | ACTIVITIES WORKS TO BE DONE |
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| **1.** | **Module 1**<br>**(First Year)** | Orientation to the PG programme<br>Pre-clinical work (4 months)<br>a. Dental<br>1. Practice of incisions and suturing techniques on the typodont models.<br>2. Fabrication of bite guards and splints.<br>3. Occlusal adjustment on the casts mounted on the articulator<br>4. X-ray techniques and interpretation.<br>5. Local anaesthetic techniques.<br>6. Identification of Common Periodontal Instruments.<br>7. To learn science of Periodontal Instruments maintance (Sharpening , Sterlization and Storate)<br>8. Concept of Biological width<br>a. Typhodont Exercise<br>(i) Class II Filling with Band and Wedge Application<br>(ii) Crown cuttings<br>b. Medical<br>1. Basic diagnostic microbiology and immunology, collection and handling of sample and culture techniques.<br>2. Introduction to genetics, bioinformatics.<br>3. Basic understanding of cell biology and immunological diseases.<br>Clinical work<br>1. Applied periodontal indices 10 cases<br>2. Scaling and root planning:- with Proper written history<br>a. Manual 20 Cases |

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| | | b. Ultrasonic 20 Cases<br>3. Observation / assessment of all periodontal procedures including implants. |
| **2.** | **Module 2**<br>**(First Year)** | 1. Interpretation of various bio-chemical investigations.<br>2. Practical training and handling medical emergencies and basic life support devices.<br>3. Basic biostatistics – Surveying and data analysis.<br>**Clinical**<br>1. Case history and treatment planning 10 cases<br>2. Root planning 50 cases<br>3. Observation / assessment of all periodontal procedures including implant.<br>4. Selection of topic for Library dissertation and submission of Dissertation Synopsis. |
| **3.** | **Module 3**<br>**(First Year)** | Minor surgical cases 20 cases<br>(i) Gingival Depigmentation 3 Cases<br>(ii) Gingival Curettage no limits<br>(iii) ENAP 1 Case<br>(iv) Gingivectomy/ Gingivoplasty 5 cases<br>(v) Operculectomy 3 cases<br>Poster Presentation at the Speciality conference |
| **4.** | **Module 4**<br>**(Second Year)** | Clinical work<br>1. Case history and treatment planning 10 cases<br>2. Occlusal adjustments 10 cases<br>3. Perio splints 10 cases<br>4. Local drug delivery techniques 5 cases<br>5. Screening cases for dissertation |
| **5.** | **Module 5**<br>**(Second Year)** | 1. Periodontal surgical procedures.<br>a. Basic flap procedures 20 cases<br>2. Periodontal plastic and esthetic 10 cases<br>a. Increasing width of attached gingival 5 cases |

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| | | b. Root coverage procedures / Papilla Preservation and Reconstruction 5 cases<br>c. Crown lengthening procedures 5 cases<br>d. Frenectomy 5 cases<br>e. Vestibuloplasty 5 cases<br>3. Furcation treatment (Hemisection, Rootsection, Tunelling) 5 cases<br>4. Surgical closure of diastema. 2 cases |
| **6.** | **Module 6**<br>**(Third Year)** | 1. Ridge augmentation procedures 5 cases<br>2. Implants Placements and monitoring 5 cases<br>3. Sinus lift procedures 2 cases<br>4. Case selection, preparation and investigation of implants.<br>5. Interdisciplinary Periodontics 2 each<br>(i) Ortho – Perio<br>(ii) Endo – Perio<br>(iii) Restorative Perio<br>(iv) Preprosthetic<br>(v) Crown Prep<br>6. Osseous Surgery 2 each<br>(i) Resective<br>(ii) Regenerative<br>7. Scientific paper/ poster presentation at the conference. |
| **7.** | **Module 7**<br>**(Third Year)** | Clinical work<br>1. Flap surgeries & regenerative techniques 25 cases (using various grafts & barrier membranes)<br>2. Assistance / observation of advanced surgical procedure 5 each<br>3. Microsurgery 5 each<br>4. Record maintenance & follow-up of all treated cases including implants.<br>5. Submission of dissertation – 6 months before completion of |

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| | | III year.<br>6. Scientific paper presentation at conferences. |
| **8.** | **Module 8**<br>**(Third Year)** | 1. Refining of surgical skills.<br>2. Publication of an article in a scientific journal.<br>3. Preparation for final exams. |
| **9.** | **Module 9**<br>**(Third Year)** | 1. Preparation for final exams.<br>2. University exam |

**ASSESSMENT EXAMINATION:**

In addition to regular evaluation, logbook etc., Assessment examination should be conducted after every 3 modules & progress of the student monitored.

**MONITORING LEARNING PROGRESS:**

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring is to be done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects.