Programme Structure

School of Dental Sciences

MDS

(Master of Dental Surgery)

-Periodontology

Programme Code: SDS0105

Batch: 2024-2027

1.1 Vision, Mission and Core Values of the University

Vision of the University

To serve the society by being a global University of higher learning in pursuit of academic excellence, innovation and nurturing entrepreneurship.

Mission of the University

1. Transformative educational experience
2. Enrichment by educational initiatives that encourage global outlook
3. Develop research, support disruptive innovations and accelerate entrepreneurship
4. Seeking beyond boundaries

Core Values

1. Integrity
2. Leadership
3. Diversity
4. Community

1.2 Vision, Mission and Core Values of the School

Vision of the School

To serve the society by being a global center in pursuit of academic and professional excellence in the field of dentistry.

Mission of the School

1. Creating a stimulating and flexible learning environment amongst the faculty and students
2. Strongly promoting research, innovation, clinical excellence
3. Promote and inculcate ethical values and continued betterment in the dental profession and in all facets of life.

Core Values

1. Integrity
2. Leadership
3. Diversity
4. Community

1.3 Programme Educational Objectives (PEO)

PEO1: Knowledge of etiology, pathophysiology, diagnosis and management of periodontal and peri-implant diseases.

PEO2: Knowledge of interrelationship between periodontal diseases and systemic conditions

PEO3: Recognize conditions that may be the outside the area of Periodontology and Oral Implantology and refer them to the concerned specialist.

PEO4: Motivate and educate the community regarding periodontal diseases, its prevention and consequences if not treated.

PEO5: Update knowledge and enhance skills by attending courses, conferences, seminars and workshops pertaining to Periodontology and Oral Implantology

PEO6: 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.

PEO7: Skills in taking a proper clinical history, examine the patient, perform essential diagnostic procedures and order relevant tests and interpret them to come to a diagnosis of various periodontal and peri-implant diseases.

PEO8: Skill in carrying out epidemiological surveys to assess incidence and prevalence of various periodontal and peri-implant diseases in Indian population region wise.

PEO9: Acquire adequate skills and competence in performing various non- surgical and surgical procedures independently as required in the specialty of Periodontology and Oral-Implantology

PEO10: Apply high moral and ethical standards in all aspects of clinical practice and while carrying out human or animal research.

1.3.2 Programme Articulation Matrix:

PEO Statements	Mission 1	Mission 2	Mission 3
PEO1:	**3**	**1**	**1**
PEO2:	**3**	**1**	**1**
PEO3:	**2**	**2**	**1**
PEO4:	**2**	**1**	**2**
PEO5:	**2**	**1**	**1**
PEO6:	**2**	**3**	**1**
PEO7:	**3**	**1**	**1**
PEO8:	**1**	**1**	**1**
PEO9:	**3**	**2**	**1**
PEO10:	**-**	**1**	**3**

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

1.3.3 Programme Outcomes (PO's)

PO1: Knowledge: Possess knowledge of etiology, pathophysiology, diagnosis and management of periodontal and peri-implant diseases. In addition, the candidate should understand interrelationship between periodontal diseases and systemic conditions.

PO2: Patient Management: The candidate should be able to take a proper clinical history, examine the patient, perform essential diagnostic procedures, and order relevant tests and interpret them to come to a diagnosis of various periodontal and peri-implant diseases. The candidate should be competent in performing various non- surgical and surgical procedures independently as required in the specialty of Periodontology and Oral-Implantology

PO3: Periodontist and Community: The candidate should be able to motivate and educate the community regarding periodontal diseases, its prevention and consequences if not treated.He/ She should be able to carry out epidemiological surveys to assess incidence and prevalence of various periodontal and peri-implant diseases in Indian population region wise.

PO4: Communication Skills: The candidate should be able to communicate effectively with the dental/periodontal community such as being able to make effective presentations and documentation in various conferences and seminars.

PO5: Ethics: The candidate should adopt ethical principle in all aspects of treatment modalities and human or animal research. Professional honesty and integrity should be fostered. The candidate should be humble, accept his/her limitations of knowledge and skill and ask for help from colleagues when needed.

PO6: Life-long Learning: The candidate should be able to 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 and update knowledge and enhance skills by attending various courses, conferences, seminars and workshops

PSO1: Diagnosis and treatment planning of periodontal problems, Recognition of medically compromised patients, their referral to physician for opinion or consent and carry out their periodontal treatment.

PSO2: Non-surgical periodontal procedures such as hand and ultrasonic scaling and root planning, local drug delivery, occlusal adjustment and splints, Oral hygiene instructions using various oral hygiene aids, Supportive Periodontal therapy.

PSO3: Surgical periodontal procedures such as curettage, gingivectomy and flap surgery, osseous grafts, GTR, Periodontal Plastic and Esthetic Surgical Procedures

PSO4: Advanced periodontal treatment procedures such as dental implants, dental lasers and use of biologic mediators like PRF and PRP

PSO5: Handling medical emergencies and basic life support.

1.3.4 Programme Articulation Matrix:

	PEO1	PEO2	PEO3	PEO4	PEO5	PEO6	PEO7	PEO8	PEO9	PEO10
PO1	3	3	3	2	1	1	2	2	2	1
PO2	1	1	1	1	1	1	3	3	3	3
PO3	1	1	1	3	1	1	1	3	1	1
PO4	1	1	1	1	3	2	1	1	1	1
PO5	1	1	1	1	1	1	1	1	1	3
PO6	1	1	1	1	3	3	1	1	1	1
PSO1	3	3	3	1	1	1	3	1	1	1
PSO2	1	1	1	1	1	1	1	1	3	1
PSO3	1	1	1	1	1	1	1	1	3	1
PSO4	1	1	1	1	2	2	1	1	3	1
PSO5	1	3	3	1	2	1	1	1	1	1

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

1.3.5 Programme Articulation Matrix:

PROGRAMME OUTCOME COURSES	COURSE NAMES	PO1	PO2	PO3	PO4	PO5	PO6	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	Applied Basic Sciences	2	2	1	1	1	1	1	-	-	1	-
CO1		1	3	1	1	1	1	2	1	1	1	2
CO1		-	-	3	3	1	3	-	-	-	-	-
CO2	Normal Periodontal structure, Etiology & Pathogenesis of Periodontal diseases, epidemiology as related to Periodontics	3	3	2	1	1	1	3	2	2	2	-
CO2		-	-	3	2	1	3	-	-	-	-	-
CO3	Periodontal diagnosis, therapy & Oral Implantology	2	3	2	-	1	1	3	1	1	1	1
CO3		1	3	3	1	1	2	2	3	3	3	-
CO3		1	3	1	1	1	1	1	2	3	3	-
CO4	Essays (Descriptive and Analyzing type Questions)	-	1	1	2	3	3	3	-	-	-	3

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

Programme Structure
School of Dental Sciences
Master of Dental Surgery (MDS)
Batch: 2024-2027

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Type of Course: 1. CC 2. AECC 3. SEC 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**

2.1 Module: Syllabus

School:		**School of Dental Sciences**
Programme:		**Master of Dental surgery (Periodontology)**
Batch:		**2024-2027**
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. 2. Knowledge of interrelationship between periodontal diseases and systemic conditions 3. Recognize conditions that may be the outside the area of Periodontology and Oral Implantology and refer them to the concerned specialist. 4. Motivate and educate the community regarding periodontal diseases, its prevention and consequences if not treated. 5. Update knowledge and enhance skills by attending courses, conferences, seminars and workshops pertaining to Periodontology and Oral Implantology 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 • 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. • CO3 Should have a basic knowledge on research methodology, biostatistics and be able to apply it in various research projects as well as dissertations.

	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. • 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 to record proper clinical history, perform thorough intra-oral and extra-oral examination, advise essential diagnostic procedures and interpret them to come to a reasonable diagnosis. • CO2 Should develop knowledge and skill of various non-surgical and 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. • 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 CO1

	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 and Supportive 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	

13	Textbooks	• Carranza's Clinical Periodontology - Newman, Takei Klokkevold, Carranza • Clinical Periodontology and Implant Dentistry – Lang, Lindhe • Contemporary Implant Dentistry – Misch • Periodontal Medicine - Rose, Mealey, Genco • Textbook of Preventive and Social Medicine – Park • Atlas of cosmetic and Reconstructive Periodontal surgery - Cohen	
14	Other References	• Journal of Clinical Periodontology • Journal of Periodontal Research • Periodontology 2000 • Journal of Periodontology • International Journal of Periodontics and Restorative Dentistry • Journal of Oral Implantology • 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
1.	**Module 1** **(First Year)**	Orientation to the PG programme Pre-clinical work (4 months) a. Dental 1. Practice of incisions and suturing techniques on the typodont models. 2. Fabrication of bite guards and splints. 3. Occlusal adjustment on the casts mounted on the articulator 4. X-ray techniques and interpretation. 5. Local anaesthetic techniques. 6. Identification of Common Periodontal Instruments. 7. To learn science of Periodontal Instruments maintance (Sharpening , Sterlization and Storate) 8. Concept of Biological width a. Typhodont Exercise (i) Class II Filling with Band and Wedge Application (ii) Crown cuttings b. Medical 1. Basic diagnostic microbiology and immunology, collection and handling of sample and culture techniques. 2. Introduction to genetics, bioinformatics. 3. Basic understanding of cell biology and immunological diseases. Clinical work 1. Applied periodontal indices 10 cases 2. Scaling and root planning:- with Proper written history

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

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

		5. Submission of dissertation – 6 months before completion of III year. 6. Scientific paper presentation at conferences.
8.	**Module 8** **(Third Year)**	1. Refining of surgical skills. 2. Publication of an article in a scientific journal. 3. Preparation for final exams.
9.	**Module 9** **(Third Year)**	1. Preparation for final exams. 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.