

# **Program Structure Template**

**School of Dental Sciences**

**MDS**

**(Master of Dental Surgery)**

**Conservative Dentistry & Endodontics**

**SDS0103**

**2021-2024**

## 1.1 Vision, Mission and Core Values of the University

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### **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**

- Integrity
- Leadership
- Diversity
- Community

## 1.2 Vision and Mission of the School

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### **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**

- Integrity
- Leadership
- Diversity
- Community

### 1.3 Programme Educational Objectives (PEO)

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Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.

- PEO1** Describe aetiology, pathophysiology, periapical diagnosis and management of common restorative situations, endodontic situations that will include contemporary management of dental caries, management of trauma and pulpal pathoses
- PEO2** Demonstrate understanding of basic sciences as relevant to conservative / restorative dentistry and Endodontics
- PEO3** Identify social, economic, environmental and emotional determinants in a given case or community and take them into account for planning and execution at individual and community level
- PEO4** Master differential diagnosis and recognize conditions that may require multi disciplinary approach or a clinical situation outside the realm of the specialty, which he or she should be able to recognize and refer to appropriate specialist
- PEO5** Update himself by self-study and by attended basic and advanced courses, conferences, seminars, and workshops in the specialty of Conservative Dentistry- Endodontics-Dental Materials and Restorative Dentistry
- PEO6** Perform all levels of restorative work and surgical and non-surgical Endodontics, as well as endodontic-periodontal surgical procedures as part of multidisciplinary approach to clinical condition
- PEO7** Provide basic life saving support in emergency situations

**PEO8** Manage acute pulpal and pulpo-periodontal situations

**PEO9** Be professionally honest and exhibit integrity and professional ethics and  
Respect patient's rights and privileges including patient's right to information.

### 1.3.3 Program Outcomes (PO's)

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- PO1** Knowledge: Possess a thorough knowledge and comprehension of diagnosis and clinical management of the oral diseases, in addition to, the infection control measures in the dental clinical environment and laboratories
- PO2** Patient management: Take proper chair side history, examine the patient and perform medical and dental diagnostic procedures and order as well as perform relevant tests and interpret to them to come to a reasonable diagnosis about the dental condition in general and Conservative Dentistry - Endodontics in particular. And undertake complete patient monitoring including preoperative as well as post operative care of the patient
- PO3** Patient treatment: Carry out appropriate and effective dental care treatment, including restorative, aesthetics and endodontics, once the diagnosis and treatment plan has been outline.
- PO4** Communication skills: Develop communication skills- in particular to explain various options available management and to obtain a true informed consent from the patient. She shall not carry out any heroic procedures and must know his limitations in performing all aspects of restorative dentistry including Endodontics. Ask for help from colleagues or seniors when required without hesitation
- PO5** Life-long Learning: Teach and/or guide, colleagues and other students. Use information technology tools and carry out research both basic and clinical with the aim of publishing his/her work and presenting the same at scientific platform on a regular basis
- PO6** Ethics: Adopt ethical principles in all aspects of restorative and contemporary Endodontics, including non-surgical and surgical Endodontics. Apply high moral and ethical standards while carrying on human or animal research.

- PSO1** Train student to be sound and efficient about the prevention, diagnosis and treatment of sequelae of dental caries and the other dental defects.
- PSO2** Make the student to carry out proficiently the techniques and procedures to restore the teeth to full function and appearance in an aesthetically pleasing manner with as little loss of the healthy tooth structure as possible
- PSO3** To encourage and promote innovative research and publication and to promote collaboration with various institutions and disciplines

**Program Structure Template  
 School of Dental Sciences  
 Master of Dental Surgery (MDS)  
 Batch: 2021-2024**

S.No.	Paper ID	Subject Code	Subjects	Teaching Load			Type of Course- 1. CC 2. AECC 3. SEC 4. DSE
				L	T	P	
<b>Theory Subjects</b>							
1.	MDS304	MDS304	Conservative Dentistry And End	134	-	-	CC
<b>Practical/Viva-Voce/Jury</b>							
2.	MDS304	MDS304	Conservative Dentistry And End	-	-	4187	CC
<b>TOTAL CREDITS</b>							NA

## Course Templates

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### 2.1 Template A1: Syllabus

<b>School:</b>	<b>School of Dental Sciences</b>	
<b>Program:</b>	<b>Master of Dental Surgery - Conservative Dentistry and Endodontics</b>	
<b>Batch:</b>	<b>2021-2024</b>	
<b>Course Code</b>	<b>MDS304</b>	
<b>Credits</b>	<b>NA</b>	
<b>Contact Hours (L-T-P)</b>	<b>134-0-4187</b>	
<b>1.</b>	<b>Course Type</b>	Compulsory (CORE)
<b>2.</b>	<b>Course Objective</b>	<p>1.1 To make the student understand the intricacies and relevance of basic sciences as applicable to conservative / restorative dentistry and Endodontics</p> <p>1.2. To make the student aware of infection control measures in the dental clinical environment and laboratories</p> <p>1.3. To imbibe in students the ethical principles in all aspects of restorative and contemporary Endodontics including non-surgical and surgical Endodontics</p> <p>1.4. To help the students develop communication skills, in particular to explain various options available management and to obtain a true informed consent from the patient</p> <p>2.1 To make the student sound in describing etiology, pathophysiology, diagnosis and management of common restorative situations, that will include contemporary management of dental caries, non-carious lesions and hypersensitivity.</p> <p>2.2 To train the student 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</p> <p>2.3 To train the student to perform all levels of restorative work including Aesthetic procedures and treatment of complicated restorative procedures</p>



		<p>3. to make the student to describe aetiology, pathophysiology, periapical diagnosis and management of common endodontic situations that will include contemporary management of trauma and pulpal pathoses including endo-periodontal pathoses</p> <p>4. To make the student sound in diagnosing, planning and executioning challenging clinical cases requiring comprehensive management strategies using contemporary materials and techniques in the specialty of conservative dentistry and endodontics</p>
3	Course Outcomes	<p>The student will be able to:</p> <p>CO 304.1.1: To make the student understand the intricacies and relevance of basic sciences as applicable to conservative / restorative dentistry and Endodontics</p> <p>CO 304.1.2 To make the student aware of infection control measures in the dental clinical environment and laboratories</p> <p>CO 304.2.1: To make the student sound in describing aetiology, pathophysiology, diagnosis and management of common restorative situations, that will include contemporary management of dental caries, non-cariou lesions and hypersensitivity.</p> <p>CO 304.2.2 To train the student 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</p> <p>CO 304.2.3 To train the student to perform all levels of restorative work including Aesthetic procedures and treatment of complicated restorative procedures</p> <p>CO 304.3.1: To make the student to describe aetiology, pathophysiology, periapical diagnosis and management of common endodontic situations that will include contemporary management of trauma and pulpal pathoses including endo-periodontal pathoses</p> <p>CO 304.3.2: To imbibe in students the ethical principles in all aspects of restorative and contemporary Endodontics including non-surgical and surgical Endodontics</p>

		<p>CO 304.4.1: To make the student sound in diagnosing, planning and execution of challenging clinical cases requiring comprehensive management strategies using contemporary materials and techniques in the specialty of conservative dentistry and endodontics</p> <p>CO 304.4.2 To help the students develop communication skills, in particular to explain various options available management and to obtain a true informed consent from the patient</p>
4	Course Description	<p>The M. D. S. in Conservative Dentistry &amp; Endodontics is a three-year Postgraduate program. It is the branch of dentistry which deals with the treatment of caries, deformed, stained, nonesthetic, or broken teeth and endodontics deals with treatment of pulpal and periapical diseases and dental pain management. The curriculum provides training in the prevention and treatment of the disease and injuries of the hard tissues and the pulp of the tooth and associated periodontal lesions. The purpose of the course is to provide advanced education in the subject to highly qualified graduate dentists who are interested in a career of specialized practice, teaching and research.</p>

<b>8</b>	<b>Outline syllabus</b>	
<b>MDS304A</b>	<b>Unit A APPLIED BASIC SCIENCES</b>	
<b>MDS304.A1</b>	Unit A Topic 1	Applied Anatomy of Head and Neck
<b>MDS304.A2</b>	Unit A Topic 2	Development of Teeth
<b>MDS304.A3</b>	Unit A Topic 3	Applied Physiology
<b>MDS304.A4</b>	Unit A Topic 4	Pathology
<b>MDS304.A5</b>	Unit A Topic 5	Pharmacology
<b>MDS304.A6</b>	Unit A Topic 6	Biostatistics
<b>MDS304.A7</b>	Unit A Topic 7	Research Methodology
<b>MDS304.A8</b>	Unit A Topic 8	Applied Dental Materials
<b>MDS304.B</b>	<b>Unit B CONSERVATIVE DENTISTRY</b>	
<b>MDS304.B1</b>	Unit B Topic 1	Examination, diagnosis and treatment plan
<b>MDS304 B2</b>	Unit B Topic 2	Occlusion
<b>MDS304 B3</b>	Unit B Topic 3	Dental caries

<b>MDS304 B4</b>	Unit B Topic 4	Hand and rotary cutting instruments
<b>MDS304 B5</b>	Unit B Topic 5	Infection control
<b>MDS304 B6</b>	Unit B Topic 6	Direct concepts in tooth preparation for amalgam, composite, GIC and restorativetechniques, failures and management.
<b>MDS304 B7</b>	Unit B Topic 7	Indirect tooth colored restorations- ceramic, inlays and onlays, veneers, crowns, recent advances in fabrication and materials.
<b>MDS304 B8</b>	Unit B Topic 8	Impression procedures used for direct restorations
<b>MDS304 B9</b>	Unit B Topic 9	Cast metal restorations
<b>MDS304 B10</b>	Unit B Topic 10	Direct gold restorations
<b>MDS304 B11</b>	Unit B Topic 11	Recent advances in restorative materials and procedures
<b>MDS304 B12</b>	Unit B Topic 12	Management of non-carious lesion
<b>MDS304 B13</b>	Unit B Topic 13	Advance knowledge of minimal intervention dentistry
<b>MDS304 B14</b>	Unit B Topic 14	Hypersensitivity, theories, causes and management
<b>MDS304 B15</b>	Unit B Topic 15	Lasers in Conservative Dentistry
<b>MDS304 B16</b>	Unit B Topic 16	CAD-CAM & CAD-CIM in restorative dentistry
<b>MDS304 B17</b>	Unit B Topic 17	Dental imaging and its applications in restorative dentistry

<b>MDS304 B18</b>	Unit B Topic 18	Principles of esthetics
<b>MDS304C</b>	<b>Unit C ENDODONTICS</b>	
<b>MDS304C1</b>	Unit C Topic 1	Rationale of Endodontics
<b>MDS304C2</b>	Unit C Topic 2	Knowledge of internal anatomy
<b>MDS304C3</b>	Unit C Topic 3	Dentin and pulp complex
<b>MDS304C4</b>	Unit C Topic 4	Pulp and periapical pathology
<b>MDS304C5</b>	Unit C Topic 5	Pathobiology of periapex
<b>MDS304 C6</b>	Unit C Topic 6	Diagnostic procedure
<b>MDS304 C7</b>	Unit C Topic 7	Case selection and treatment planning
<b>MDS304 C8</b>	Unit C Topic 8	Infection control procedures
<b>MDS304 C9</b>	Unit C Topic 9	Access cavity preparation
<b>MDS304 C10</b>	Unit C Topic 10	Endodontic instruments and instrumentation
<b>MDS304 C11</b>	Unit C Topic 11	Working length determination / cleaning and shaping of root canal system
<b>MDS304 C12</b>	Unit C Topic 12	Root canal irrigants and intra canal medicaments
<b>MDS304 C13</b>	Unit C Topic 13	Endodontic microbiology
<b>MDS304 C14</b>	Unit C Topic 14	Obturing materials, various obturation techniques and recent advances

<b>MDS304 C15</b>	Unit C Topic 15	Traumatic injuries and management -
<b>MDS304 C16</b>	Unit C Topic 16	Endodontic surgeries, recent developments
<b>MDS304 C17</b>	Unit C Topic 17	Endoperio interrelationship
<b>MDS304 C18</b>	Unit C Topic 18	Endo emergencies and management
<b>MDS304 C20</b>	Unit C Topic 19	Geriatric endodontics Lasers in endodontics
<b>MDS304 C21</b>	Unit C Topic 20	Endodontic radiology
<b>MDS304 C22</b>	Unit C Topic 21	Procedural errors in endodontics
<b>MDS304 D</b>	<b>Unit D LONG ESSAY</b>	
<b>MDS304 D1</b>	Unit D Topic 1	Basic Sciences, Applied Sciences, Biostatistics
<b>MDS304 D2</b>	Unit D Topic 2	Conservative Dentistry, recent advances and application
<b>MDS304 D3</b>	Unit D Topic 3	Endodontics, recent advances and application
<b>MDS304 D4</b>	Unit D Topic 4	Recent advances, Tissue Engineering

<b>1.</b>	<b>Course evaluation</b>	Attendance	Minimum 75% is Needed for both theory and clinical/practical		
		Quizzes	Taken every 2 months		
		Presentations	Seminars, Journal Clubs, Case presentations, Thesis and Library Dissertation presentations		
		Any Other	Project based learning, flip learning, Assignments		
		End Term examination	700 Marks	Theor y	1 <sup>ST</sup> YEAR – 100 Marks
	Practi cal			3 <sup>rd</sup> year – 300 marks	
<b>2.</b>	<b>Text book/s*</b>	<ol style="list-style-type: none"> <li>1. Sturdevant's – Art And Science of Operative Dentistry</li> <li>2. Pickard's Manual of Operative Dentistry</li> <li>3. Ingle's Textbook of Endodontics</li> <li>4. Cohen's Pathways of the Pulp</li> <li>5. Grossman's Endodontic Practice</li> </ol>			
<b>3.</b>	<b>Other References</b>	TED learning EBSCOHOST Various scientific articles from various sources			