Programme Structure

School of Dental Sciences

MDS

(Master of Dental Surgery)

(Prosthodontics and Crown & Bridge)

Programme Code: SDS0102

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

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: Training programme in Prosthetic dentistry including Crown & Bridge & Implantology is structured to achieve knowledge and skill in theoretical and clinical laboratory, attitude, communicative skills and ability to research with understanding of social, cultural, educational and environmental background of the society.

PEO2: To have acquired adequate knowledge and understanding of applied basic and systemic medical science, knowledge in general and particularly of head and neck.

PEO3: The postgraduates will be able to provide Prosthodontic therapy for patients with competence and working knowledge with understanding of applied medical, behavioral and clinical science, that are beyond the treatment skills of the general BDS graduate and MDS graduate of other specialties, to demonstrate evaluative and judgment skills in making appropriate decisions regarding prevention, treatment, after care and referral to deliver comprehensive care to patients.

1.3.2 Map PEOs with Mission Statements:

PEO Statements	School Mission 1	School Mission 2	School Mission 3
PEO1	1	3	2

PEO2	**1**	**2**	**1**
PEO3	**2**	**2**	**3**

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

1.3.3 Programme Outcomes (PO's)

PO1: <u>Knowledge:</u> Ability to diagnose and planned treatment for patients requiring a Prosthodontic therapy like tooth and tooth surface restorations, Complete denture Prosthodontics, removable partial denture Prosthodontics, fixed prosthodontics and maxillofacial and Craniofacial Prosthodontics, implants and implant supported Prosthodontics, T.M.J. and occlusion, craniofacial esthetic, and biomaterials, craniofacial disorders, problems of psychogenic origin.

PO2: Skills: Understand the prevalence and prevention of diseases of craniomandibular system related to Prosthetic dentistry and the candidate should be able to restore lost functions of stomatognathic system namely mastication, speech, appearance and psychological comforts. By understanding biological, an biomedical, bioengineering principles and systemic condition of the patient to provide a quality health care of the craniofacial region.

PO3: Attitude: Adopt ethical principles in all Prosthodontic practice. Professional honesty and integrity are to be fostered. Treatment to be delivered irrespective of social status, caste, creed or religion of patient.

PO4: Communications: Should be able to communicate in simple understandable language *with* the patient and explain the principles of Prosthodontics to the patient. He should be able to guide and counsel the patient with regard to various treatment modalities available. Develop the ability to communicate with professional colleagues through various media like Internet, e-mail, videoconference, and etc. to render the best possible treatment.

PO5: lab equipment's& Materials: Laboratory technique management based on skills and knowledge of Dental Materials and dental equipment and instrument management. Perform clinical and Laboratory procedure with understanding of biomaterials, tissue conditions related to prosthesis and have competent dexterity and skill for performing
clinical and laboratory procedures in fixed, removable, implant, maxillofacial, TMJ and
esthetics Prosthodontics.

PSO1: Train the student to know the proper diagnosis and plan the treatment of various prosthodontics conditions

PSO2: Should able to offer the Prosthodontic line of treatment complete denture cases, partial denture cases fixed partial denture cases Maxillofacialcases and all types of implant treatment

PSO3: should able to select the specific dental materials based on their properties, manipulation and of Prosthodontic conditions

PSO4: to encourage and promote innovation, research and publication and also to promote collaboration with various other universities and disciplines

1.3.4 Programme Articulation Matrix:

	PEO1	**PEO2**	**PEO3**
PO1	3	2	1
PO2	2	2	1
PO3	1	1	1

PO4	3	1	2
PO5	1	-	1
PSO1	1	1	3
PSO2	2	1	3
PSO3	-	-	1
PSO4	3	-	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	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	**Applied Basic Sciences**	2	2	1	2	1	3	1	3	1	2	2
CO2		3	2	1	2	-	3	2	1	1	3	2
CO1	**Removable Prosthodontics and Implantology**	3	2	1	-	-	3	2	1	1	3	2
CO2		1	-	1	2	-	2	-	-	1	1	-
CO1	**Fixed Prosthodontics**	2	3	1	1	1	3	2	1	1	2	3
CO2		3	2	1	2	-	2	3	1	3	3	2
CO1	**Essay**	3	3	1	-	1	3	2	2	2	3	3

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

Programme Structure
School of Dental Sciences
Master of Dental Surgery (MDS)
Batch: 2024-27

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.	MDS301	MDS301	Prosthodontics And Crown & Bridge	**0**	**3**	**45**	**CC**
Practical/Viva-Voce/Jury							
2.	MDS301	MDS301	Prosthodontics And Crown & Bridge	**0**	**3**	**45**	**CC**

Course Modules

2.1 Module: Syllabus for Theory Subjects

School:		**SCHOOL OF DENTAL SCIENCES**
Program:		**MASTER OF PROSTHODONTICS, CROWN & BRIDGE**
Batch		**2024-2027**
1	Course Code	MDS301
2	Credits	NA
3	Contact Hours (L-T-P)	0-3-45
4	Course Type	CC
5	Course Objective	1. Training programme in prosthetic dentistry including Crown & Bridge & Implantology is structured to achieve knowledge and skill in theoretical and clinical laboratory, attitude, communicative skills and ability to research with understanding of social, cultural, educational & environmental background of the society. 2. To have acquired adequate knowledge & understanding of applied basic and systemic medical science, knowledge in general & particularly of head & neck. 3.The postgraduates will be able to provide Prosthodontic therapy for patients with competence and working knowledge with understanding of applied medical, behavioural and clinical science, that are beyond the treatment skills of the general BDS Graduate & MDS Graduate of other specialities, to demonstrate evaluative and judgement skills in making appropriate decisions regarding prevention, treatment, after care and referral to deliver comprehensive care to patients.
6	Course Outcomes	The student will be able to: CO1 The candidate would possess knowledge about applied basic and systematic medical sciences. CO2 The candidate would diagnose the ailment, plan a treatment, communicate it with the patient and execute it, CO3 the candidate would be able to examine the patients requiring prosthodontic therapy, investigate the patient systemically, analyze the investigation results. CO4 The candidate would possess knowledge about age changes and Prosthodontic Therapy for the aged related to removable Prosthodontics and oral implantology, CO5 The candidate would be able to demonstrate the clinical competence to restore lost functions of stomatognathic system namely mastication, speech, appearance and psychological comforts by removable prosthesis, CO6 The candidate would be able to adopt ethical principles Prosthodontic practice. Professional honesty and integrity are to be fostered. Treatment to be delivered irrespective of social status, caste, creed or religion of patient. CO7- The candidate would be able to understand the prevalence and prevention of disease of craniomandibular system related to fixed prosthetic dentistry. The candidate would be willing to adopt new methods and techniques in fixed prosthodontics from time to time based on the scientific research, which is in patient's best interest.

7	Course Description	The M. D. S. in Prosthodontics, Crown & Bridge is a three year Postgraduate program. It is the dental speciality pertaining to the diagnosis, treatment planning, rehabilitation and maintenance of the oral function, comfort, appearance & health of patients with clinical conditions associated with missing or deficient teeth & or maxillofacial tissues by using biocompatible tissues. 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.

Outline Syllabus			**CO Mapping**
UNIT 1	**APPLIED BASIC SCIENCES**		
A	Topic 1	Applied Anatomy of Head & Neck, Applied Physiology & Nutrition, Endocrines, Applied Biochemistry	**CO1**
B	Topic 2	Applied Pharmacology & Therapeutics, Applied Pathology & Microbiology, Biostatistics	**CO301.1**
C	Topic 3	Applied Radiology, Applied Medicine & Surgery, Applied Dental Materials	**CO301.1**
MDS-301.B	**Unit B** **REMOVABLE PROSTHODONTICS**		
A	Topic 1	Prosthodontic Treatment for Completely Edentulous Patient- Complete Denture, Immediate Comlete Denture, Single CD, Tooth-Supported CD, Implant- Supported Prosthesis.	**CO301.2, CO301.3**
B	Topic 2	Prosthodontic Treatment for Partially Edentulous Patient- Clasp Retained Partial Denture, Intracoronal & Extracoronal Precision Attachment Retained Partial Denture.	**CO301.2, CO301.3**
MDS-301.C	**Unit C** **MAXILLOFACIAL REHABILITATION**		
A	Topic 1	Osseointegrated Supported Facial & Maxillofacial Prosthesis	**CO301.2,CO301.3**
B	Topic 2	Material & Lab Procedures for maxillofacial prosthesis	**CO301.2,CO301.3**

MDS-301 D	**Unit D** **FIXED PROSTHODONTICS**		
A	Topic 1	Diagnosis & Treatment Planning, Management of Carious Teeth, Periodontal Considerations	**CO301.1,CO301.2**
B	Topic 2	Biomechanical Principles of Tooth Preparation, Tooth Preparation for Complete Metal Crown, All-Porcelain Crown, PFM Crown, Partial 3/4th , Radicular 7/8th , fronional half, telescopic, pin-ledge, laminates, inlays, onlays, resin-bonded retainers, Isolation & Fluid Control	**CO301.1,CO301.2,CO301.3**
C	Topic 3	Resins, Gold & its Alloys, Glass-Ionomer Restorations, Restoration of Endodontically-Treated Teeth. Management of Failed Restorations	**CO301.1,CO301.2,CO301.3**
UNIT 5	**OSSEOINTEGRATED SUPPORTED FIXED-PROSTHODONTICS**		
A	Topic 1	Rationale for Dental Implants-Diagnostic Imaging & techniques, Prosthetic Options in Implant Dentistry, Available Bone & Dental Treatment Plan. Treatment Planning-Preimplant Prosthodontics, Diagnostic Casts & Surgical Templates, Single- tooth replacement, Treatment planning for the edentulous maxilla & mandible. Fundamental Science- Medical Evaluation, Pharmacology, Applied Anatomy, Biomaterials, Biomechanics, Dental Implants Surface, Bone Response to Mechanical Loads	**CO1, CO2**
B	Topic 2	Implant Surgery- Surgical Guidelines for posterior/ anterior Single-tooth replacement, Implant Insertion in edentulous anterior & Posterior Mandible/Maxilla, Stage-II Surgery..	**CO301.1,CO301.2**
C	Topic 3	Soft & Hard Tissue Rehabilitation- Bone Grafting & it's Materials, Socket Grafting, Barrier Membrane, Bone Regeneration, Maxillary Sinus. Implant Maintenance-Implant Quality of Health Scale.	**CO301.1**
UNIT 6	**TMJ-TEMPOROMANDIBULAR JOINT DYSFUCTION-SCOPE, DEFINITIONS AND TERMINOLOGY**		
A	Topic 1	TMJ & its Function, Orofacial Pain & Pain from TMJ, TMJ Dysfunction, TMJ Disorders.	**CO301.1,CO301.3**
B	Topic 2	Etiology, Diagnosis & Craniomandibular Pain- Differential Diagnosis & Management of Orofacial Pain, TMJ Pain-psychologic, physiologic.	**CO301.1,CO301.3**
C	Topic 3	Occlusal Splint therapy-construction & fitting of occlusal splints, management of occlusal splints, therapeutic effects of occlusal splints, TMJ Joint uploading & Anterior Repositioning appliances,use & care of	**CO301.1, CO301.3**

		occlusal splints. Occlusal Adjustment Procedures- reversible- Occlusal Stabilisation splints, jaw exercises, jaw manipulation. Irreversible- Occlusal repositioning Appliance, Orthodontic Treatment, Orthognathic Surgery.	

Cos	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	2	2	1	2	1	3	1	3	1
CO2	3	2	1	2	-	3	2	1	1
CO1	3	2	1	-	-	3	2	1	1
CO2	1	-	1	2	-	2	-	-	1
CO1	2	3	1	1	1	3	2	1	1
CO2	3	2	1	2	-	2	3	1	3
CO1	3	3	1	-	1	3	2	2	2

Mapping

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical
		Quizzes	Taken in every 3 months
		Presentations	Video Presentation
		Any Other	Project based learning, flip learning, Assignments
		1st year examination	100 Marks
		3rd year examination	600 Marks
2.	**Text book/s**	1. Prosthodontic Treatment for Edentulous Patient, Bouchers,	Boucher

	*	Mosby Publications, 12th Edition.	
		2. Removable Partial Prosthodontics	Mc. Cracken
		3. Fundamentals of Fixed Prosthodontics	H.T. Shillingburg
		4. Contemporary Fixed Prosthodontics	S.F. Rosenstiel
		5. Contemporary Implant Prosthodontics, 1st edition	Carl.E.Misch
		6. Management of Temporomandibular Disorders & Occlusion	Jeffery.P. Okeson
		7. Clinical Maxillofacial Prosthetics	T.D. Taylor
		8. Maxillofacial Rehabilitation	John Beumer III
3.	**Other References**	TED learning EBSCOHOST Various scientific articles from various sources	