



# Programme Specifications

MDS Programme

Programme:  
Prosthodontics, Crown and Bridge

Department:  
Prosthodontics, Crown and Bridge

Faculty of Dental Sciences  
M.S. Ramaiah University of Applied Sciences

University House, New BEL Road, MSR Nagar, Bangalore – 560 054

[www.msruas.ac.in](http://www.msruas.ac.in)

**Programme Specifications: Prosthodontics including Crown and Bridge**

<b>Faculty</b>	Dental Sciences
<b>Department</b>	Prosthodontics including Crown and Bridge
<b>Programme</b>	Master of Dental Surgery
<b>Dean of Faculty</b>	Dr B V Sreenivasa Murthy
<b>Head of Department</b>	Dr Suma

**1 Title of The Award**

MDS in Prosthodontics including Crown and Bridge

**2 Modes of Study**

Full Time

**3 Awarding Institution /Body**

M.S. Ramaiah University of Applied Sciences

**4 Joint Award**

Not Applicable

**5 Teaching Institution**

Faculty of Dental Sciences, M.S. Ramaiah University of Applied Sciences

**6 Programme Approved date by the Academic Council of the University**

May 2018

**7 Next Review Date:**

April 2021

**8 Programme Approving Regulating Body and Date of Approval**

Dental Council of India (DCI) MDS Regulations dated September 5, 2017 vide No. DE-87-2017

**9 Programme Accredited Body and Date of Accreditation**

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**10 Grade Awarded by the Accreditation Body**

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**11 Programme Accreditation Validity Duration**

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**12 Programme Benchmark**

Dental Council of India(DCI) MDS Regulations dated September 5, 2017 vide No. DE-87-2017

**13 Rationale for the Programme**

The world population is rapidly ageing. Between 2000 and 2050, the proportion of the world's population over 60 years will double from about 11% to 22%. The absolute number of people aged 60 years and over is expected to increase from 605 million to 2 billion over the same period. Globally, edentulism compromises quality of life by reducing masticatory efficiency and thereby the nutrient value of food consumed. Treatment methodologies to treat edentulism have evolved over the years with near predictable results.

In India, the problem of edentulism is widely prevalent upto about fifty percent of our population being partially dentate and about 15%, being completely edentulous. In proportion to our population, this translates into mind boggling numbers and we still don't have the required number of professionals to treat and restore these patients. In addition, the lack of awareness of the consequences of edentulism, the financial inability of a large percentage of the population to avail of state of art services, raises the need of the professional to be innovative and deliver prosthodontic therapy in a manner that mitigates the patients' health worries.

On the other hand, Bangalore, being a cosmopolitan city also provides plenty of scope to treat patients with the highest levels of care possible. This increases the bar for research required in material science as well as bring about paradigm shifts in treatment methodologies.

A student of MDS Prosthodontics will be exposed to a wide variety of cases due to advanced training centers, location and attachment to the 1400 bed hospitals and the good standing of the institution. As prosthodontic treatment forms a major portion of private practice, effective training in Prosthodontics is essential.

The University, by providing excellent educational technologies, research facilities and an atmosphere conducive for assimilation of knowledge, wants to make available the best possible education in Prosthodontics, including crown and bridge.

**14 Educational Aims of the Programme**

Master's degree programme in prosthodontics is aimed to design efficient training and competence to diagnose and manage clinical situations of partial and complete edentulism and rehabilitation of associated missing structure by use of removable and/or fixed prosthesis including implantology. The Programme will impart knowledge and aid to attain procedural and operative skills in removable and fixed prosthodontics, maxillofacial Prosthodontics including implantology. Postgraduates are expected to acquire advanced knowledge in all facets of Prosthodontics with high order skills in analysis, critical evaluation, professional clinical application, and the ability to solve complex problems and think rigorously and independently. The postgraduates are expected to meet the human resources requirements in the area of Prosthodontics. They may take the path of oral health research for future and a few of them may also prefer to be into academics or take up to exclusive clinical practice.

**15. Programme Aims and Objectives**

The Programme aims to prepare dental surgeons to ensure higher competence for a career in prosthodontics, crown and bridge, maxillofacial and implant dentistry with an emphasis on prevention of edentulism. The Programme also encourages the student to develop a scientific

temper and conduct scientific research into various aspects of prosthodontics at both fundamental and applied aspects. In addition, the Programme strengthens clinical decision making ability of the student. Personal development, interactive skills with professionals and empathy for the needs of the community is an inherent component of the training.

The specific Programme aims are to :

1. Enhance understanding of etiology, clinical manifestations and differential diagnosis of common oral diseases affecting teeth and surrounding structures that could result in edentulism
2. Impart knowledge and ability to diagnose and plan treatment for patients with both partial and complete edentulism
3. Critically analyze various treatment options and deliver it efficiently based on evidence based dentistry
4. Impart training on techniques for various procedures for oral rehabilitation with the most appropriate prosthodontic modality
5. Meet the human resource requirement of society and translate empathy for the geriatric population into definitive solutions for them
6. Provide opportunities for a career in clinical Prosthodontics, academics and research

#### 16. **Intended Learning Outcomes of the Programme**

The intended learning outcomes are listed under four headings

1. Knowledge & Understanding
2. Cognitive Skills
3. Clinical Skills
4. Transferable/Capability skills

##### **Knowledge & Understanding**

After undergoing this Programme, a student will be able to:

- KU1: Explain etiology, clinical signs and symptoms, and methods to prevent progress of edentulism
- KU2: Describe indications, contraindications, advantages and disadvantages of different treatment options
- KU3: Differentiate the properties of materials and interpret their clinical applications
- KU4: Identify needs of geriatric population to prevent edentulism and promote oral health

##### **Cognitive Skills**

After undergoing this Programme, a student will be able to:

- CS1: Analyze clinical signs and symptoms and arrive at a treatment plan
- CS2: Appraise indications, contraindications, advantages and disadvantages of different treatment options
- CS3: Discuss the aspects of material science for clinical application
- CS4: Explore the applications of ICT to simplify prosthodontic treatment

##### **Clinical skills**

After undergoing this Programme, a student will be able to:

- PS1: Plan treatment with assessment of prognosis by design, fabrication, insertion of prosthesis and patient follow up

PS2: Perform procedures on varying types of cases with multidisciplinary approach for a holistic management of the patient

PS3: Employ prosthodontic practice management principles

PS4: Carry out material science research based on patient needs

#### **Transferable Skills**

After undergoing the Programme, a student will be able to:

TS1: Able to take responsibilities to manage difficult situations

TS2: Develop a research project and make presentations

TS3: Work in a multidisciplinary team for various treatment options with effective communication

TS4: Work in a hospital based setup in liaison with other healthcare professionals for oral rehabilitation

### 17 **Programme Structure**

Entire postgraduate program is a 3-year program comprising of 6 terms of 26 weeks each. Every term can be a combination of modules including Programme Specialization Module, Research Module, Faculty Common Module and an Elective Module. Each Programme specialization module will include one week of assessment. The following are the modules a student is required to successfully complete for the award of the degree

	<b>Module Title</b>	<b>Module code</b>	<b>Credits</b>
<b>Programme specialization modules</b>			
1	Preclinical phase	PGPROS01	24
2	Clinical Phase Basics – 1	PGPROS02	24
3	Clinical Phase Basics – 2	PGPROS03	24
4	Clinical Phase Advanced - 1	PGPROS04	24
5	Clinical Phase Advanced - 2	PGPROS05	24
6	Clinical Phase Advanced - 3	PGPROS06	20
<b>Research modules</b>			
1	Research Methodology	PGRM01	2
2	Short term project/Group project	PGRM02	6
3	Library Dissertation	PGRM03	4
4	Dissertation	PGRM04	18
5	Conference presentation	PGRM05	1
6	Journal publication	PGRM06	1
<b>Faculty Common Modules</b>			
1	Clinical photography	PGFCM01	1
2	Basic and advanced life support	PGFCM02	1
3	Personality Development and Soft Skills	PGFCM03	1
4	Law for Dental Professionals	PGFCM04	1
<b>Elective module</b>			
1	Training in any other institution in India or Abroad	PGEM01	3
2	Teacher training Module	PGTTM	1
	<b>TOTAL</b>		<b>180</b>

**18. Module Delivery Structure**

The module is delivered Monday to Saturday of the week according to time table including mandated library/laboratory time towards self- directed learning.

**19 Teaching Learning Methods**

Teaching and Learning Methods

1. Team Teaching/ Integrated Teaching
2. Face to Face Lectures using Audio-Visuals
3. Seminars/journal clubs/e-lectures
4. Case Based Discussions
5. Group Discussions, Debates, Presentations
6. Demonstrations on videos, computers and models
7. Clinical based learning
8. Hospital based learning
9. Laboratory work
10. Dissertation/ Group Project work
11. School visits/Outreach center visits
12. Interdepartmental meets
13. Continuing dental education programs/symposiums/workshops
14. State/National/International conferences and conventions

**20 Research modules**

Research modules are

**1. Research Methodology**

Every student shall be trained in Research Methodology in a workshop prior to starting any research project.

**2. Library dissertation**

Each student is expected to survey, review and critically appraise scientific literature. The students will be able to use various search engines to identify and select literature with good scientific value. This module emphasizes the student to apply good practices and guidelines of a systematic and structured literature review to collect, comprehend, sort and document the available information in open literature. In the context of reviewed contemporary research work, student acquires wider breadth of knowledge and will be able to formulate research question to be addressed in the main dissertation. The module insists on the preparation and submission of manuscript for publication..

**3. Short term or Group Project**

Each student is expected to carry out either a short term project in their own specialty or conduct an interdisciplinary research project as a group project. The students can choose a project from the priority areas of research of the concerned department or the Faculty and submit the synopsis of the intended project for review. A group will not have more than 5 students. The purpose of group project is that the group should be able to design a multidisciplinary research

project. The students are required to develop a report for assessment and also finalise the report in form of a manuscript and submit to the constituted committee. A committee constituted by the Academic Registrar of the Faculty shall review the synopsis of the intended research project and progress of the research project till completion.

**4. Dissertation**

A student should choose a project from the priority areas of research for the department and submit the finding in the form of a dissertation.

**5. Conference presentation**

Each student is expected to present the findings of the short-term project/group project or dissertation at the National conference of the specialty or at related disciplines. During the Programme of MDS in three years, a student is mandatorily required to present a minimum of two poster/ table clinic and two paper.

**6. Journal Publication**

Each student shall have submitted the manuscript of the dissertation by the end of the MDS programme before component 2.

**21 Elective Module**

Elective modules are

**1. Training in any other university**

A student can undergo training in any other university or any other organisation in a specific Programme area that falls under the broad category of his specialization either in India or abroad for two weeks. He/she need to submit a complete report on the training undergone and also make a presentation to a team of examiners as per the guidelines laid by the University.

**2. Teacher Training Module**

A student can undergo training in principles of pedagogy and Health profession education to prepare for a career in academics. He/she need to submit a complete report on the training undergone and also make a presentation to a team of examiners as per the guidelines laid by the University.

**22 Faculty common modules**

Each student is expected to undergo training in the following modules as an value added skill for his/her post-graduation

- a. Basic and Advanced Life Support
- b. Personality Development and Soft Skills
- c. Clinical Photography
- d. Law for Dental Professionals

Module specifications will contain details of aim and summary, intended learning outcomes, contents, delivery and assessment.

25 **Assessment and Grading****Programme specialization Teaching Module (PSTM) 1 - 6**

There are two components-

Component 1 (Continuous Evaluation of Module CEM) for PSTM 1-6

Component 2 (Programme End Exam CEE),

a. **Component 1 ( Continuous Evaluation of Module - CEM) for PSTM 1-5 except 2: 200 marks**

There are 2 components in this module

- i. Theory component consisting of
  - a. Assignment to be submitted as a word processed document for 50 marks
  - b. Assessment as a written examination for 50 marks
- ii. Clinical component consisting of
  - a. Clinical case discussion/clinical examination for 80 marks
  - b. Viva Voce for 20 marks on the module content including assignment.

b. **Component 1 ( Continuous Evaluation of Module - CEM) for PSTM 2: 200 marks**

There are 2 components in this module

- i. Theory component consisting of
  - a. Assignment to be submitted as a word processed document for 100 marks
- ii. Clinical component consisting of
  - a. Clinical case discussion/clinical examination for 80 marks
  - b. Viva Voce for 20 marks on the module content including assignment.

c. **Component 1(Continuous Evaluation of Module – CEM) for PSTM 6: 600 marks**

- i. Theory component consisting of 3 Papers same as Part II of component 2
- ii. Structured clinical exam for different exercises will be assessed for 200 marks same as component 2.
- iii. Structured Viva Voce exam for 80 marks and pedagogy for 20 marks will be conducted during clinical exam
  - a.

b. **Component 2 (Programme End Exam): 700 marks**

Component 2 shall have a theory component, Clinical Component, Pedagogy and Viva Voce.

**Theory component**

Written examination shall consist of Basic Sciences (Part-I) of three hours duration shall be conducted at the end of First year of MDS Programme. Part-II Examination shall be conducted at the end of Third year of MDS Programme. Part-II Examination shall consist of Paper-I, Paper-II and Paper-III, each of three hours duration. Paper-I & Paper-II shall consist of two long answer questions carrying 25 marks each and five questions carrying 10 marks each. Paper-III will be on Essays. In Paper-III three Questions will be given and student has to answer any two questions. Each question carries 50 marks. Questions on recent advances may be asked in any or all the papers. Distribution of topics for each paper will be as follows:

**Part-I**

Paper-I : Applied Basic Sciences: Applied anatomy, embryology, growth and development Genetics, Immunology, anthropology, Physiology, nutrition and Biochemistry, Pathology and Microbiology, virology, Applied pharmacology, Research Methodology and bio



statistics,. Applied Dental anatomy and histology, Oral pathology & oral Microbiology, Adult and geriatric psychology. Applied dental materials

#### **Part-II**

Paper-I: Removable Prosthodontics and Implant supported prosthesis(Implantology), Geriatric dentistry and Cranio facial Prosthodontics

Paper-II: Fixed Prosthodontics, occlusion, TMJ and esthetics

Paper-III: Descriptive and analysing type questions

#### **Clinical Component**

Structured clinical exam for different exercises will be assessed for 200 marks.

- a. Case discussion and management of a complete denture patient for balanced occlusion including facebow transfer and tracing or impression for implant supported overdenture including abutment selection – 70 mark
- b. Case discussion and performing of 3 unit fixed partial denture ,die preparation and wax pattern fabrication – 70 mark
- c. Surveying and RPD designing for a given case – 60 marks

#### **Pedagogy and Viva voce Component**

Structured Viva Voce exam for 80 marks and pedagogy for 20 marks will be conducted during clinical exam.

#### **Research, Faculty common, elective modules :**

These modules will be assessed as per the assessment norms as specified in the module specification. The assessment for these modules is through tests, presentations or any other method as specified in the module specification.

#### **24 Eligibility, Failure and Readmissions**

In case of Programme specialization teaching modules 1 – 5,

- The student is eligible for the next Programme specialization module on satisfaction of attendance requirement and obtaining 50% in Component 1.
- If a student fails in component 1, he/she is required to take up the re-sit examination in component 1 in the next opportunity with the permission of the HoD, Academic Registrar of the faculty and the Dean by paying the requisite fees.

Assessment and pass criteria for Research, Faculty common, Elective modules is set in the module specifications and followed accordingly.

#### **25 Attendance**

In case of Programme Specialization Teaching Module, a student is required to have a minimum attendance of 85% to be eligible to write the examination. However the Dean in consultation with HOD can condone up to 10% under special circumstances. Students who fail to achieve the minimum attendance is required to Re-Register, attend the module and take up all the components of assessment at the next offering. In case of Research modules, Faculty common modules and electives, the attendance requirement is specified in the respective module specification document.

**26 Award of Class**

As per the Academic Regulations of MDS programme

**27 Student support for Learning**

1. Module Notes
2. Reference Books in the Library
3. Magazines and Journals
4. Internet Facility
5. Computing Facility
6. Laboratory Facility
7. Staff support
8. Any other support that enhances their learning

**28 Quality Control Measures**

1. Review of Module Notes
2. Review of Question Papers and Assignment Questions
3. Student Feedback
4. Moderation of assessed work
5. Opportunities for students to see their assessed work
6. Staff Student Consultative Committee Meetings
7. Student exit feedback
8. Subject Assessment Board(SAB)
9. Programme Assessment Board(PAB)

**29 Curriculum Map**

Module Code	Knowledge & Understanding				Cognitive Skills				Clinical Skills			
	KU1	KU2	KU3	KU4	CS1	CS2	CS3	CS4	PS1	PS2	PS3	PS4
PGPROS01	X	-	-	-	-	-	-	X	X	-	-	-
PGPROS02	X	X	X	X	X	X	X	X	X	X	X	X
PGPROS03	X	X	X	X	X	X	X	X	X	X	X	X
PGPROS04	X	X	X	X	X	X	X	X	X	X	X	X
PGPROS05	X	X	X	X	X	X	X	X	X	X	X	X
PGPROS06	X	X	X	X	X	X	X	X	X	X	X	X
PGRM01	-	-	-	X	-	-	-	X	-	-	-	-
PGRM02	X	X	X	X	X	X	X	X	X	X	X	X
PGRM03	X	X	X	X	X	X	X	X	X	X	X	X
PGRM04	X	X	X	X	X	X	X	X	X	X	X	X
PGRM05	X	X	X	X	X	X	X	X	X	X	X	X
PGRM06	X	X	X	X	X	X	X	X	X	X	X	X
PGFCM01	X				X							
PGFCM02					X	X	X	X	X	X	X	X

PGFCM03					X	X	X	X	X	X	X	X
PGFCM04					X	X	X	X	X	X	X	X
PGEM01				X	X	X	X	X	X	X	X	X
PGEM02					X	X	X	X	X	X	X	X

### 32 Capability Map

Module Code	Group work	Self learning	Research Skills	Written Communication Skills	Verbal Communication Skills	Presentation Skills	Behavioral Skills	Information Management	Personal management/Leadership Skills
PGPROS01	X	X	X	X	X	X	X	X	
PGPROS02	X	X	X	X	X	X	X	X	X
PGPROS03	X	X	X	X	X	X	X	X	X
PGPROS04	X	X	X	X	X	X	X	X	X
PGPROS05	X	X	X	X	X	X	X	X	X
PGPROS06	X	X	X	X	X	X	X	X	X
PGRM01	X	X	X	X	X	X	X	X	X
PGRM02	X	X	X	X	X	X	X	X	X
PGRM03	X	X	X	X	X	X	X	X	X
PGRM04	X	X	X	X	X	X	X	X	X
PGRM05	X	X	X	X	X	X	X	X	X
PGRM06	X	X	X	X	X	X	X	X	X
PGFCM01	X	X	X	X	X	X	X	X	X
PGFCM02	X	X	X	X	X	X	X	X	X
PGFCM03	X	X	X	X	X	X	X	X	X
PGFCM04	X	X	X	X	X	X	X	X	X
PGEM01	X	X	X	X	X	X	X	X	X
PGEM02	X	X	X	X	X	X	X	X	X

### 33 Co curricular Activities

Students are encouraged to take part in co-curricular activities like seminars, conferences, symposium, paper writing, attending industry exhibitions, project competitions and related activities to enhance their knowledge and network.

### 34 Cultural and Literary Activities

To remind and ignite the creative endeavors, annual cultural festivals are held and the students are made to plan and organize the activities.

**35 Sports and Athletics**

Students are encouraged to engage in routine physical activities and also take part in annual sports and athletic events.

