



Programme Specifications

MDS Programme

Programme:
Oral Pathology and Microbiology

Department:
Oral Pathology and Microbiology

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

Programme Specifications: Oral Pathology & Microbiology

Faculty	Dental Sciences
Department	Oral Pathology & Microbiology
Programme	Master of Dental Surgery
Dean of Faculty	Dr B V Sreenivasa Murthy
Head of Department	Dr Roopa S Rao

1 Title of The Award

MDS in Oral Pathology & Microbiology

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

February 2015

7 Next Review Date:

January 2018

8 Programme Approving Regulating Body and Date of Approval

Dental Council of India(DCI)

9 Programme Accredited Body and Date of Accreditation

10 Grade Awarded by the Accreditation Body

11 Programme Accreditation Validity Duration

12 Programme Benchmark

DCI - New Delhi: Oral Pathology & Microbiology Course

13 Date of Programme Specifications

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14 Rationale for the Programme

Oral diseases such as dental caries, periodontal diseases, tooth loss, oral mucosal lesions & oropharyngeal cancers, human immunodeficiency virus-related oral diseases and orodontal trauma are major public health problems worldwide. Poor oral health has a profound effect on general health and quality of life. The burden of oral diseases is particularly high for the disadvantaged and poor population groups in both developing and developed countries. In the Indian scenario, often oral health is the most neglected aspect of health care with higher prevalence occurring in rural areas due to multiple barriers including lack of awareness, access to dental care or unaffordability.

The practice of oral pathology includes research, diagnosis of diseases using clinical, radiographic, microscopic, biochemical or other examinations. It occupies a unique position in the health care community for the dental as well as medical professions. A thorough knowledge obtained from this subject will help to correlate human biology with signs and symptoms of human disease. This will help to understand oral diseases so that it can be properly diagnosed and adequately treated.

Oral pathology speciality assists the clinicians to diagnose the challenging diseases like head and neck cancers by providing confirmatory evidence. This can be combined with advanced investigative techniques. It also navigates the surgeons for better management of patients. Thus it is imperative to train more oral pathologists to address the oral health care issues.

15 Programme Mission

Masters degree programme in Oral Pathology is structured to ensure adequate coverage at an advanced level of all areas in Oral Pathology. However, the post graduates are expected to possess high end theoretical and topics in applied basic sciences and in all facets of oral pathology; high order skills in analysis, critical evaluation and diagnosis, professional practical application; and the ability to diagnose complex oral health diseases independently. The post graduates are expected to meet the human resource requirement in the arena of oral pathology and opt one of these: exclusive clinical practice, research or academics.

16. Programme Goal

The Programme goal is to produce graduates with critical, analytical and problem solving skills and ability to think independently in pursue in Oral Pathology & Microbiology

17 Programme Objectives

The programme aims to train a dental surgeon for a career in Oral Pathology & Microbiology. The programme trains a candidate so as to ensure higher competence in both general and special area of interest and prepare him for a career in teaching, research and speciality practice. A candidate must achieve a high degree of clinical proficiency in the subject matter and develop competence in research and its methodology as related to the field concerned.

The specific programme aims are:

1. Ensure higher understanding in both general and special pathology dealing with the nature of oral diseases, their causes, processes and effects.

2. Enable the students to operate the diagnostic and investigative devices and interpret the observations.
3. Enable the students in the performance of routine histopathological evaluation of specimens relating to oral and perioral tissues, to carry out routine diagnostic procedures including hematological, cytological, microbiological, Immunological and ultra-structural investigations.
4. Ensure in depth understanding in Oral oncology, nature of oral oncological diseases, their causes,
processes and effects.
5. Develop research skills to identify a scientific problem and address independently and as a team.
6. Function as a competent Oral Pathologist and Forensic Odontologist in any given situation.

18. **Programme Intended Learning Outcomes**

The intended learning outcomes are listed under four headings

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

Knowledge and understanding

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

- KU1: Describe the normal histology, anatomy, embryology and physiology of oral and maxillofacial structures
- KU2: Discuss the clinical features, etiopathogenesis, radiographic features, oral manifestations, lab investigations and differential diagnosis of head and neck pathologies
- KU3: Identify laboratory investigative procedures applicable in head and neck pathologies
- KU4: Differentiate features of various head and neck pathologies

Cognitive Skills

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

- CS1: Diagnose provisionally different pathological conditions that involve the oral cavity
- CS2: Decide appropriate investigative procedures to arrive at a definitive diagnosis
- CS3: Interpret the basic and advanced laboratory data to arrive at a definitive diagnosis
- CS4: Decide appropriate laboratory investigations relevant to forensic odontology

Clinical Skills

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

- PS1: Operate basic and advanced diagnostic equipments in the laboratory
- PS2: Perform routine laboratory procedures
- PS3: Display competence in performing advanced diagnostic techniques
- PS4: Perform laboratory investigations relevant to oral oncology and forensic odontology

Transferable Skills

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

- TS1: Manage information, develop technical reports and make presentations
- TS2: Build, Manage and Lead a team to successfully complete a project and communicate across teams and organizations to achieve professional objectives
- TS3: Work under various constraints to meet project targets

TS4: Adopt to the chosen profession by continuously upgrading his/her knowledge and understanding through Life-long Learning philosophy

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 be followed by one week of assessment and assignment. Every student can avail 2 weeks of vacation once a year during the assignment subject to approval of the head of the department. Every module will also have one-week duration allotted for National Conference and Post Graduate Convention. The following are the modules a student is required to successfully complete for the award of the degree

	Module type	Module code	Module Title	Credits
Term 1				
1	Programme specialization modules	PGOPM01	Preclinical phase	24
2	Faculty-Common Modules	PGFCM01	Clinical photography	1
3	Faculty-Common Modules	PGFCM02	Basic and advanced life support	1
4	Faculty-Common Modules	PGFCM03	Personality Development and Soft Skills	1
5	Faculty-Common Modules	PGFCM04	Ethics and Professionalism	1
6	Research modules	PGRM01	Research Methodology	2
Term 2				
1	Programme specialization modules	PGOPM02	Laboratory phase	24
2	Research modules	PGRM03	Library Dissertation	4
Term 3				
1	Programme specialization modules	PGOPM03	Basic Oral Pathology	24
2	Elective module	PGEM01	Training in MSRUAS	1
3	Research modules	PGRM02	Short term project/Group project	6
4	Research modules	PGRM05	Conference presentation	1
Term 4				
1	Programme specialization modules	PGOPM04	Oral Oncology	24
2	Elective module	PGEM02	Training in any other institution in India or Abroad	3
3	Research modules	PGRM04	Dissertation	8
Term 5				
1	Programme specialization modules	PGOPM05	Advanced Oral pathology	24
2	Research modules	PGRM04	Dissertation	10
3	Research modules	PGRM06	Journal publication	1
Term 6				
1	Programme specialization modules	PGOPM06	Comprehensive Oral Pathology & Microbiology	20
TOTAL				180

Programme Delivery Structure			
The following table explains the course time table			
Week	Teaching Learning Activity	Research Activity	Supporting Activity
Term 1			
1-22	PGOPM01-Preclinical phase		National Conference
23	Assessment & Assignments		
24-25			PGFCM01 - Clinical photography
			PGFCM02 -Basic and advanced life support
			PGFCM03 -Personality Development and Soft Skills
			PGFCM04 – Ethics and professionalism
26		PGRM01 - Research Methodology	
Term 2			
1-22	PGOPM02 - Clinical Phase Basics – 1	Start of Library dissertation Submission of synopsis for Short term project /Group project	Postgraduate Convention
24	Assessment & Assignments		
25-26		PGRM03 – Submission of Library Dissertation PGRM04 - Submission of synopsis for Dissertation	
Term 3			
1-22	PGOPM03 - Clinical Phase Basics – 2	PGRM05 - Conference presentation	National Conference
23	Assessment & Assignments		
24		PGEM01 - Training in MSRUAS	
25-26		PGRM02 - Submission of Short term project /Group project	
Term 4			
1-22	PGOPM04 - Clinical Phase Advanced – 1		Postgraduate Convention
23		PGRM04 - Review of Dissertation	
24	Assessment & Assignments		
25- 26		PGEM02 - Training in any other institution in India or Abroad	
Term 5			
1-22	PGOPM05 - Clinical Phase Advanced – 2	PGRM06- Journal Publication	National Conference
23	Assessment & Assignments		
24-26		PGRM04 - Submission of Dissertation	
Term 6			
1-18	PGOPM06 - Clinical Phase Advanced – 3		
19 -24	Study Leave		
25-26	Assessment		

20. 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.

21 Teaching Learning Methods

Teaching and Learning Methods

1. Interactive Teaching Learning methods
2. Team Teaching/ Integrated Teaching
3. Case Based Discussions
4. Face to Face Lectures using Audio-Visuals
5. Seminars/journal clubs/e-lectures
6. Group Discussions, Debates, Presentations
7. Interdepartmental meets
8. Continuing dental education programs/symposiums/workshops
9. Clinical / Practicals
10. Mini Clinical Exercise, Direct Observation of Procedural skills
11. Laboratory-work Demonstrations
12. Case Discussions
13. School visits/Outreach center visits
14. Project work
15. State/National/International conferences and conventions

22 Research modules

Research modules are

1. Research Methodology

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

2. Library dissertation

Each student is expected to submit a report on literature review to arrive at a research question for the dissertation.

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. The detail procedure and evaluation procedure will be provided in student handbook.

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. The detail procedure of executing and assessing individual project is specified in student handbook.

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 course of MDS in three years, a student is mandatorily required to present a minimum of one poster/ table clinic and one paper.

6. Journal Publication

Each student shall have submitted at least one publication at the time of appearing at CEE. The publication can be a review, original research or case report in a peer reviewed, indexed journal.

23 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 subject 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.

2. Training in MSRUAS

A student can undergo training in any other Faculty of the University for one week to hone skills necessary for career. He/she need to submit a complete report on the training undergone and also make a presentation to a team of examiners.

24 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. Ethics and Professionalism

Module specifications will contains 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 1-5

Component 2 (Course End Exam CEE) for PSTM 6,

1. Component 1 (Continuous Evaluation of Module CEM): 600 marks for module 1 to 5

- ii. Every module will be assessed for 120 marks; assessment in theory for 40 marks, in practicals

/clinical for 40 marks and an assignment for 40 marks

- a. Component 1A will be as assessment in theory for 20 marks conducted at the end of module while 20 marks will be assigned for seminars, journal clubs, or any other such academic activity conducted during the module.
- b. Component 1B will be assessments in regular chair side discussions of practicals/clinical for 20 marks and viva voce marks for 20 marks.
- c. Component 1C will be an Assignment that will be submitted as a report followed by presentation for 40 marks.

2. Component 2 (Course End Exam CEE): 600 marks

At the end of the 6th modules, a Course end exam will be held as per the norms of the University/DCI for Assessment.

a. Assessment for theory will for 300 marks consisting of 4 papers as specified by DCI.

- i. **Paper 1 -Applied Basic Sciences-** Applied aspects of Head and Neck anatomy, Physiology, Biochemistry, General Pathology , General & Systemic Microbiology, General histology including embryology and Oral histology including oral embryology and Basic Genetics and Immunology
- ii. **Paper 2-** Oral Pathology, Oral Microbiology, Oral Immunology, Oncology and Forensic Odontology
- iii. **Paper 3- Laboratory techniques** and Diagnostic methods
- iv. **Paper 4- Comprehensive Oral pathology-** Oral pathology, Microbiology, Immunology, Oncology, Forensic Odontology and Laboratory procedures

b. A structured viva voce exam for 80 marks and pedagogy for 20 marks will be conducted during practical exam.

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

- i. Long and short clinical case presentation (30 +20 marks)
- ii. Any 2 Hematological investigations : Total leucocyte count, Differential leucocyte count, Hemoglobin estimation, ESR estimation, Bleeding time, Clotting time- 20 marks
- iii. Staining of tissues using Hematoxylin and Eosin stain or any specific special stain- 20 marks
- iv. Cytology smear preparation & staining OR Microbiological investigations including staining using either Ziehl Neelsen stain or Gram stain- 10 marks
- v. Histopathological reporting of 10 slides- 100 marks

Research, Faculty common, elective modules : 600 Marks

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

26 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 40% in Component 1. If a student fails in component 1, he/she is required to take up the resit examination in theory and viva for the module when offered prior to the next programme specialization teaching module by paying the requisite fees. In case, the student is unable to submit assignment and attend assessment at the

end of the programme specialization module, with due considerations (on a case to case basis) to the underlying circumstances, the student may be permitted to appear for the Resit examination in assignment, theory and viva voce with the permission of the Dean of the Faculty and Academic Registrar of the University. Assessment and pass criteria for Research, Faculty common, Elective modules is set in the module specifications and followed accordingly

27 Attendance

A student is required to have a minimum of 85% attendance to be eligible to write the examination. Less than 85% attendance is considered to be FAIL; such a student is required to follow the same procedure as that of a failed student.

28 Award of Class

As per the programme regulations

29 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. Workshop facility
8. Staff support
9. Lounges for Discussions
10. Any other support that enhances their learning

31 Curriculum Map

Module Code	Knowledge & Understanding				Cognitive Skills				Clinical Skills			
	KU1	KU2	KU3	KU4	CS1	CS2	CS3	CS4	PS1	PS2	PS3	PS4
PGOPM01	X	-	-	-	-	-	-	X	X	-	-	-
PGOPM02	X	X	X	X	X	X	X	X	X	X	X	X
PGOPM03	X	X	X	X	X	X	X	X	X	X	X	X
PGOPM04	X	X	X	X	X	X	X	X	X	X	X	X
PGOPM05	X	X	X	X	X	X	X	X	X	X	X	X
PGOPM06	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
PGOPM01	X	X	X	X	X	X	X	X	
PGOPM02	X	X	X	X	X	X	X	X	X
PGOPM03	X	X	X	X	X	X	X	X	X
PGOPM04	X	X	X	X	X	X	X	X	X
PGOPM05	X	X	X	X	X	X	X	X	X
PGOPM06	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 organise 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.

