

COURSE CURRICULUM

Fellowship in Microendodontics

Title of the course: Fellowship in Microendodontics.

Preamble:

Microendodontics combines magnification and illumination, provided by the microscope, with the proper use of new microinstruments. Magnification helps the user not only to see more, but to see well. The Microscope allows an exceptional substantiation of the anatomy with the consequent possibility of a more accurate diagnosis and a more incisive operative capacity. The better vision leads to a less invasive approach respecting the tissues and, therefore, a lesser post-operative discomfort and faster healing. Enlarging the field of view improves the prognosis significantly.

Magnification by means of microscopes in Endodontics has led to delivery of quality Oral HealthCare to the patients

Objectives:

A Microendodontist at the end of the course should be trained to

- Use the microscope and loupes
- Document cases using Beam Splitter / Mount & Adapters for microscope.
- Handle routine Endodontic procedures under the microscope
- Manage advance Endodontic procedures like instrument retrieval, retreatment, perforation repairs and placing bioceramic materials in the tooth.
- Perform microsurgical cases and document them.

Duration: One Year

Annual intake: 1

Eligibility: MDS Conservative Dentistry & Endodontics

Fee: As per University policy

Selection method: Entrance Examination conducted by the University

Faculty: Qualified Dental professional (MDS)

Course Faculty, Academic year 2019-2020

MDS Faculty

Dr T M Mangala
Professor and Head
Department of Conservative Dentistry and
Endodontics

Nurse & clinical assistant/Clerk:

Mrs Poonam Shinde
Mrs. Ashwini Ajetrao

Mr.Mahendra Mohite
Mrs.Trupti Gurav
Mrs. Sushma Yadav
Mr. Tofik R.Aga
Mr.Vikram Jadhav

Infrastructure: Department of Conservative Dentistry , School of Dental Sciences.

Medium of instruction: English

Attendance: Full time (min. 75%)

Academic Schedule:

Notification of course:	4 th week of June
Entrance Exam of candidates:	2 nd week of July
Enrollment of candidate:	3 rd week of July
Commencement of course:	1 st week of August
Orientation lecture for the enrolled student:	1 st week of August
Clinical Work under microscope:	2 nd week of August- 3 rd week of July (11 months)
Preparatory leave for Exam	4 th week of July till commencement of exam
University exam	2 nd week of August

Syllabus / course content: (Theory & Practical)

The Masters Fellowship in Micro-Endodontics (MFM) curriculum include theory, pre-clinical work, clinical work & practical examination using dental operating microscopes only.

Section	Content
1	Theory topics <ul style="list-style-type: none">• Magnification• Advanced Endodontics• Separated Instrument
2	Pre-clinical exercises
3	Clinical work

SECTION 1: THEORY TOPICS :

1. MAGNIFICATION :

1.1.1 Introduction to Magnification in Endodontics.

1.1.2 Magnification Tools & Parameters.

1.1.3 Dental Loupes - Selection Criteria, Various magnification & their applications, IPD, Working Distance etc.

1.1.4 Getting started with Microscopes.

1.1.5 Microscope Selection criteria.

1.1.6 Basic Operations & Functions of Microscope.

1.1.7 Parfocality, IPD determination, Focusing etc.

1.1.8 Hand-mirror-scope coordination for Maxillary & Mandibular teeth.

1.1.9 Chair position & microscope focusing.

2. ADVANCED ENDODONTICS :

1.2.1 Micro / Caries Driven access cavity.

1.2.2 Methods of Isolation of mutilated / rotated / inaccessible teeth with Rubber Dam, Ultrasonics in Endodontics.

1.2.3 Ultrasonic Tips for Irrigation / Access Refinement / Calcifications / Instrument retrieval.

1.2.4 Access Refinement using Ultrasonic Tips.

1.2.5 Tracing MB2 / Extra canals.

1.2.6 Management of Pulp Stones / Calcifications / complete obliteration of canals.

1.2.7 Apex Locators and Rotary / Recipro Glide Path files.

1.2.8 Selection of Recipro / Rotary / Hybrid for complex canals.

1.2.9 Irrigation protocols using Ultrasonic / Sonic.

1.2.10 LASERS in Endodontics.

1.2.11 Thermoplastic Obturation / Warm Vertical / Carrier based obturation techniques.

1.2.12 RETREATMENT - Case Selection, GP Removal, Ledge management, work-flow & technique for specific cases.

1.2.13 Management of Coronal & Radicular perforations.

1.2.14 Handling & applications of MTA / MTA Based / Bio-Ceramic sealers.

3. SEPARATED INSTRUMENT

1.3.1 How to minimize instrument separation.

1.3.2 Bypassing techniques & protocols.

1.3.3 Instrument retrieval when & where to attempt.

1.3.4 Step-wise Instrument retrieval techniques.

1.3.5 Use of Ultrasonic Tips specific size, no & shape for retrieval

SECTION 2 : PRE-CLINICAL EXERCISES : (Under Individual Microscopes & Extracted Teeth)

- 2.1.1 Orientation, Posture, co-ordination & Focusing in Microscopes.
- 2.1.2 Documentation protocols using Beam Splitter / Mount & Adapters for opto (microscope)
- 2.1.3 Micro / Ninja access prep.
- 2.1.4 Access Refinement using Ultrasonic Tips.
- 2.1.5 Tracing MB2 / Extra canals.
- 2.1.6 Management of Pulp Stones / Calcifications / complete obliteration of canals.
- 2.1.7 Thermoplastic Obturation / Warm Vertical / Carrier based obturation.
- 2.1.8 Re-treatment GP removal & canal shaping.
- 2.1.9 Handling & applications of MTA for perforations / MTA Based / Bio-Ceramic sealers.
- 2.1.10 Instrument retrieval Step wise instrument retrieval techniques using Ultrasonics / Band & Loupes etc.

SECTION 3: CLINICAL WORK : (Under Individual Microscopes & Patients)

Candidates have to submit 10 documented cases done under Microscopes

- 3.1.1 Cases of Special Anatomy - Extra canal (IMB2, DB2, Middle mesial etc), Vertucci configuration cases, Deep splits etc) : 3 cases.
- 3.1.2 Re-treatment (Ledge management, Missed canals, GP retrieval etc) : 2 cases.
- 3.1.3 Separated Instrument retrieval : 2 cases.
- 3.1.4 Miscellaneous cases of special interest : 3 cases.

Teaching-learning method: Didactic lectures, Clinical demonstrations, Hands-on chair side practical.

Assessment pattern:

EVALUATION I: Submission of 5 documented cases with discussion after 3 months.

All Clinical work should be done ONLY under Microscope WITH Documentation at College

EVALUATION II: Submission of next 5 documented cases with discussion after 10 months.

PRACTICAL EXAMINATION: Clinical Endodontic Work using Microscope on patient Access opening, Tracing of Canals, Shaping upto Master cone selection duly evaluated by 2 examiners (Internal & External).

Credit system:

There will be periodic monitoring and review of the structure of the qualification to ensure that it meets current educational requirements and the needs of the profession. To ensure that each candidate is given every opportunity to pass, candidates are assessed on each part of the examination by at least two members of the Panel of Examiners and the results of each individual examination centre moderated by a Presiding Examiner.

<p>1. Written paper - part A:</p> <ul style="list-style-type: none">• 20 Multiple-choice questions
<p>2. Written paper - part B:</p> <p>Four conventional-type questions.</p> <ul style="list-style-type: none">• all four answers carry equal marks;• most of the questions consist of more than one part;• pure essays are not necessary;• neatly laid out note-form answers with sub-headings are acceptable;• diagrams wherever relevant are acceptable.
<p>3. Practical</p> <p>Clinical Endodontic Work using Microscope on patient Access opening, Tracing of Canals, Shaping upto Master cone selection duly evaluated by 2 examiners (Internal & External).</p>
<p>4. Oral</p> <p>Candidates undergo oral Viva Voce to assess their depth of knowledge and understanding.</p>

Instruments, Equipments and Materials:

College will provide	Candidates should bring
<ul style="list-style-type: none"> • Microscopes • Loupes - Multiple magnifications / Working distance / brands. • Phantom mount for Indirect vision. • Ultrasonic units. • Ultrasonic Tips for access refinement. • Irrigants, Solvents, Mask / Gloves etc. • Touch N Heat • MTA/Bio-ceramic sealers. • Instrument retrieval Ultrasonic units & retrieval tips • Dental Chairs. • Micro-motors. • Patients for Clinical Work • RVG X-ray. • Camera for Documentation. • Obturation Equipment (System B / Obtura) 	<ul style="list-style-type: none"> • Extracted teeth • Airotor Hand-piece. • Micro-motor Contra-angle handpiece. • Endo Micro access bur • All Consumables K Files • Re-treatment Rotary Files • Endo Motor. • Apex Locator. • Rubber Dam Kits / clamps / (sheets will be provided). • White Coat.

Log book: Each candidate has to maintain a log book during the duration of the course

Text & Reference books:

- Colour Atlas of Microsurgery in Endodontics: Syngcuk Kim DDS PhD, Gabriele Pecora MD DDS, Richard A. Rubinstein MD DDS
- Ingle's Endodontics 6th edition. John Ide Ingle, Leif K. Bakland, J. Craig Baumgartner
