

ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

MDS CURRICULUM

All the students of the speciality departments shall complete the minimum quota for the teaching and learning activities, as follows:

(a) Journal Clubs: 5 in a year

(b) Seminars: 5 in a year

(c) Clinical Case Presentations: 4 in a year

(d) Lectures taken for undergraduates: 1 in a year

(e) Scientific Paper / Poster Presentations in State / National Level Conferences:

4 papers/posters during three years of training workshop period

(f) Clinical Pathological Conferences: 2 presentations during three years of training period

(g) Scientific Publications (optional): One publication in any indexed scientific journal

(h) Submission of Synopsis: One synopsis within six months from the date of commencement of the course

(i) Submission of Dissertation: One dissertation within six months before appearing for the university examination

(j) Submission of Library Dissertation: One dissertation within eighteen months from the date of commencement of the course

TEACHING /LEARNING ACTIVITIES:

The following is the minimum required to be completed before the candidate can be considered eligible to appear for the final MDS exam.

First Year

Orthodontics and Dentofacial Orthopaedics:

PRE – CLINICAL EXERCISES (Should be completed within 3 months)

A general outline of the type of exercises is given here:

1. General Wire bending exercises to develop the manual dexterity.
2. Clasps, Bows and springs used in the removable appliances.
3. Soldering and welding exercises.
4. Fabrication of removable, habit breaking, mechanical and functional appliances, also all types of space maintainers and space regainers.
5. Bonwill Hawley Ideal arch preparation.
6. Construction of orthodontic models trimmed and polished.
7. Cephalometric tracing and various Analyses, also superimposition methods.
8. Fixed appliance typodont exercises.
 - a) Training shall be imparted in one basic technique i.e. Standard Edgewise / Begg technique or its derivative / Straight wire etc., with adequate exposure to other techniques.
 - b) Typodont exercise
 - Band making
 - Bracket positioning and placement
 - Different stages in treatment appropriate to technique taught
9. Clinical photography
10. Computerized imaging
11. Preparation of surgical splints, and splints for TMJ problems.
12. Handling of equipment like vacuum forming appliances and hydro solder etc.

EXERCISE	REQUIRED
Clasps:	
1. ¾ Clasps	1
2. Triangular Clasps	1
3. Adam's clasp	2
4. Modification of Adam's – With Helix	2
5. Southend Clasp	1
Labial Bow:	
1. Short labial bow (upper & lower)	1
2. Long labial bow (upper & lower)	1
3. Split high labial bow	1
Springs:	
1. Double cantilever spring	1
2. Coffin spring	1
3. T spring	1
Appliances:	
1. Hawley's retention appliance with anterior bite plane	1
2. Upper Hawley's appliance with posterior bite plane	1
3. Upper expansion appliance with expansion screw	1
4. Habit breaking appliance with tongue crib	1
5. Oral screen and double oral screen	1
6. Lip bumper	1
7. Splint for Bruxism	1
8. Catlans appliance	1
9. Activator	1
10. Bionator	1
11. Frankel-FR 1& 2 appliance	1
12. Twin block	1

13. Lingual arch	1
14. TPA	1
15. Quad helix	1
16. Utility arches	1
17. Pendulum appliance	1
18. Canine Retractor(Marcotte & PG Spring)	1
19. Space maintainers	
Band and loop	1
Nance palatal	1
Trans Palatal	1
20. Space Regainer	1
Soldering exercises: Star/Comb/Christmas tree	
Study model preparation	
Model analysis – Mixed and permanent Dentition	
Cephalometrics: 1. Lateral cephalogram to be traced in different colors and super imposed to see the accuracy of tracing 2. Vertical and Anterio-Posterior Cephalometric analysis 3. Soft tissue analysis – Holdaway and Burstone 4. Various superimposition methods	
Basics of Clinical Photography including Digital Photography:	
Typodont exercises: Begg or P.E.A. method/Basic Edgewise: 1 Teeth setting in Class-II division I malocclusion with maxillary anterior Proclination and mandibular anterior crowding	1
2 Band pinching, welding brackets and buccal tubes to the bands	1
3 Different Stages dependent on the applied technique	1

CLINICAL WORK

Each postgraduate student should start with a minimum of 50 fixed orthodontics cases and 20 removable including myofunctional cases of his/her own. Additionally he/she should handle a minimum of 25 transferred cases.

The type of cases can be as follows:

- Removable active appliances
- Class-I malocclusion with Crowding
- Class-I malocclusion with bi-maxillary protrusion
- Class-II division – 1
- Class-II division – 2
- Class-III (Orthopedic, Surgical, Orthodontic cases)
- Inter disciplinary cases
- Removable functional appliance cases like activator, Bionator, functional regulator, twin block and new developments
- Fixed functional appliances – Herbst appliance, jasper jumper etc
- Dento-facial orthopedic appliances like head gears, rapid maxillary expansion, NiTi expander etc.
- Appliance for arch development such as molar distalization
- Fixed mechano therapy cases (Begg, PEA, Tip edge, Edgewise, lingual)
- Retention procedures of above treated cases.

Presentation of:

- Seminars - 5 seminars by each student
- Journal clubs -5 by each student
- Clinical case presentation by each student
- Submission of synopsis at the end of 6 months
- Library assignment work
- Internal assessment - theory and clinicals.

Second Year

Clinical work as described above

- Under graduate teaching program as allotted by the HOD
- Seminars - 5 by each student
- Journal club - 5 by each student
- Clinical case presentation by each student
- Dissertation work
- Prepare scientific paper and present in conference and clinical meeting
- Library assignment to be submitted 18 months after starting of the course
- Internal assessment - theory and clinical

Third Year

Clinical work as described above

Dissertation work to be submitted 6 months before final examination.

- Seminars - 5 by each student
- Journal club - 5 by each student
- Clinical case presentation by each student
- Teaching - lecture (under graduates)
- Internal assessment - theory and clinical

MONITORING LEARNING PROGRESS:

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring be done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects.

SCHEME OF EXAMINATION:

Written examination shall consist of Basic Sciences Paper (Part-I) of three hours duration and should be conducted at the end of First year of MDS course. Part-II Examination will be conducted at the end of Third year of MDS course. Part-II Examination will consist of Paper-I, Paper-II & Paper-III, each of three hours duration.

Part-I

Paper I: Applied Basic Sciences: Applied anatomy, Physiology, Dental Materials, Genetics, Pathology, Physical Anthropology, Applied Research methodology, Bio-Statistics and Applied Pharmacology.

Part-II

Paper-I: Orthodontic history, Concepts of occlusion and esthetics, Child and Adult Psychology, Etiology and classification of malocclusion, Dentofacial Anomalies, Diagnostic procedures and treatment planning in Orthodontics, Practice management in Orthodontics

Paper-II: Clinical Orthodontics

Paper-III: Essays (descriptive and analyzing type questions)

DISTRIBUTION OF MARKS:

Theory: (Total 400 Marks)

(1) Part I University Examination (100 Marks):-

There shall be 10 questions of 10 marks each (Total of 100 Marks)

(2) Part II (3 papers of 100 Marks):-

(i) Paper-I: 2 long essay questions of 25 marks each and 5 short essays of 10 marks each.
(Total of 100 Marks)

(ii) Paper-II: 2 long essay questions of 25 marks each and 5 short essays of 10 marks each.
(Total of
100 Marks)

(iii) Paper III: 2 out of 3 essay questions (50 x 2 = 100 Marks)

B. Clinicals: 200 Marks

Day 1

Exercise No: 1 50 Marks

Functional Case : Selection of case for functional appliance and recording of construction bite.

Exercise No: 2 50 Marks

1. III stage with auxiliary springs/Wire bending of any stage of fixed orthodontics (OR)
2. Bonding of SWA brackets and construction of suitable arch wire.

Exercise No. 3 75 Marks

Display of records of the treated cases (Minimum of 5 cases)

Day 2

A. Fabrication and delivery of the appliance the next day.

B. Long Case discussion 25 Marks

C. Viva Voce : 100 Marks

i. Viva-Voce examination: 80 marks

All examiners will conduct viva-voce conjointly on candidate's comprehension, analytical approach, expression, interpretation of data and communication skills. It includes all components of course contents. It includes presentation and discussion on dissertation also.

ii. Pedagogy Exercise: 20 marks

A topic be given to each candidate in the beginning of clinical examination. He/she is asked to make a presentation on the topic for 8-10 minutes.