



AMRITA
VISHWA VIDYAPEETHAM

School of
Dentistry

MASTER OF DENTAL SURGERY (MDS)-
Conservative Dentistry & Endodontics (MDS.CDE)
(As per the Regulations of Dental Council of India)

Our Inspiration



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Hon. Chancellor, Amrita Vishwa Vidyapeetham

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PROGRAM OUTCOMES

The program outcomes of MDS Conservative Dentistry may be summarized as appended below. At the end of three years of training, a post graduate student in Conservative Dentistry is expected to:

Describe etiology, pathophysiology, diagnosis and management of common restorative situations as well as endodontic situations comprising contemporary management of dental caries, management of trauma and pulpal pathoses including periodontal situations.

Demonstrate an understanding of basic sciences as relevant to Conservative/Restorative dentistry and Endodontics

Identify social, economical, environmental and emotional determinants in a given case or community and take them into account for planning and execution of treatment at individual and community levels.

Ability to master differential diagnosis of conditions that may require multidisciplinary approach or a clinical situation outside the realm of the specialty, which he/she should be able to recognize and refer to appropriate specialist.

Update himself by self- study and by attending basic and advanced courses, conferences, seminars and workshops in the specialty of Conservative Dentistry / Endodontics / Dental Materials and Restorative Dentistry.

Ability to teach and guide colleagues and other students.

Use information technology tools and carry out research, both basic and clinical, with the aim of publishing his work and presenting the same at various scientific platforms.

PROGRAM SPECIFIC OUTCOMES

A candidate undergoing training for the MDS program in Conservative Dentistry, shall, at the end of the three year training, inculcate the following specific skills:

Take proper chair-side history, examine the patient and perform essential medical and dental diagnostic procedures and order as well as perform relevant tests and interpret them to come to a reasonable diagnosis about the dental conditions in general and Conservative dentistry/ Endodontics in particular; and undertake complete patient monitoring including preoperative care of the patient.

Perform all levels of restorative work and surgical and non- surgical Endodontics including Endodontic endosseous implants, as well as Endodontic-Periodontal surgical procedures as part of a multidisciplinary approach to a clinical situation.

Provide basic life saving support services in emergency situations and manage acute pulpal & periodontal situations and emergency procedures.

Have a thorough knowledge of infection control measures in the dental clinical environment and laboratories.

The skill to explain the various options available in management and to obtain a true informed consent from the patient.

Willingness to share the knowledge and clinical experience with professional colleagues.

Willingness to adopt new methods and techniques from time to time based on scientific research, which is in the patient's best interest.

EVALUATION AND GRADING SYSTEM

SCHEME OF EXAMINATIONS

PART I MDS EXAMINATIONS

The DCI, in its revised curriculum, has introduced a University level Examination at the end of the First year of the MDS course, from 2018-2019. As per this curriculum, *“the University shall conduct the Part I MDS Examination in Applied*

Basic Sciences at the end of the first academic year. This shall consist of One Theory Written Paper of three hours duration, and shall contain ten questions, each carrying ten marks each. The answer sheets shall be valued by one External Examiner and one Internal Examiner from the concerned specialty”.

At the end of the 1st academic year (on completion of 12 months after the start of the MDS course), the University shall conduct the Part I MDS Examinations in Applied Basic Sciences, notification for which shall be issued by the Examination Control Division (ECD) of the University two months prior to the date of conduct of these Examinations.

As part of the eligibility criteria to appear for the Part I MDS Examinations, each MDS student shall have secured a minimum of 80% attendance in the first year of the MDS course, and shall have completed all the Pre-clinical work/exercises or any such course work, as mandated by the DCI, in its Modified Regulations (2017) or by the Head of the concerned Department /Principal of the Institution. The Principal shall send a list of students eligible to appear for the Part I MDS Examinations, to the ECD, at least 2 weeks prior to the start of the Examinations, so as to enable the University to issue hall tickets to eligible candidates

The Part I MDS Examinations in Applied Basic Sciences shall consist of one (1) Theory Written Paper, of three (3) hours durations, for a total of one hundred (100) marks. The Theory Written paper shall have a total of ten (10) questions, each carrying 10 marks. The single paper carrying a total of 100 marks, can comprise varied types of questions that could help assess the knowledge of the candidates in a better manner.

A grand viva voce on the topics covered for the Theory Examinations can be conducted by the External and Internal Examiners appointed by the University for paper Evaluation. This will impart a better value and credibility to the Part I Examination system. The Viva voce can be conducted in the respective Departments of the Dental School, on the same day as notified by the University for evaluation of the Theory answer sheets.

The University can appoint as Question paper setters for the Part I MDS examinations, those Examiners from the concerned specialty, who fulfill the same general criteria laid down by the DCI, to qualify as Examiners for the Part II MDS Examinations. The Examiners may take care to set the questions which apply to the Basic Science topics in their concerned specialty, as mandated in the syllabus for the same by the DCI.

The candidates need to secure 50% marks separately for theory written and Grand viva to be declared 'Passed' for the Part I MDS Exams. Candidates who have failed in the Part I MDS Examination, will have a chance to appear for the supplementary Examinations that shall be conducted by the University six months after the conduct of the Regular Examinations. To become eligible to appear for the Part II MDS Examinations at the end of the third year of the course, the candidate shall have passed the Part I Examinations at least 6 months prior to the Part II Examinations. There shall be NO reevaluation of the answer sheets of the Part I MDS Examinations.

The syllabus for the Part I MDS Examinations shall be according to that specified by the DCI for each Specialty in its MDS Course Regulations, 2017.

Part II MDS Examinations:

Shall be conducted at the end of three years of completion of the MDS course. Notification for these Examinations shall be given by the ECD three months prior to the actual dates of the Examinations.

Every MDS student shall submit to the University (ECD) four printed copies of the completed **Dissertation work** duly signed and approved by the Guide/HOD, through the Principal, six months prior to the scheduled date of Examinations. *Acceptance of Dissertation by all the appointed Examiners is a mandatory pre-requisite to enable the candidate to become eligible to appear for the subsequent Part II MDS Examinations.*

Hall tickets shall be issued to the candidates for the Part II MDS Examinations, based on: (a) Acceptance of Dissertations by the appointed Examiners, (b) Report of eligibility of candidates from the Principal, after taking into account the completion of the required quantum of work in each specialty and (c) a minimum of 80% total attendance for each candidate.

There shall be three (3) Theory Written Papers, followed by the Practicals and Viva-voce.

Each **Theory Written Paper** (Paper I, II & III) will have the syllabus and contents, as prescribed in the MDS Course Regulations, for each specialty. The nomenclature of each paper for each specialty will also be in accordance with these Regulations. Each paper shall be of three hours durations, and maximum marks of One hundred (100). For Papers I and II, there shall be two essay questions, each carrying twenty five (25) marks, and five (5) short questions, each carrying ten (10) marks. For Paper III, there shall be Three (3) Essay questions of which the candidates need to answer any two (2), carrying 50 marks each. Each paper shall be of 3 hours duration.

Clinical examination (Day 1)

Clinical exercise – I

Cast post and core preparation on maxillary anterior tooth

Tooth preparation	10 marks
Direct wax pattern	10 marks
Casting	10 marks
Cementation	10 marks
Retraction & elastomeric impression	10 marks
Total	50 marks

Clinical exercise –II 50 marks

Composite restoration / inlay cavity preparation , wax pattern preparation

Clinical Exercise Day 2

Clinical exercise III

100 marks

Molar root canal with rubber dam application –

- a. Access preparation
- b. Working length determination
- c. Cleaning & shaping
- d. Master cone selection

C. Viva Voce 80 Marks

All examiners shall conduct viva voce on candidate's comprehension, analytical approach, expression, interpretation of data and communication skills .It includes all component of course content. It include presentation and discussion of dissertation

Pedagogy 20 Marks

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

MARKS DISTRIBUTION

Part I Applied Basic Sciences Examination	Maximum Marks	Marks required for Pass
Theory Written Exam	100	50 out of 100

Grand Viva	50	25 out of 50
Part II Examinations		
Theory Written Exams (3 papers)	300 (100 marks each)	150
Practical and Viva-voce	300 (200 for Practicals, 80 for Grand Viva, 20 for Pedagogy)	150
Total for Part II Exams	600 (300 + 300)	300

COURSE DETAILS

Sl#	COURSE NAME	COURSE CODE
1	Applied Basic Sciences	MCON1
2	Conservative Dentistry	MCON2
3	Endodontics	MCON3
4	Recent Advances	MCON4

Applied Basic Sciences (MCON1)

CO1	Acquire knowledge about the basics of Conservative Dentistry & Endodontics in order to apply the same in
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	clinical practice
CO2	Knowledge and skill to manipulate dental materials with respect to Conservative Dentistry

Conservative Dentistry (MCON2)

CO1	Gain knowledge and expertise in diagnosing the problems of the patient, formulating a treatment plan for the same
CO2	Master the techniques of treatment with various cements and restorative materials used in Conservative Dentistry with special emphasis on cavity preparations for each type of cement.

Endodontics (MCON3)

CO1	Gain knowledge and expertise in root canal treatment, based on the indications for each patient
CO2	Knowledge of root canal microbiology with special emphasis on endo-perio relationships in clinical practice

COURSE SYLLABUS

The course contents shall be as under :

Basic sciences

Dental Materials

Conservative Dentistry

Esthetic Dentistry

Endodontics

Allied specialty knowledge

Basic Sciences

I. Applied -Anatomy of the head and neck

1. General knowledge of genetics applied to Dentistry.

2. Embryology

Early embryology, development upto the appearance of the three primary germ layers.

Histogenesis & Organogenesis.

Post natal growth and development of bony and soft tissue structure of the head and neck.

Principles of physical growth, differentiation between growth and development

Development of

Brachial arches

Face

Tooth

Tongue

Hard and soft palate and alveolar bone

Salivary glands

T.M .Joint

Maxilla and mandible

Muscles of mastication and deglutition

3. General Anatomy

Osteology of Head and neck with special reference to facial bones

Myology – muscles of facial expression, mastication , deglutition and speech

Cranial Nerve with special reference to Trigeminal ,facial and glossopharyngeal nerves.

Vascular and Lymphatic system of head and neck, Salivary glands and Paranasal air sinuses

Anatomy of Tongue ,its muscles , blood and nerve supply

TM Joint – structure ,movements, relations, anomalies and age changes

4. Oral and Dental Anatomy

Morphology of individual teeth in primary and permanent with variations

Anatomy of pulp canal and their variations.

Occlusion, dental arch formation, development of occlusion from gum pads.

Deciduous, mixed and permanent dentition.

Functional occlusion

Sequence of eruption

g. Age changes in the dentition.

5. General Histology

a. Different types of Epithelium

b. Bone

c. Cellular elements of blood

d. Histology of developing tooth germ, enamel, dentine, cementum, periodontal ligament, pulp, alveolar bone, oral mucous membrane, salivary glands, gingiva, gingival sulcus and epithelial attachment.

6. Anthropology

General Introduction to Anthropology with special reference to evolution of jaws and teeth.

II. Physiology

General principles of human physiology

Blood and lymph

Definition- Amount-Composition, cells and plasma functions, Chemical and physical properties- Blood groups and transfusion.

Origin of blood cells, spleen and anticoagulants Hydrogen ion concentration of blood

Bio Acid base – balance

Osmotic and anchortic pressure

Lymph- composition and functions- comparison with blood

Development of RBC's , WBC & factors influencing development
Number, size, structure, functions, main variations of RBC and WBC
Normal distribution Number, function, pathologic variations.

3. CVS-

Blood pressure- control and maintenance

Dynamics of circulation

Cardiac cycle and output

Shock

Vascular Disorders

4. Excretory system -

Kidney-General outline of functions

5. Digestive system

In general with special reference to physiology of

Mastication and deglutition- Gagging and vomiting

Saliva – composition and functions

Influence of function on teeth and surrounding structures.

6. Respiratory System

Mechanics of respiration

Principles governing control of respiration and respiratory exchange

Control of respiration

Dyspnoea and Anoxia

7. Endocrine system

General outline of-

Endocrine glands and their functions

Pituitary, thyroid and parathyroid

Adrenal gland and its dual function

Applied aspects of hormones on bone biology

8. Special senses -

Cutaneous and taste sensations

9. Nutrition and Metabolism

General principles of nutrition-

Balanced diet in relations to oral health with special reference to fluoride.

Metabolism of carbohydrate, protein and fat

Vitamin and minerals- dietary requirements

BMR- Body temperature and heat balance

Effect of diet on growth and development

Dietary formulation for specific dental conditions -like dental caries, periodontal disease and geriatric post operative cases.

III. Pharmacology

Mechanism of drug action

Mechanism of detoxication in the body

Intolerance, tolerance, cumulative action, synergism Antagonism

Dosage, classification of drugs

Central depressants

General Anaesthetics

Basal Narcotics, Hypnotic

Stimulant drugs

Local Anesthetics

Sympathomimetic and sympatholytic drugs

Respiratory and vasoconstrictors

Histaminic and antihistaminic drugs – steroids

Coagulants and Anti coagulants

Sialagogue , anti-sialagogue, emetics, Anti emetics

Vitamins

Parathyroid and calcium metabolism

Analgesics, antipyretic drugs, hypothermia

Chemotherapy, antiseptics and disinfectants

Sulphanomides, antibiotics

Counter irritants

Mouth washes, astringents, antacids, caustics, bleaching agents

Obtundents, Mummifying agents

Pharmacological action of mercury, Arsenic, Bismuth Barium

IV. Applied General and Oral –Pathology and Microbiology

A . General pathology

Introduction – Pathology of the cell, cellular degenerations

Detailed study of inflammation- Definition, Vascular phenomena, inflammatory exudates –localization of infection, tissue changes in inflammation and variations of inflammation.

Repair –Healing of a wound ,organization- parenchymal repair, healing of a fracture, healing of a socket after extraction

Infection – its localization, spread, facial infection and recovery from infections.

Bacteria, fungal and viral diseases. Tuberculosis syphilis, mycosis, tetanus, herpes, Measles and Mumps.

Diffuse collagen diseases

Auto immune diseases

Vascular disorders with special reference to bleeding disorders.

Disturbance of fluid balance, disturbances of blood volumes, hemorrhage and shock

Metabolic disorders-Kwashiorkar-hyper vitaminosis, hypovitaminosis, Rickets, Osteomalcia, Pigments, Melanosis, endocrines disturbances

Physical and chemical injuries chemical and metallic poisoning.

Genetic factors in disease.

B. Oral and Dental Pathology

Developmental anomalies of teeth and jaws

Regressive changes in the dentine and pulp

Dental caries- etiology, histopathology, clinical characteristics and sequelae

Minerals and dental caries- fluorides in particular.

Pulpitis – etiology, pathology and sequelae of acute and chronic pulpitis.

Acute apical periodontitis and dentoalveolar abscess

Topography of root ends and surrounding structures ,relationship between maxillary teeth and maxillary sinus

Osteomyelitis

Discolorations and stains

Cysts of oral cavity

Tumours of oral cavity classifications, morphology etiology, benign and malignant characteristics with special reference to odontogenic tumours

Common oral and dental disease with special reference to children.

C. Microbiology

Microbial flora of oral cavity- morphology, cytology and staining reactions- bacterial metabolism- the effect of environment, culture media.

Caries activity tests

Sterilization with special reference to dental office

Infection and resistance- defence mechanisms immunity and hypersensitivity.

V. BIOSTATISTICS

I. Introduction basic concepts

Sampling, systems- size ,collection, completion and presentation of data.

Elementary statistical methods – presentation of statistical data, Statistical averages- measures of central tendency measures of dispersion.

Normal distribution. Tests of significance- parametric and non-parametric tests (Fisher., extract test, Sign test, Median test, Mann Whitney test, Kruscal Wallis one way analysis, Friedmann two way analysis , Regression analysis)

Correlation and regression

Use of computers.

II. RESEARCH METHODOLOGY

Essential features of a protocol for research in humans

Experimental and non-experimental study designs

Ethical considerations of research

VI. Dental Materials

History and development of all related materials associated with Conservative dentistry

Advanced knowledge of dental materials

- c. Impression materials , restorative materials , investments ,casting alloys and all other materials used in Conservative dentistry
- d. Physical properties of all restorative materials and materials used in casting procedures
 - e. Advanced knowledge of all materials associated with restorative dentistry which includes impression materials. Biocompatibility of materials used in dentistry.
- f. All past, present and future restorative materials and recent advances including their History, Classification, composition, physical properties, advantages , disadvantages, Uses, modifications and combinations of recent restorative materials including Composites, Glass Ionomers ,Pit and fissures sealants and dentine bonding systems.
- g. Bases, liners and varnishes – composition, classification, chemistry, setting reaction, advantages, disadvantages and its applications
- h. All materials associated with metal casting fabrication and finishing , abrasives and polishing agents.
 - i. Ceramics with recent advances, knowledge of metallurgy.
 - J. Biological response to various restorative materials.
 - k. Advanced knowledge of dental equipments.

Conservative Dentistry

Examination , diagnosis and treatment plan

Occlusion as related to conservative dentistry, contact, contour and its significance. Separation of teeth and matrices used in conservative dentistry.

Dental caries-epidemiology, recent concept of etiological factors

pathophysiology, Histopathology, diagnosis, caries activity tests, prevention of dental caries and management recent methods.

Hand and rotary cutting instruments, development of rotary equipment, speed ranges, hazards.

Dental burs and other modalities of tooth preparation -recent developments(air abrasions, lasers etc)

Infection control procedures in conservative dentistry and isolation equipments etc.

Direct concepts in tooth preparation for amalgam, composite, GIC and restorative techniques, failures and management.

Direct and indirect composite restorations

Indirect tooth colored restorations- ceramic, inlays and onlays , veneers, crowns, recent advances in fabrication and materials.

10. Impression procedures used for indirect restorations

11. Cast metal restorations, indications- contraindications, tooth preparation

for class 2 inlay, onlay full crown restorations. Restorative techniques,

and direct and indirect methods of fabrication including materials used for fabrication like inlay wax and investment materials

Direct gold restorations.

Recent advances in restorative materials and procedures.

Management of non- carious lesion.

Advance knowledge of minimal intervention dentistry

Recent advances in restoration of endodontically treated teeth and grossly mutilated teeth.

Hypersensitivity, theories, causes and management.

Lasers in Conservative Dentistry

CAD- CAM & CAD- CIM in restorative dentistry

Dental imaging and its applications in restorative dentistry (clinical photography)

Principles of esthetics

- Color
- Facial analysis

- Smile design
- Principles of esthetic integration
- Treatment planning in esthetic dentistry

Endodontics

Rationale of Endodontics

Knowledge of internal anatomy of permanent teeth, anatomy of root apex and its implications in Endodontic treatment.

Dentin and pulp complex.

Pulp and Periapical pathology

Patho -biology of periapex.

Diagnostic procedure- recent advances and various aids used for diagnosis

7. Orofacial dental pain emergencies: Endodontic diagnosis and management

8. Case selection and treatment planning.

9. Infection control procedures used in Endodontics (aseptic techniques such as rubber dam, sterilization of instruments etc.

10 Access cavity preparation- Root canal morphology ,objectives ,principles and errors during preparation

11. Endodontic instruments and instrumentation – recent developments detailed

description of hand, rotary, sonic, ultra sonic etc....

12. Working length determination , cleaning and shaping of root canal system and recent development in techniques of canal preparation.

13. Root canal irrigants and intra canal medicaments used including non-surgical

Endodontics by calcium hydroxide.

14. Endodontic microbiology.
 15. Obturating materials, various obturation techniques and recent advances in obturation of root canal.
 16. Traumatic injuries and management-
 17. Endodontic treatment for young permanent teeth.
 18. Pediatric Endodontics- treatment of immature apex.
 19. Endodontic surgeries, recent developments in technique and devices, endosseous Endodontic implants- biology of bone and wound healing.
 20. Endoperio interrelationship, endo - perio lesion and its management
 21. Drugs and chemicals used in Endodontics
 22. Endo emergencies and management
 23. Restoration of endodontically treated teeth, recent advances.
 24. Geriatric Endodontics.
 25. Biologic response of pulp to various restorative materials and operative procedures.
 26. Lasers in Endodontics.
 27. Multidisciplinary approach to Endodontic situations.
 28. Endodontics radiology- digital technology in Endodontic practice
 29. Local anesthesia in Endodontics .
 30. Procedural errors in Endodontics and their management.
 31. Endodontics failures and retreatment.
 32. Resorptions and its management.
 33. Microscopes in Endodontics.
 34. Single visit Endodontics , current concepts and controversies.
- Knowledge of Allied Specialties
- Basic knowledge of computers and radiology in detail.
- General and local anaesthesia.
- Basic and advanced knowledge of Periodontics
- Basic and advanced knowledge of pedodontics and preventive dentistry.
- Basic knowledge of Oral Surgery in management of post operative general Anaesthesia patients.
- Basic knowledge of operating theater description.

Radiology: basic and advanced methods of intra oral and extra oral Radiography. Basic knowledge on radiography equipments. Advanced Knowledge on RVG and other imaging systems methods of developing fixing radiographs. And on methods of interpretation of radiographs.

Basic knowledge of Oral histology – microscopic structures of tissues of teeth – enamel, dentin, pulp, cementum and alveolar bone

Basic knowledge of Dental Pathology – clinical, radiographic and microscopic identification of hereditary and environmental enamel defects, dentin defects and combined defects of enamel, dentin and pulp

Operative Skills

Pre- clinical knowledge of Conservative dentistry/ Endodontics.

Clinical skills

- a Restorative procedures
- b Endodontic procedures and post- Endodontic situations.
 - c Surgical Endodontics.
3. Laboratory skills
 - a Impression procedures, disinfections of impression
 - b Making of removable dies.
 - c Casting procedures, / pre heaters/ waxes elimination
 - d Ceramic lab work procedures.
 - e Finishing of casting.
 - f Fabrication of post and core/ inlays/ onlays and crowns.
 - g Fabrication of ceramic laminates/ crown / inlays and onlays

DETAILED SCHEDULE OF TRAINING

Every week the PG trainees shall present seminars and journal clubs on a rotation basis. Seminars shall be presented on 2 week days and journal clubs on another 2 week days.

Each PG trainee has to present a minimum of 15 seminars and 25 Journal clubs during the tenure.

Every month the PG trainees shall actively participate in interdepartmental discussions related to interesting cases.

Each PG trainee shall present at least one scientific paper and one poster at the National level (either specialty conference/convention or IDA)

Each PG trainee shall submit an original library dissertation to the department.

Each PG trainee shall conduct and submit an original dissertation to the university, a copy of which shall be submitted to the department.

SCHEME FOR POST GRADUATE PROGRAMME

Duration of the course: 36 months

Program for 1st year:

Pre – clinical exercises (List provided - upgraded periodically)

Study models to be submitted to the department

Seminars on Basic Sciences / Dental materials (List provided - upgraded periodically)

Journal club

Library Dissertation

Clinical training including basic Restorative and Endodontic procedures

Selection of topic for dissertation, feasibility evaluation and submission of synopsis

Basic knowledge of computer within first 3 months

Maintenance of daily work log book

Presentation of scientific papers / research papers in State and/or National Conferences

Program for 2nd & 3rd year:

Clinical training including specialized Restorative and Endodontic procedures

Seminars on Endodontics and Conservative dentistry (List provided - upgraded periodically)

Journal club presentations

Lecture classes for undergraduate students in Conservative Dentistry

Presentation of scientific papers / research papers in State and/or National conferences

Publication of scientific paper in journals	
Maintenance of case album	
Completion of dissertation	
Submission of pre-clinical exercises months	3
Selection of topic for Library dissertation months	4
Registration of main thesis topic months	6
I Internal assessment examination month	8 th
Submission of Library dissertation (rough draft) 10 th month	
Submission of Applied Basic Science Seminars 11 th month	
Submission of Library dissertation (final) 18 th month	
II Internal assessment examination 20 th month	
Submission of seminars 24 th month	
Submission of Dissertation 30 th month	
III Internal assessment (Model) examination (Theory & Practicals) 33 th month	
Submission of Log book, seminars, case album 35 th month	
Final examination 36 th month	

Pre Clinical Exercises

CONSERVATIVE DENTISTRY

I. Plaster models

Class I Amalgam cavity preparation
Class II Amalgam cavity preparation
Class II Modifications
Class II Composite cavity preparation
Class II Inlay cavity preparation
Full Crown preparation
 $\frac{3}{4}$ th crown preparation
Acrylic jacket crown preparation
Porcelain Jacket crown preparation

II. Typhodont teeth

Class I Amalgam restorations
Class II Amalgam restorations
Class II Modifications
Class II Bonded amalgam restorations
Class II Composite restorations
Class II Inlays
Full Crown preparations
 $\frac{3}{4}$ th crown preparations
Acrylic jacket crown preparations
Porcelain Jacket crown preparations
Metal- Free All ceramic crown preparations
Indirect veneers – Anterior teeth

III. Natural teeth

Class I Amalgam restorations
Class II Amalgam restorations
Class II Modifications
Class II Bonded amalgam restorations
Class II Composite restorations
Class II Inlay preparation, wax pattern, investing and casting
Full Crown preparations
 $\frac{3}{4}$ th crown preparations

Acrylic jacket crown preparations

Porcelain Jacket crown preparations, wax pattern, investing and casting

Metal- Free All ceramic crown preparations

Indirect veneers – Anterior teeth

ENDODONTICS

All exercises to be done on extracted natural teeth

Sectioning of teeth

Incisors

Cuspids

Bicuspid

Molars

Root canal treatment of all teeth

Post and core preparation of anterior teeth, wax pattern, investing and casting)

RCT – additional techniques of cleaning and shaping

Step back techniques

Crown Down technique

Double Flare technique

Balanced force technique

RCT – additional techniques of obturation

Vertical condensation technique

Sectional compaction technique

Rolled cone technique

Thermoplasticized GP technique

CLINICAL TRAINING

After 3 months, each PG trainee's work is evaluated and if found satisfactory, he/she is permitted to start the clinical work. During the 1st year of PG, the trainees are posted in the out patient department (OPD) on a rotation basis. During their 2nd year of PG, the trainees are included in the undergraduate teaching program including 2nd year BDS preclinical practicals, on a rotation basis.

The clinical work from the 4th month onwards is planned as follows :

1st 15 days	GIC, Amalgam / Composite restorations
After 2 weeks	Anterior teeth RCT
5th month onwards	Anterior teeth full crowns
premolars RCT	
6th month onwards	Anterior teeth post & core
Premolars full crowns	
Molars RCT	
8th month onwards	Molars full crowns
Posterior teeth Post & core	
Pin-retained restorations	
9th month onwards	Inlays
	Onlays
10th month onwards	Endodontic surgeries
11th month onwards	Esthetic rehabilitation & Veneers

In the clinics, the following stipulated treatment modalities are required to be performed by the postgraduates to ensure clinical competence and to develop a diverse range of clinical skills.

CONSERVATIVE DENTISTRY

Amalgam restorations	100
Inlays - metal & ceramic	30
Onlays	5
Full crowns- Vital	10
Non vital	100
Post and core (anterior)	30
Post and core (posterior)	10
Pin-retained amalgam	5
Bonded Amalgam	20
Anterior composites	100
Posterior composites	100
Glass ionomer	50

Compomer	50
Fiber post with All-ceramic crown	10
Composite laminate veneer	10
Porcelain laminate veneer	5

ENDODONTICS

Anterior root canal treatment	120 cases
Posterior root canal treatment	200 cases
Step back preparation	50 cases
Crown down preparation	30 cases
Rotary system	100 cases
Thermoplasticized GP obturation	20 cases
McSpadden obturation	5 cases
Epiphany resin obturation	5 cases
Rolled cone obturation	5 cases
Bleaching (Vital)	20 cases
Bleaching (NonVital)	20 cases
Splinting	10 cases

13.Surgical Endodontics:

1 Apicoectomy	5
2 Reattachment	5
3 Hemi section	2
4 Apexification	10

EVALUATION OF A PG TRAINEE

The postgraduate students are evaluated mainly based on their clinical work. This includes the manner in which they present themselves to the patients, their understanding of the clinical situation and their ability to work out a treatment plan that best suits the patient's needs. They are provided adequate training to be equipped with the knowledge and skill to handle any kind of clinical situation ranging from simple to complicated, with relative ease.

Assessment is also done based on clinical case discussions and during several viva voce, seminars and journal club sessions held. They must access other specialty departments for consultation that would help them deal with different clinical situations. All of these inter department discussions are supervised/monitored.

Finally, it is also the duty of every student not only to possess sound knowledge about the basic sciences, but also about various latest advances in technology, equipment and materials from extensive reading of the numerous national and international journals as well as research articles.