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

Our Inspiration

H.H. Mata Amritanandamayee Devi
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 revaluation 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

<table>
<thead>
<tr>
<th>Tooth preparation</th>
<th>10 marks</th>
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<tbody>
<tr>
<td>Direct wax pattern</td>
<td>10 marks</td>
</tr>
<tr>
<td>Casting</td>
<td>10 marks</td>
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<tr>
<td>Cementation</td>
<td>10 marks</td>
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<tr>
<td>Retraction &amp; elastomeric impression</td>
<td>10 marks</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>50 marks</strong></td>
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**Clinical exercise – II**

Composite restoration / inlay cavity preparation, wax pattern preparation

50 marks
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 8-10 minutes

MARKS DISTRIBUTION

<table>
<thead>
<tr>
<th>Part I Applied Basic Sciences Examination</th>
<th>Maximum Marks</th>
<th>Marks required for Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory Written Exam</td>
<td>100</td>
<td>50 out of 100</td>
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</table>
## Grand Viva

<table>
<thead>
<tr>
<th>Part II Examinations</th>
<th>Theory Written Exams (3 papers)</th>
<th>Practical and Viva-voce</th>
<th>Total for Part II Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Viva</td>
<td>50</td>
<td>300 (100 marks each)</td>
<td>600 (300 + 300)</td>
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<tr>
<td>25 out of 50</td>
<td></td>
<td>150</td>
<td>300</td>
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<td>150</td>
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### COURSE DETAILS

<table>
<thead>
<tr>
<th>SI#</th>
<th>COURSE NAME</th>
<th>COURSE CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Applied Basic Sciences</td>
<td>MCON1</td>
</tr>
<tr>
<td>2</td>
<td>Conservative Dentistry</td>
<td>MCON2</td>
</tr>
<tr>
<td>3</td>
<td>Endodontics</td>
<td>MCON3</td>
</tr>
<tr>
<td>4</td>
<td>Recent Advances</td>
<td>MCON4</td>
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</tbody>
</table>

#### Applied Basic Sciences (MCON1)

<table>
<thead>
<tr>
<th>CO1</th>
<th>Acquire knowledge about the basics of Conservative Dentistry &amp; Endodontics in order to apply the same in</th>
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<tbody>
<tr>
<td>Course</td>
<td>Content</td>
</tr>
<tr>
<td>--------</td>
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<tr>
<td>CO2</td>
<td>Knowledge and skill to manipulate dental materials with respect to Conservative Dentistry</td>
</tr>
</tbody>
</table>

**Conservative Dentistry (MCON2)**

<table>
<thead>
<tr>
<th>CO1</th>
<th>Gain knowledge and expertise in diagnosing the problems of the patient, formulating a treatment plan for the same</th>
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<tbody>
<tr>
<td>CO2</td>
<td>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.</td>
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</table>

**Endodontics (MCON3)**

<table>
<thead>
<tr>
<th>CO1</th>
<th>Gain knowledge and expertise in root canal treatment, based on the indications for each patient</th>
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<tbody>
<tr>
<td>CO2</td>
<td>Knowledge of root canal microbiology with special emphasis on endo-perio relationships in clinical practice</td>
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**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 germs 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-sailagogue, 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, hypovitaminesis, Rickets, Osteomalacia, 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.
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.
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.

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.
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.

21
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 3 months
Selection of topic for Library dissertation 4 months
Registration of main thesis topic 6 months
I Internal assessment examination 8\textsuperscript{th} month
Submission of Library dissertation (rough draft) 10\textsuperscript{th} month
Submission of Applied Basic Science Seminars 11\textsuperscript{th} month
Submission of Library dissertation (final) 18\textsuperscript{th} month
II Internal assessment examination 20\textsuperscript{th} month
Submission of seminars 24\textsuperscript{th} month
Submission of Dissertation 30\textsuperscript{th} month
III Internal assessment (Model) examination (Theory & Practicals) 33\textsuperscript{th} month
Submission of Log book, seminars, case album 35\textsuperscript{th} month
Final examination 36\textsuperscript{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
¾ 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
¾ 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
¾ 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  
Bicuspids  
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.