SYLLABUS
for Courses affiliated to the
Kerala University of Health Sciences
Thrissur 680596

Master of Dental Surgery (MDS)
Pediatric and Preventive Dentistry
Course Code: 247

(2022 Academic year onwards)

Modified as per DCI MDS Course (3rd Amendment) Regulations 2019

2. COURSE CONTENT

2.1. Title of course:

MDS PEDIATRIC AND PREVENTIVE DENTISTRY

2.2. Objectives of course

1. Goals

The goals of postgraduate training in various specialties are to train the BDS graduate who will:

- Practice respective specialty efficiently and effectively, backed by scientific knowledge and skill.
- Exercise empathy and a caring attitude and maintain high ethical standards.
- Continue to evince keen interest in continuing professional education in the specialty and allied specialties irrespective of whether in teaching or practice.
- Willing to share the knowledge and skills with any learner, junior or a colleague.
- To develop the faculty for critical analysis and evaluation of various concepts and views, to adopt the most rational approach.

2. Objectives

The objective is to train a candidate so as to ensure higher competence in both general and special area of interest and prepare him/her for a career in teaching, research and specialty 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 above objectives are to be achieved by the time the candidate completes the course. The objectives may be considered as under –

1. Knowledge (Cognitive Domain)
2. Skills (Psychomotor Domain)
3. Human values, ethical practice and communication abilities.

Knowledge

- Demonstrate understanding of basic sciences relevant to the specialty.
- Describe etiology, pathophysiology, principles of diagnosis and management of common problem within the specialty in adults and children.
- Identify social, economic, environmental and emotional determinants in a given case and take them into account for planning treatment.
- Recognize conditions that may be outside the area of specialty/competence and to refer them to an appropriate specialist.
- Update knowledge by self-study and by attending courses, conferences and seminars relevant to specialty.
- Undertake audit; use information technology and carry out research both basic and clinical with the aim of publishing or presenting the work at various scientific

gatherings.

Skills

- Take a proper clinical history, examine the patient, perform essential diagnostic procedures and order relevant tests and interpret them to come to a reasonable diagnosis about the condition.
- Acquire adequate skills and competence in performing various procedures as required in the specialty.

Human values, ethical practice and communication abilities

- Adopt ethical principles in all aspects of practice.
- Foster professional honesty and integrity.
- Deliver patient care, irrespective of social status, caste, creed, or religion of the patient.
- Develop communication skills, in particular skill to explain various options available inmanagement and to obtain a true informed consent from the patient.
- Provide leadership and get the best out of his team in congenial working atmosphere.
- Apply high moral and ethical standards while carrying out human or animal research.
- Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek asecond opinion.

2.3. Medium of instruction:

The medium of instruction for the course shall be English.

2.4. Course outline

This branch deals with the nature of oral diseases, their causes, processes and effects. It relates to the clinical manifestation of oral diseases and also the physiologic and anatomic changes associated with these diseases in children.

2.5. Duration

The course shall be of **three years** duration. All the candidates for the degree of MDS are required to pursue the recommended course for at least three academic years as full time candidates in an institution affiliated to and approved for Postgraduate studies by KUHS, observing the norms put forward by the DCI.

i. There will be no reduction for the course duration for any of the students including service candidates, diploma holders and those who have done senior house surgency or equivalent research experience.

ii. No student shall be permitted to complete the course by attending more than 6 continuous years.

iii. A candidate selected for admission in a Dental College is obliged to follow the curriculum, rules and regulations as approved by the Dental Council of India and the University. Curriculum, rules or regulations are subject to changes from time to time.

2.6. Syllabus

The syllabus for the theory of the specialty of Pediatric and preventive Dentistry should cover the entire field of the subject and the following topics may be used as guidelines. A strict division of the subject may not be possible and some overlapping of subjects is inevitable. The concept of health care counselling shall be incorporated in all relevant areas.

Syllabus for MDS Part I Examination

Paper I: Applied Basic Sciences:

Applied Anatomy of Head and Neck:

- Anatomy of the scalp, temple, and face
- Anatomy of the triangles of neck and deep structures of the neck
- Cranial and facial bones and its surrounding soft tissues with its applied aspects
- Muscles of head and neck
- Arterial supply, venous drainage and lymphatics of head and neck
- Congenital abnormalities of the head and neck
- Anatomy of the cranial nerves
- Anatomy of the tongue and its applied aspects
- Anatomy and its applied aspects of salivary glands, pharynx, thyroid and parathyroid gland, larynx,trachea, and esophagus
- Autonomous nervous system of head and neck
- Functional anatomy of mastication, deglutition, speech, respiration and circulation
- TMJ: anatomy and function

Applied Dental Anatomy
Anatomy of primary and secondary dentition, concept of occlusion, mechanism of articulation, and masticatory function. Detailed structural and functional study of the oral dental and Para oral tissues. Normal occlusion, development of occlusion in deciduous mixed and permanent dentitions, root length, root configuration, tooth-numbering system.

Applied Physiology:
Introduction, Mastication, deglutition, digestion and assimilation, Homeostasis, fluid and electrolyte balance.
Blood composition, volume, function, blood groups and hemorrhage, Blood transfusion, circulation, Heart, Pulse, Blood pressure, Normal ECG ,capillary and lymphatic circulation, shock, respiration, control, anoxia, hypoxia, asphyxia, artificial respiration. Endocrine glands in particular reference to pituitary, parathyroid and thyroid glands and sex hormones. Role of calcium and Vit D in growth and development of teeth, bone and jaws. Role of Vit.A, C and B complex in oral mucosal and periodontal health. Physiology and function of the masticatory system.
Speech mechanism, swallowing and deglutition mechanism, salivary glands and Saliva

Applied Pathology:
Inflammation and chemical mediators, Thrombosis, Embolism, Necrosis, Repair, Degeneration , Shock, Hemorrhage , Blood dyscrasias, Pathogenesis of Dental Caries, Periodontal diseases, tumors, oral mucosal lesions etc. in children

Applied Microbiology:
Microbiology & Immunology as related to Oral Diseases in Children: Basic concepts, immune system in human body, Auto Immune diseases and Immunology of Dental caries.

Applied Oral Pathology:
Developmental disturbances of oral and Para oral structures, Regressive changes of teeth,

Bacterial, viral and mycotic infections of oral cavity, Dental caries, diseases of pulp and periapical tissues, Physical and chemical injuries of the oral cavity, oral manifestations of metabolic and endocrine disturbances, Diseases of the blood and blood forming organism in relation to the oral cavity, Periodontal diseases, Diseases of the skin, nerves and muscles in relation to the Oral cavity.

Applied Nutrition & Dietics:

- General principles, balanced diet, effect of dietary deficiencies and starvation, protein energy, malnutrition, Kwashiorkor, Marasmus.
- Fluid and Electrolytic balance in maintaining homeostasis
- Diet, digestion, absorption, transportation and utilization

Genetics:

- Introduction to genetics
- Cell structure, DNA, RNA, protein synthesis, cell division
- Modes of inheritance
- Chromosomal anomalies of oral tissues & single gene disorders

Growth & Development:

Prenatal and Postnatal development of cranium, face, jaws, teeth and supporting structures. Chronology of dental development and development of occlusion. Dimensional changes in dental arches. Cephalometric evaluation of growth.

Applied Pharmacology:

Definition of terminologies used – Dosage and mode of administration of drugs. Action and fate of drugs in the body, Drug addiction, tolerance and hypersensitive reactions, Drugs acting on the central nervous system, general anesthetics hypnotics. Analeptics and tranquilizers, Local anesthetics, Chemotherapeutics and antibiotics, Antiheamorrhagics, anticoagulants, Analgesics and antipyretics, Antiseptics, styptics, Sialogogues and antisialogogues, Haematinics, Cortisone, ACTH, insulin and other antidiabetics vitamins: A, D, B –complex group C and K etc. Chemotherapy and Radiotherapy

Immunology:

Immunology as related to Oral Diseases in Children. Basic concepts, immune system in human body, Auto Immune diseases, Immunology of dental caries & Periodontal diseases, Tumors, Oral Mucosal lesions etc.

Research Methodology and Biostatistics:

RESEARCH METHODOLOGY:

Understanding and evaluating dental research, scientific method and the behavior of scientists, understanding to logic – inductive logic – analogy, models, authority, hypothesis and causation, Quacks, Cranks, Abuses of Logic, Measurement and Errors of measurement, presentation of results, Reliability, Sensitivity and specificity diagnosis test and measurement,

Research Strategies, Observation, Correlation, Experimentation and Experimental design. Logic of statistical interference balance judgements, judgement under uncertainty, clinical v/s. Scientific judgement, problem with clinical cavity. judgement, forming scientific judgements, the problem of contradictory evidence, citation analysis as a Means of literature evaluation, influencing judgement : Lower forms of Rhetorical life, Denigration, Terminal, Inexactitude.

BIOSTATISTICS:
Study of Biostatistics as applied to dentistry and research. Definition, aim characteristics and limitations of statistics, planning of statistical experiments, sampling, collection, classification and presentation of data (Tables, graphs, pictograms etc) Analysis of data

INTRODUCTION TO BIOSTATISTICS: Scope and need for statistical application to biological data. Definition of selected terms – scale of measurements related to statistics, Methods of collecting data, presentation of the statistical diagrams and graphs. Frequency curves, mean, mode of median, Standard deviation and co-efficient of variation, Correlation – Coefficient and its significance, Binominal distributions normal distribution and Poisson distribution, and tests of significance

Syllabus for MDS Part II

Paper-I: Clinical pedodontics

B) Pediatric Dentistry:
ϒ Child Psychology:
Development & Classification of behavior, personality, intelligence in children, theories of child psychology, stages of psychological child development, fear, anxiety, apprehension & its management.
ϒ Behavior Management: Non- pharmacological & Pharmacological methods.
ϒ Child Abuse & Dental Neglect:
ϒ Conscious Sedation:
ϒ Deep Sedation & General Anesthesia in Pediatric Dentistry: (Including Other Drugs, Synergic &Antagonistic Actions of Various Drugs Used in Children

Preventive Pedodontics:
Concepts, chair side preventive measures for dental diseases, high-risk caries including rampant & extensive caries – Recognition, Features & Preventive Management, Pit and Fissures Sealants, Oral Hygiene measures, Correlation of brushing with dental caries and periodontal diseases.

Diet & Nutrition as related to dental caries.
Diet Counseling

Dental Plaque:
Definition, Initiation, Pathogenesis, Biochemistry, and Morphology & Metabolism.

Gingival & Periodontal diseases in Children:
ϒ Normal Gingiva & Periodontium in children.
ϒ Gingival & Periodontal diseases – Etiology, Pathogenesis, Prevention & Management

Pediatric Operative Dentistry:
ϒ Principle of Operative Dentistry along with modifications of materials/past, current & latest including tooth colored materials.
ϒ Modifications required for cavity preparation in primary and young permanent teeth.
ϒ Various Isolation Techniques
ϒ Restorations of decayed primary, young permanent and permanent teeth in children using various restorative material like Glass Ionomer, Composites, Silver, Amalgam & latest material (gallium)
ϒ Stainless steel, Polycarbonate & Resin Crowns / Veneers & fibre post systems.

Pediatric Endodontics:

- Primary Dentition: - Diagnosis of pulpal diseases and their management – Pulp capping, Pulpotomy,Pulpectomy (Materials & Methods), Controversies & recent concepts.
- Young permanent teeth and permanent teeth, Pulp capping, Pulpotomy, Apexogenesis, Apexification, Concepts, Techniques and Materials used for different procedures.
- Recent advances in Pediatric diagnosis and Endodontics.
- Prosthetic consideration in Pediatric Dentistry.

Traumatic Injuries in Children:

- Classifications & Importance.
- Sequelae & reaction of teeth to trauma.
- Management of Traumatized teeth with latest concepts.
- Management of jaw fractures in children.

Interceptive Orthodontics:

- Concepts of occlusion and esthetics: Structure and function of all anatomic components of occlusion, mechanics of articulations, recording of masticatory function, diagnosis of Occlusal dysfunction, relationship of TMJ anatomy and pathology and related neuromuscular physiology.
- A comprehensive review of the local and systemic factors in the causation of malocclusion.
- Recognition and management of normal and abnormal developmental occlusions in primary, mixed and permanent dentitions in children (Occlusal Guidance).
- Biology of tooth movement: A comprehensive review of the principles of teeth movement. Review ofcontemporary literature. Histopathology of bone and Periodontal ligament, Molecular and ultra cellular consideration in tooth movement.
- Myofunctional appliances: Basic principles, contemporary appliances: Design & Fabrication
- Removable appliances: Basic principles, contemporary appliances: Design & Fabrication
- Case selection & diagnosis in interceptive Orthodontics (Cephalometrics, Image processing, Tracing, Radiation hygiene, Video imaging & advance Cephalometric techniques).
- Space Management: Etiology, Diagnosis of space problems, analysis, Biomechanics, Planned extraction in interceptive orthodontics.

Oral Habits in Children:

- Definition, Etiology& Classification
- Clinical features of digit sucking, tongue thrusting, mouth breathing & various other secondary habits.
- Management of oral habits in children

Dental care of Children with special needs:

Definition, Etiology, Classification, Behavioral, Clinical features & Management of children with:

- Physically handicapped conditions
- Mentally compromising conditions
- Medically compromising conditions
- Genetic disorders

Oral manifestations of Systemic Conditions in Children & their Management of Minor Oral Surgical Procedures in Children Dental Radiology as related to Pediatric Dentistry

Cariology:

- Historical background

- Definition, Etiology& Pathogenesis
- Caries pattern in primary, young permanent and permanent teeth in children.
- Rampant caries, early childhood caries and extensive caries. Definition, etiology, Pathogenesis, Clinical features, Complications & Management.
- Role of diet and nutrition in Dental Caries
- Dietary modifications & Diet counseling.
- Subjective & objective methods of Caries detection with emphasis on Caries Activity tests, Caries prediction, Caries susceptibility & their clinical Applications

Pediatric Oral Medicine & Clinical Pathology:
Recognition & Management of developmental dental anomalies, teething disorders, stomatological conditions, mucosal lesions, viral infections etc.

Congenital Abnormalities in Children:

- Definition, Classification, Clinical features & Management.Dental
- Emergencies in Children and their Management.
- Dental Materials used in Pediatric Dentistry.
- Comprehensive Infant Oral Health Care.
- Comprehensive cleft lip and palate care management with emphasis on counseling, feeding, nasoalveolar bone remodeling, speech rehabilitation.
- Principles of Biostatistics, Research Methodology, Understanding of Computers and Photography.
- Setting up of Pediatric and Preventive Dentistry Clinic.
- Emerging concepts in Pediatric Dentistry
- Scope of LASERS
- Minimal Invasive Dentistry
- Nanodentistry in Pediatric Dentistry.
- Evidence Based Dentistry.
- Genetics and Molecular Biology Biomimetics and Smart Materials.
- Tooth Banking
- Implantology – Basic Principles. Hospital based paediatric dentistry.
- Changing Trends in Oral Diseases in Children
- Minimum invasive procedures in Pediatric Dentistry.

Paper-II: Preventive and Community Dentistry as applied to Pediatric Dentistry:

- Definition
- Principles & Scope
- Types of prevention
- Different preventive measures used in Pediatric Dentistry including fissure sealants and caries vaccine.

Dental Health Education & School Dental Health Programmes:

Dental health concepts, Effects of civilization and environment, Dental Health delivery system,

Public Health measures related to children along with principles of Pediatric and Preventive Dentistry

School Dental Health programmes

Incremental and Comprehensive Care.

National Oral health Policy**.**

Epidemiology of oral Diseases

Dental Caries, Gingival and periodontal diseases, malocclusion, dental fluorosis.

Oral Survey Procedures

1. Planning
2. Implementation
3. WHO Basic Oral health methods.
4. Indices for oral diseases.

Fluorides:

- Historical background
- Systemic & Topical fluorides
- Mechanism of action
- Toxicity & Management.
- Defluoridation techniques.

Medico legal aspects in Pediatric Dentistry with emphasis on informed concent.

Counseling in Pediatric Dentistry

Case History Recording: Outline of principles of examination, diagnosis & treatment planning.

Epidemiology:

Concepts, Methods of recording & evaluation of various oral diseases. Various national & global trends of epidemiology of oral diseases.

Comprehensive Infant Oral Health Care.

Principles of Bio-Statistics& Research Methodology & Understanding of Computers and Photography

Comprehensive cleft care management with emphasis on counseling, feeding, bone remodeling,speech rehabilitation.

Setting up of Pediatric Dentistry Clinic.

Paper-III :**Essay**

Three descriptive and analyzing type questions on any of the above mentioned topics of which the candidate is to answer any two essays.

TEACHING LEARNING ACTIVITIES

1. Seminars

During a 1 hour weekly seminar the student is required to review the assigned topic completely and present it in a compiled manner. Each seminar should be followed by an elaborate discussion to facilitate a complete learning. At the end of each seminar a detailed evaluation has to be carried out by each of the attending faculty and signed by the respective guide.

The topics for Basic Science seminars include

- Evolution of jaws and teeth
- Eruption and Shedding of Teeth,
- Theories of Eruption
- TM Joint
- Homeostasis
- Bleeding disorders
- Regulation of Blood Calcium level.
- Physiology of pain
- Pain Pathway
- Cranial Nerves
- Pedologic Anatomy
- Enamel, Dentine and Pulp.
- Blood supply of head and neck.
- Lymphatic drainage.
- Oral Mucosa
- Saliva.
- Shock
- Fear and its management.
- Caries susceptibility and Caries Activity.
- Syncope and its management.
- Complications of LA.
- Drug related emergencies.
- Infection Control.

- Prenatal growth and Development.
- Postnatal growth and development.
- Muscles of facial expression.
- Biostatistics.
- Aesthetic Restorations.
- Amalgam and Amalgam controversies.
- Theories of Child Psychology.
- Anxiety rating scales.
- Balanced diet.
- Ethics in research.
- Dental Health Survey.
- Drug dosing.
- Inferential Statistics.
- Intraoral Radiographs.
- Radiographic hazards.
- Normal radiographic anatomy of the jaws and its structures.
- Digital imaging.
- CBCT in pediatric dentistry.
- Bleeding disorders.
- Pediatric Oral Pathology.
- Developmental anomalies of the face.
- Developmental anomalies of the jaws.
- Biomedical waste management.
- Healing and Repair.
- Pulp and Pulpal Diseases.
- Antibiotics in Pediatric Dentistry.
- Analgesics in Pediatric Dentistry.

Basic and Advanced Specialty Seminars.

The topics for Basic Specialty and Advanced Specialty seminars include

Growth and Development

- Basic concepts of growth and development of face (pattern variability, timing of growth influenced by various hereditary and environmental factors).
- Principles and theories.
- Cephalometric growth evaluation.

- Human dentition, its development and changing patterns.
- Normal occlusion and factors influencing functional development of occlusion.
- Principles and practice of diagnosis of incipient malocclusion.

Child Psychology

- Emotional development of the child and its scope in Pediatric Dentistry.
- Concept of different theories of child psychology.
- The origin and characteristics of fear, anxiety and phobia.
- Psychometric measures of dental fear, anxiety and phobia.
- Behavioral Sciences and its application in Pediatric dentistry.
- Ephebodontics.

Orodental diseases in Children

- Indian and global prevalence of dental diseases and its changing trends.
- Recent concepts of dental plaque.
- Dental Caries and its recent concepts.
- Principles and diagnosis of dental caries.
- Management of high risk dental caries child.
- Common periodontal diseases in children and their management.
- Strategies for prevention of dental caries and periodontal diseases in children.
- Caries vaccine.

Pediatric Operative Dentistry

- Basis for pediatric restorative dentistry – how it differs from adult dentistry.
- New era in conservative dentistry
- Recent concept.
- Aesthetic Dentistry
- Recent trends in restorative materials for children.
- Enamel hypoplasia and it management.
- Rubber dam – facilitation for excellence.
- Traumatized teeth and its management in children.

Pediatric Endodontics

- Pulp and its pathophysiology.
- Biological approach to pulp therapy.
- Diagnosis and differential diagnosis including latest diagnostic aids.
- Management using various recent materials.

Radiology in Pediatric Dentistry

- Its scope in pediatric dentistry.
- Digital radiography.
- Lasers in dentistry.

Preventive and Interceptive Orthodontics

- Preventive and Interceptive Orthodontics: Diagnosis and Significance in Pediatric Dentistry.
- Pernicious oral habits, their prevention and management in children.
- Interceptive procedures for the integrity of arch perimeter.
- Functional jaw orthopedics in Pediatric Dentistry.

Preventive Dentistry

- Principles of Epidemiology.
- Various indices used for recording the dental and oral diseases in children.
- Measures used for prevention and maintenance of oral and dental diseases on children.
- Fluorides in dentistry.
- Present Scenario of fluorides in various countries throughout the world.
- Diet and its implication on oro-dental health.
- Occlusal Sealants.

Special care Children

- Differently abled Children – The concept of Attitude.
- Hospital Dentistry for Medically compromised children.
- Child with cleft lip and Palate.
- Comprehensive preventive oral health care for differently abled children.

Pediatric Prosthodontics

- Edentulous child and implications on the stomatognathic system.
- Semi permanent restorations.
- Prosthodontic rehabilitation of the child with cleft palate.

Pediatric Consideration in Oral Surgery.

First Year

PRE CLINICAL EXERCISES

(Duration–first 6 Months of First Year MDS)

1. **Carving of all deciduous teeth**
2. **Basic wire bending exercises** (Clasps, Bows, Retractors and Springs etc on patient models)

   Straightening of 6” long19 G SS wire.

Square of 1''side

Triangle of 1" side

Circle of 2"diameter.

Clasp – 1 pair each

- ¾clasp
- Full clasp
- Triangular clasp
- Adam's clasp
- Modified Adam's clasp
- Ball clasp

Fabrication of Labial bows

- Short
- Long
- With reverse loop
- Split labial bow

Springs

- Single cantilever
- Double cantilever
- Helical canine retractor
- Coffin Spring

- **Basic Soldering exercises**

Ladder–5" long with 4 rungs 1"long and 1"apart.

- **Fabrication of:**
  - Maxillary bite plate/Hawley's Maxillary
  - Expansion screw appliance.
  - Canine retractor appliance
- **All habit breaking appliances.**

Removable type.

- Removable Tongue guard,
- Lip bumper,
- Oral screen

Fixed type.

- Fixed Tongue guard,

- Blue grass appliance
- Fixed lip bumper.

- **Three myofunctional appliances should include**
  - Twin block
  - Lip bumper
  - Oral Screen
- **Making of inclined plane appliance**.
  - Acrylic inclined plane

3. **Fabrication of space maintainers:**
   - **Removable type**
     - Functional and non functional acrylic space maintainers
   - **Fixed type**
     - Band and loop,
     - Trans palatal arch
     - Nance Arch holding device
     - Lingual arch
     - Distal shoe appliance,.

   Fixed Space Regainer-
   - Gerber or Open coil space regainer

   Removable space regainer

   For guiding the eruption of first permanent molar

   Functional space maintainer
4. **Basic Spot Welding exercises**
5. **Feeding appliance: Feeding Plate.**
6. **Collection of extracted deciduous and permanent teeth**

a. Sectioning of the teeth at various levels and planes

b. Drawing of section and shapes of pulp

c. Phantom Head Exercises: Performing ideal cavity preparation for various restorative materials for both deciduous and permanent teeth

d. Performing pulpotomy, root canal treatment and apexification procedure on extracted mounted natural tooth

- Tooth Preparation and fabrication of various temporary and permanent restorations on fractured anterior teeth
- Preparation of various types of crowns

Preparation of strip crowns and polycarbonate crowns on mounted natural anterior teeth.

- Reattachment of tooth fragment on mounted natural tooth
- Laminates/veneers

Bonding & banding exercise (Bracket placement in anterior mounted teeth for sectional fixed treatment).

- Exercise on minimally invasive Dentistry (resin infiltration on mounted tooth)

7. **Performing of behavioral rating and IQ tests for children**
8. **Computation** of
   a. Caries Index
   b. Oral Hygiene Index
   c. Fluorosis Index
9. **Surgical Exercises**
   a. Fabrication of splints (placement of composite with wire on mounted natural teeth)
   b. Fabrication of cap splint
   c. Type of Wiring on mounted teeth (eyelet wiring, arc bar fixation)
   d. Suturing
10. **Radiographs**
    a. Taking of periapical, occlusal, bitewing radiographs of children
    b. Developing and processing of films thus obtained.
    c. Cephalometric Radiographs :- Tracing of soft tissues, dental and skeletal landmarks as observed on these radiographs, drawing of various planes and angles and profile studies at 3,7,11 and 14years
11. **Mixed dentition cast analysis and other prediction methods.**
12. **Library assignment:** Topic for the library dissertation should be finalized and approved at the end of the first six months and two copies to be submitted to the Head of the Department at the end of the first year as per KUHS guidelines.
13. **Placement of rubber dam in phantom jaw**
14. **Records of the Preclinical exercises** to be approved by the guide and duly certified by the Head of the Department. Preclinical exercises to be displayed for the MDS final examination
15. **Synopsis:** Dissertation topic to be finalized, approved, and synopsis to be submitted at the endof the first six months to KUHS
16. Attending CDE or taking training in rotary endodontics in primary teeth before the end of first year.

17. Attending CDE or taking training in Dental photography and preparation of power point presentation before the end of 6 months of first year.

18. Applied Professional Experience

Pediatrics – 1 week including Injection OP

Child Development Centre – 1 week

The student should participate in Hospital pediatric rounds, clinics and seminars. They should also learn to perform the routine physical examination on a child, as well as gain knowledge about normal developmental milestones, reflexes, immunization schedule, infant health care, differentiate between normal and abnormally developed child and discuss the general principles of medical care for acutely and chronically sick children as well as children with chromosomal syndromes.

Dental Radiology – 1 week

22. Special Assignments

School Dental Health Programme – 1

Dental Camp -1

Practical application of Preventive dentistry concepts in a class of 35-50 children and Dental Health Education and Motivation. - 2

23. Mini Project – In the form of an epidemiological survey – Recording of any dental diseases on at least 100 children, computation of results and submission of report or a KAP study on any topic relevant to pediatric dentistry.

Second Year

1. This part of the programme focuses on providing the candidate with a further broad outline of theoretical, clinical and practical courses in Basic Pediatric and Preventive Dentistry.

2. Applied Professional Experience (APEX)

Anesthesia and Pediatric Surgery – 2 weeks

Training in General anesthesia, training in giving IV, IM, SC injections, learn to intubate a patient and monitor the patient's vital signs during GA, participate in seminars, pre and postoperative rounds.

Plastic Surgery – 2 weeks.

Training in basic principles and their application especially in comprehensive management of cleft lip and palate and other oral and maxillofacial anomalies with special emphasis on the role of Pediatric Dentist in the multidisciplinary team.

Trauma Centre Posting OR Oral and Maxillofacial Surgery – 2 weeks

Learn to attend emergency calls with the principles of primary management.

3. Special Assignments

School Dental Health Programme – 1

Dental Camp-1/ attending camp in special schools -2

Practical application of Preventive dentistry concepts in a class of 35-50 children & Dental HealthEducation & Motivation - 4

Third Year

This part of the programme focuses on providing the candidate with a further broad outline of theoretical, clinical and practical courses in Advanced Clinical Pediatric and Preventive Dentistry.

CLINICAL REQUIREMENTS

The following is the minimum required quota to be completed before the candidate can beconsidered eligible to appear in the MDS Examination.

1. Behavior management of different age group children with complete records. – 17
2. Detailed case evaluation with complete records, treatment planning and presentation of cases with chairside discussion. – 17
3. Step by step chairside preventive dentistry scheduled for high-risk children with gingival and periodontal diseases and Dental Caries. – 11
4. Practical Application of Preventive Dentistry concepts in a class of 35-50 children and Dental health Education and Motivation. – 7
5. Pediatric Conservative Dentistry with application of recent concepts.

    5.1. Management of Dental Caries

        5.1.1. occlusal Caries 50

        5.1.2. Proximal Caries – 100

        5.1.3. Other Surfaces - 100

5.2. Management of Traumatized Anterior teeth - 15

5.3. Aesthetic Anterior Restorations – 25

6. Pediatric Endodontic Procedures

6.1. Deciduous Teeth

6.1.1. Pulpotomy - 50

6.1.2. Pulpectomy - 100

6.2. Permanent Teeth

6.2.1. Posterior RCT – 20

6.2.2. Anterior RCT – 15

6.2.3. Apexification and Apexogenesis - 20

7. Stainless Steel Crowns - 50

8. Other Crowns – 20

9. Orthodontic Appliances

9.1. Fixed Space Maintainers - 20

9.2. Fixed Habit Breakers - 10

9.3. Removable Space Maintainers - 15

9.4. Removable Habit Breakers - 15

9.5. Removable appliance for correction of minor orthodontic problems - 15

9.6. Semi Fixed - 10

9.7. Myofunctional Appliances:- Twin Block - 5

9.8. Fixed Appliance Therapy in selected cases in Children – 5

10. **Management of Cleft lip/palate patients**

Prosthetic Rehabilitation

10.1.Partial Dentures – 10

10.2.Feeding Plates – 10

10.3.Obturators – 10

11.**Surgical Management** of Cysts of Dental Origin, Supernumerary teeth and Odontomes.

12.**Other Minor Surgical Procedures** like Apicoectomy, Frenotomy, Frenectomy, Gingivectomy, Surgical Exposure of Teeth

13.**Management of Fracture of the Jaws.**

14.**Comprehensive dental management** of the physically impaired, mentally compromised and medically compromised children.

15.**Preventive measures** like Fluoride Applications, Pit and Fissure sealant applications with complete follow up and diet counseling.

16. **Rotation Postings in other Departments:** It is mandatory that the students are posted on rotation in the following departments:

16.1. Pediatrics – 1 week including injection OP

16.2. Child Development Centre – 1 week

16.3. Dental Radiology – 1 week

16.4. Anesthesia and Pediatric Surgery – 2 weeks

16.5. Plastic Surgery – 2 weeks.

16.6. Trauma Centre Posting /Oral and Maxillofacial Surgery – 2 weeks

17. **Special Assignments (Mentioned earlier)**

17.1. School Dental Health Programme - 1

17.2. Dental Camps - 2

18. **Library Dissertation**: Topic for the library dissertation should be finalized and approved by the end of the first six months and the same to be submitted at the end of the first year. It should beapproved by the guide and certified by the Head of the Department.

19. **Conferences and Publication of Scientific Paper:** During the MDS course the student should **attend two National Conferences** and attempts should be made to **present at leasttwo scientific papers** and **publish at least two scientific articles** in an indexed journal relevant to the specialty.

Clinical work Requirements from 7 to 36 months

The following is the minimum requirement to be completed before the candidate can be consideredeligible to appear in the final M.D.S Examinations:

Sr No	Clinical Work	Total	7 To 12 Months	13 To 24 Months	25 To 36 Months
1	Behavior Management of different age groups children with complete records.	17	2	10	5
2	Detailed Case evaluation with complete records, treatment planning and presentation of cases with chair side and discussion	17	2	10	5
3	Step-by-step chair side preventive dentistry scheduled for high risk children with gingival and periodontal diseases & Dental Caries	11	1	5	5

4	Practical application of Preventive dentistry concepts in a class of 35-50 children& Dental Health Education & Motivation.	7	1	4	2
5	Pediatric Operative Dentistry with application ofrecent concepts. (a). Management of Dental Caries				
	(I) Class I	50	30	10	10
	(II) Class II	100	40	50	10
	(III) Other Restorations	100	20	50	30
	(b) Management of traumatized anterior teeth	15	04	06	05
	(c)Aesthetic Restorations	25	05	10	10
	(d) Pediatric Endodontic Procedures Deciduous teeth Pulpotomy / Pulpectomy Permanent Molars Permanent Incisor Apexification & Apexogenesis	 150 20 15 20	 30 3 2 02	 50 7 3 08	 70 10 10 10
6.	Stainless Steel Crowns	50	10	20	20
7.	Other Crowns	05	01	02	02
8.	Fixed : Space Maintainers Habit breaking appliances	30	08	12	10
9.	Removable: Space Maintainers, Habit breaking appliances	20	05	07	08
10.	Functional Appliances	05	01	02	02
11.	Preventive measures like fluoride applications & Pit & Fissure Sealants applications with complete follow up and diet counselling	20	08	08	04
12.	Special Assignments (i) School Dental Health Programmes	03	01	01	01
	(ii) Camps etc.,	02	01	01	-
13.	Library usage				
14.	Laboratory usage				
15.	Continuing Dental Health Programmes				

(The figures given against Sl. No. 4 to 12 are the minimum number of recommended procedures to beperformed)

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 is to 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.

Structured Training

First Year

- Preclinical Exercises within the first six months

- 3 seminars in basic sciences
- 2 seminars in the Specialty
- 5 Journal Clubs
- Basic training in Computers and Photography and videography
- Mandatory BLS training
- Library Dissertation Work
- Commencement of Dissertation Work.
- Attending CDE/Workshops/Advanced Courses
- Attending a State/National Conference and presentation of a Scientific Paper.
- Publication of a scientific paper
- Case Discussions – 2 (uniform case history taking, recording and record keeping)
- Clinical Teaching of Undergraduate students
- APEX Posting
  - Pediatrics – 1 week
  - Child Development Centre – 1 week
  - Dental Radiology – 1 week (interpretation of USG, CT and CBCT)

Second Year

- 5 seminars in Specialty.
- Assisting and guiding Third year BDS students during their clinical posting.
- Taking lectures for Third BDS students on selected topics.
- 5 Journal Clubs.
- 2 CPC
- Attending CDE/Workshops/Advanced Courses
- Attending a National Conference and presentation of a Scientific Paper.
- Completion of Dissertation.
- Publication of a scientific paper
- APEX Posting
  - Anesthesia and Pediatric Surgery – 2 weeks
  - Plastic Surgery – 2 weeks.
  - Trauma Centre Posting/ Oral and Maxillofacial Surgery – 2 weeks

Third Year

- 5 Seminars on Recent Advances in Pediatric and Preventive Dentistry.
- 5 Journal Clubs.
- 2 CPC
- Attending CDE/Workshops/Advanced Courses
- Attending a National Conference and presentation of a Scientific Paper.
- Submission of Dissertation.

2.7. Total number of hours

As per the instruction given by the DCI.

2.8. Branches if any with definition

Pediatric and Preventive Dentistry

2.9. Teaching learning methods

Method of Training

The training of a post graduate student shall be full time but graded responsibilities in the management and treatment of patients entrusted to his/her care. The participation of the students in all facets of educational process is essential. Every candidate should take part in seminars, group discussions, case demonstrations, clinics, journal review meetings, and clinical meetings. Every candidate shall be required to participate in the teaching and training programme of undergraduate students and interns. Training should include involvement in laboratory and experimental work, and research studies.

Every Institution undertaking Post Graduate training programme shall set up an Academic cell or a Curriculum Committee, under the chairmanship of a Senior faculty member, which shall work out the details of the training programme in each specialty in consultation with other Department faculty staff and also coordinate and monitor the implementation of these training programmes.

Based on the above guidelines for a structured training programme for postgraduate courses, the basic tenets of a successful postgraduate teaching programme, are detailed under the following heads.

▫ **Formal Lectures** by the faculty on varied subjects including general areas and systems.

Both senior and junior faculty can do this. However, the number of these classes should be maintained of low levels to encourage self-learning.

▫ **Symposia / Seminars** form an integral part of PG learning. A monthly symposium will

generate approximate 30-35 symposia / course. These symposia can include department faculty and HODs as chairpersons and maximum involvement of both students and faculty should be ensured.

▫ **Clinical Discussions** form the core of PG training and can be assigned to various clinical units on rotating basis. However other faculty could also actively participate in the discussion. The discussions must be 3-4/week. One suggestion is to score the performance of the candidate by a small panel of faculty and convey the scores to the candidate / PG at the end of the session.

▫ **Journal Club /Clinical Club** should be conducted at least once in a week in each postgraduate department. Journal clubs not only imparts new information but also trains the candidate to objectively assess and criticize various articles which come out and should be useful in ensuring evidence based dentistry.

▫ **Guest Lectures** can be integrated into the PG program at least once in a month. Even the retired faculty can be invited for delivering the lectures and will ensure importing of greater wisdom to the candidates.

▫ **Orientation Classes** for newcomers should also be incorporated. These classes can even be assigned to junior faculty/senior PGs.

▫ **Clinical posting.** Each PG student should work in the clinics on regular basis to acquire adequate professional skills and competency in managing various cases to be treated by a specialist.

▫ **Clinico Pathological Conferences** should be held once a year involving the faculties of Oral Medicine and Radiology, Oral Pathology and concerned clinical department. The student should be encouraged to present the clinical details, radiological and histopathological interpretations and participation in the discussions.

▫ **Rotation postings in other departments** should be worked out by each department in order to bring in more integration between the specialty and allied fields.

▫ **Periodical Quiz** can be both informative and entertaining and should be encouraged and planned.

▫ **Computer Training and Internet Applications** are now becoming a must for both faculty and students. These areas should be strengthened as a next step. There can be a sort of internet information club in the departments.

▫ **Conferences/CDEs** – All postgraduate students should be encouraged to attend conferences and CDEs. They should also be asked to present papers wherever appropriate and should be rewarded by assigning scores for them.

▫ **Publication of scientific papers** – It is desirable and advisable to have at least two publications in the State/National/International indexed dental journals.

▫ **Involvement in Teaching Activity** – PG students can be assigned the job of teaching the undergraduate students and these will definitely improve the teaching skills in the postgraduate students.

Content of each subject in each year

Present in clause 2.6

2.10. No: of hours per subject

Present in clause 2.6

2.11. Practical training

Present in clause 2.6

2.12. Records

Present in clause 2. 20

2.13. Dissertation: As per Dissertations Regulations of KUHS

Every candidate pursuing MDS degree course is required to carry out work on a selected research project under the guidance of a recognized postgraduate teacher. The results of such a work shall be submitted in the form of a dissertation. The dissertation is aimed to train a postgraduate student in research methods and techniques. It includes identification of a problem, formulation of a hypothesis, search and review of literature, getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, and comparison of results and drawing conclusions. Every candidate shall submit to the University in the prescribed format a synopsis containing particulars of proposed dissertation work after obtaining ethical clearance from the Institutional Ethical Committee **within six months from the date of commencement of the course or before the dates notified by the University**. The synopsis shall be sent only through the Principal of the institution. Such synopsis will be reviewed and the dissertation topic will be registered by the university. No change in the dissertation topic or guide/co guide shall be made without prior approval of the University. The dissertation should not be just a repetition of a previously undertaken study but it should try to explore some new aspects.

The dissertation should be written under the following headings:

i. Introduction

ii. Aims and Objectives of the study

iii. Review of Literature

iv. Methodology

v. Results

vi. Discussion

vii. Conclusion

viii. Summary

ix. References

x. Annexures

The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires, and other annexures. It should be neatly typed (font size 13-Times New Roman or font size 13-Cambria) in 1.5 line spacing on one side of the paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should be avoided. (Refer Section V and VII). The guide, co-guide if any, Head of the Department and the Head of the Institution shall certify the dissertation. For uniformity, it was suggested that the color of the hard bind of the dissertation for all branches of MDS course in the purview of KUHS shall be dark brown with letters of gold color. The title, author, and year of study should also be imprinted or embossed on the spine of the book. **Three hard copies and one properly labeled soft copy in a CD (refer Section VII) of the dissertation thus prepared shall be submitted to KUHS on the 29th month of commencement of the course / 31st Oct. of the 3rd academic year, whichever falls first.** Dissertation should preferably be sent to a minimum of three

reviewers / examiners /assessors, of which two shall be from outside the state and one from the affiliated colleges of KUHS. Consent for acceptance for evaluation of dissertation should be obtained from the reviewer/examiner/assessor before the dissertation are dispatched. Proforma for evaluation of dissertation should be sent along with the copies of the dissertation to the reviewers appointed by the university. The proforma should contain all the assessment criteria with the clause –**Accepted/Accepted with modifications/Rejected** and reasons for rejection by the examiner. This proforma should be sent back to the University within two weeks / within the date specified after receipt of dissertation. The dissertation may be declared accepted if more than 50% of the reviewers (2 in the case of 3 reviewers) have accepted it. If modifications are to be made as specified, 3 hard copies and one soft copy of the dissertation after corrections made by the candidate should be submitted within 30 days to the University which may be sent back to the same examiner/s by the University for Acceptance after a fee has been levied from the candidate.

If the dissertation has been rejected by more than 50% of the reviewers (2 in the case of 3 reviewers), the dissertation may be reviewed by an Expert Reviewing Committee comprising of not less than two subject experts, Dean (Research) of KUHS and Guide of the candidate provided the Guide requests for a review, after a fee has been levied from the candidate. If rejected by the Reviewing Committee, the candidate should take up a new topic and undergo all the procedures of submitting the synopsis, fees, IEC clearance, etc as prescribed by the University. The candidate who takes up the new topic can appearonly for the subsequent examination.

Approval of dissertation work is an essential precondition for a candidate to appear in the MDS Part II University examination. Hall tickets for the Part II examination should be issued to the candidate only if the dissertation has been accepted. A candidate whose dissertation has been accepted by the examiners and approved by the University, but who is declared to have failed at the final examination will be permitted to reappear at the subsequent MDS examination without having to prepare a dissertation.

Guide – The academic qualification and teaching experience required for recognition by the University as a guide for dissertation work is as laid down by the Dental Council of India / KUHS.

Co-guide – A co-guide may be included provided the work requires substantial contribution from the same department or a sister department or from another institution recognized for teaching/training by KUHS/DCI. The co-guide should fulfill the academic qualification and teaching experience required for recognition by the Universityas a co-guide for dissertation work.

Change of Guide – In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the University.

Specialty training if any

Present in clause 2.6

Project work to be done if any

Present in clause 2.6

Any other requirements [CME, Paper Publishing etc.]

Present in clause 2.6

2.14. Prescribed/recommended textbooks for each subjectApplied

Basic Sciences

SUBJECT	NAME OF AUTHOR	NAME OF BOOK
Anatomy	BD Chaurasia	BD Chaurasia's Human Anatomy
	William, Peter L	Grays Anatomy

Oral Anatomy	Ash, Major M	Wheelers Dental Anatomy, Physiology and Occlusion
	Sicher, Harry, Du Brull , Llyod	Oral Anatomy
Oral Histology	Bhaskar B.N. Ed	Orbans Oral Histology and EmbryologyAvery, James K
	Avery, James K	Essentials of Oral Histology and Embryology
Embryology	Sadler	Langmans Medical Embryology
	Inderbeer Singh	Human Embryology
Physiology	Guyton Arthur and John LHall	Text Book of Medical Physiology
	Ganong, William F	Review of Medical Pysiology
Pharmacology	KD Tripathi	Essentials of Medical Pharmachology
	Hardman, Joel G	Goodman and Gillmans pharmacological basis of Therapeutics
Nutrition	Nizel	Nutrition in Preventive Dentistry: Science and Practice
General Pathology	Cotran, Ramzi S and Others	Robbins Pathologic Basis of Disease
	Harsh Mohan	Textbook of Pathology
Oral Pathology	Shaffer, William andOthers	Textbook of Oral Pathology
	Neville, Brad W and Others	Oral and Maxillofacial Pathology
Microbiology	Ananthanarayan and Panicker	Textbook of Microbiology
	Lakshman S	Essential Microbiology for Dentistry
Biostatistics	Dr.Symalan	Statistics in Medicine
	Soben Peter	Essentials of Preventive and Community Dentistry
	Sunder Rao and Richard	Introduction to Biostatistics and
	J.	Research Methods

Pediatric and Preventive Dentistry

List of Essential and Recommended Reference Books

1. Dentistry for the Handicapped Child — Kenneth E. Wessels
2. Dental Management of the Child Patient — HanneloreT.Loevy
3. Development of Dentition — Van der Linden
4. Dentistry of the Child & Adolescent — Mac Donald & Avery
5. Dentistry for the Adolescent — Castaldy& Brass
6. Essentials of Dental Caries – The Disease and its management — Kidd-Joysten

7. Endodontics	Nicholls
8. Endodontology – Biologic considerations	Samuel Seltzer
9. Fluoride in Preventive Dentistry	Melberg, Louis Ripa
10. Fundamentals of Pediatric Dentistry	Mathewson
11. Manual of PedodonticsAndlow& Rock	
12. Minor tooth movement in children	Joseph M. Sim
13. Nutrition in Preventive Dentistry	Nizel
14. Principles & Practice of Orthodontics	Graber
15. Pediatric Dentistry – Scientific foundations	Stewart & Wei16.
16. Pediatric Dentistry – Infancy through Adolescence	Pinkham
17. Pediatric Dentistry – Total Patient Care	Wei
18. Treatment of Traumatised incisor in the child patient	Ronald Johnson
19. Cariology Today	Guggenhein
20. Orthodontics – Current Principles & Techniques	Graber & Swain
21. Cariology Ernest	Newbrun
22. Pediatric Operative Dentistry	Kennedy
23. Synopsis of Orthodontics	Rani
24. Handbook of Local Anaesthesia	Malamed
25. Community Dental Health	Jong
26. Handbook of Clinical PedodonticsSnawder	
27. Growing up Cavity Free	Moss
28. Dentistry for the Preschool Child	Davies
29. Dentistry for Children	Brauer&Hisley
30. Practical Treatment Planning for the Pedodontic Patient	Blinkhein
31. Nutrition in Clinical Practice	Nizel
32. The Human Dentition Before Birth	Kraus & Jordan
33. Appropriate Uses of Fluorides for Human Health	J.J.Murray (WHO)
34. Fluoride in Preventive Dentistry – Theory & Clinical Practice	Mellberg&Ripa
35. Trace Elements & Dental Diseases	Curzon
36. Fluorides in Caries Prevention	Murray, Rugg-Gunn
37. A Symposium on Preventive Dentistry	Muhler
38. Antibiotic – Antimicrobial Use in Dental Practice	Newmann
39. Applied Dental Materials	McCabe
40. Cross Infection Control in General Practice	Croser& Davies
41. Congenital Deformities	Gordon, Gause
42. Caries Resistant Teeth	Wolstenholm
43. Dental Materials - Properties & Manipulation	Craig
44. Dental Caries	Silverstone
45. Dentistry for the Special Patient	Davidoff
46. Fixed Orthodontic Appliances	Williams
47. Hand Book of Facial Growth	Enlow
48. Human Embryology	Inderbir Singh
49. Orthodontic Cephalometry	Athanasiou
50. Preventive Dentistry	Forrest
51. Study of Tooth Shapes- A systematic Approach	Grundler
52. Radiographic Cephalometry	Jacobson
53. Comprehensive textbook of Psychiatry	Kaplan

54. Science of Dental Materials	Skinners
55. Rubber Dam in Clinical Practice	Reid
56. Diagnosis of the Orthodontic Patient	McDonald & Ireland
57. Fixed Orthodontic Appliances – Principles & Practice	Issacson& Thom
58. Decision making in Dental Treatment Planning	Hall & Roberts
59. Plaque & Calculus Removal	Cochran, Brunsvold
60. Community Oral Health	Pine
61. Primary & Emergency Dental Care	Figures & Lamb
62. Principles of Dental Treatment Planning	Morris
63. A practical Guide to Technology in Dentistry	Jedynakiewicz
64. The Art & Science 0f Operative Dentistry	Sturdevant
65. Endodontic Therapy	Weine
66. Endodontics	Ingle
67. Endodontics in Clinical Practice	Harty
68. Pathways of the Pulp	Cohen
69. Esthetic Composite Bonding	Jordan
70. Esthetic Restorations	Mula
71. Modern Concepts in the Diagnosis & Treatment of Fissure Caries	Paterson & Watts
72. Dentin & Pulp in Restorative Dentistry	Brannstrom
73. Oral Development & Histology	Tencate
74. Textbook of Oral Pathology	Shafer
75. Oral Pathology	Ash
76. An Introduction to Fixed Appliances	Isaccson
77. Dental Care for Handicapped Patients	Hunter
78. Clinical Pedodontics	Finn
79. Book for special children	Priya Verma Gupta
80. Dynamic aspects of Dental Pulp	Reizoinoki, Teruokudo and Leif M Olgart

2.15. Reference books

As instructed by HOD

2.16. Journals

- ASDC Journal of Dentistry for Children
- Pediatric Dentistry
- International Journal of Pediatric Dentistry
- Journal of Clinical Pediatric Dentistry
- International Journal of Clinical Pediatric Dentistry
- Journal of Dentistry for Children
- Journal of the Indian Society of Pedodontics and Preventive Dentistry
- Australian Dental Journal

- British Dental Journal
- Dental Clinics of North America
- Endodontics and Dental Traumatology
- International Dental Journal
- International Endodontic Journal
- JADA
- Journal of Dental Research
- Journal of Dentistry
- Journal of Endodontics
- Journal of Indian Dental Association
- Advanced Dental Research

2.17. Logbook

▫ **Work Diary / Log Book**

Logbooks serve as a document of the trainee's work. The trainee shall maintain this Logbook of the special procedures/operations observed/assisted/performed by him/her during the training period right from the point of entry and its authenticity shall be assessed weekly by the concerned Post Graduate Teacher / Head of the Department. This shall be made available to the Board of Examiners for their perusal at the time of his / her appearing at the Final examination.

The logbook should record clinical cases seen and presented, procedures and tests performed, seminars, journal club and other presentations. Logbook entries must be qualitative and not merely quantitative, focusing on learning points and recent advances in the area and must include short review of recent literature relevant to the entry. A work diary containing all the various treatment done by the candidate in the course of the study should also be maintained.

The work diary shall be scrutinized and certified by both the guide/co guide and Head of the Department and presented in the University practical/clinical examination.

3. EXAMINATIONS

Evaluation is a continuous process, which is based upon criteria developed by the concerned authorities with certain objectives to assess the performance of the learner. This also indirectly helps in the measurement of effectiveness and quality of the concerned MDS programme. Evaluation is achieved by two processes

1) Formative or internal assessment

2) Summative or university examinations.

Formative evaluation is done through a series of tests and examinations conducted periodically by the institution. Summative evaluation is done by the university through examination conducted at the end of the specified course.

A candidate registered for MDS course must clear the final examination within six years of the date of admission. The examinations should be so organized that this shall be used as the mechanism to confirm that the candidate has acquired appropriate knowledge, skill and competence at the end of the training that he/she can act as a specialist and/or a medical teacher as per expectation. University examination will be held regularly by KUHS in April-May/October-November every year.

A candidate who wishes to study for MDS in a second specialty should have to take the full course of 3 years in that specialty and appear for examinations.

3.1. Eligibility to appear for exams

Every candidate to become eligible to appear for the **MDS examination** shall fulfill the following requirements.

MDS Part I Examination

Attendance

Every candidate shall have fulfilled the attendance prescribed by the University (80%) during first academic year of the Postgraduate course.

Library Dissertation

Submission of the library dissertation as per the regulations of the DCI / KUHS is mandatory for the candidate to appear for the examination.

MDS Part II (Final) Examination

Attendance

Every candidate shall have fulfilled the attendance prescribed by the University during **each academic year** of the Postgraduate course. A candidate becomes eligible for writing the University examination only after the completion of 36 months from the date of commencement of the course. The candidates should have completed the training period before the commencement of examination.

Pass in MDS Part I Examination

Every candidate shall have to pass the Part I examination to become eligible to appear for the Part

II examination. The candidates shall have to pass the Part-I examination at least six months prior to the Part-II examination.

Dissertation

Approval of the dissertation is a mandatory requirement for the candidate to appear for the university examination.

Progress and Conduct

Every candidate shall have participated in seminars, journal review meetings, symposia, conferences, case presentations, clinics and didactic lectures during each year as designed by the concerned department.

Work Diary and Logbook

Every candidate shall maintain a work diary and logbook for recording his/her participation in the training programmes conducted by the department. The work diaryand logbook shall be verified and certified by the Head of the department.

The certification of satisfactory progress by the Head of the Department and Head of the Institution shall be based on checklist given in 5.1 to 5.8.

- **Students should note that in case they do not complete the exercises and work allotted to them within the period prescribed, their course requirements will be considered unfulfilled.**
- **Clinical Records, Work Diaries and Logbooks should be maintained regularly and approved by the guide, duly certified by the Head of the Department.**

3.2. Schedule of Regular/Supplementary exams

The MDS examination shall consist of theory, practical / clinical examination, and Viva voceand Pedagogy

1.Theory: 400 marks

There shall be two theory examinations for the MDS course,

Part I Examination – at the end of the first academic year

Part II Examination –at the end of the third academic year

Part-I Examination: Shall consist of one theory paper

There shall be a theory examination in the Basic Sciences of three hours duration at the end of the first academic year of the course. The question papers shall be set and evaluated by the faculty of the concerned specialty. The candidates shall have to secure a minimum of 50%marks in the Basic Sciences paper and shall have to pass

the Part-I examination at least six months prior to the final (Part-II) examination.

Part-II Examination: Shall consist of

(i) Theory - three papers, namely:– Paper I, Paper II & Paper III, each of three hours duration.

(ii) Practical and Clinical Examination;

(iii)Viva-voce and Pedagogy.

3.3. Scheme of examination showing maximum marks and minimum 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, each 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 (2 x 50 = 100 Marks)

(iv) Practical and Clinical Examination: 200 Marks

Viva-voce and Pedagogy : 100 Marks

Written Examination (Theory) : 400 Marks

Part-I: Basic Sciences Paper - 100 Marks

The Part I examination consists of one theory paper in Basic Sciences, of three hours duration and shall be conducted at the end of the first academic year of the MDS course. There shall be 10 questions of 10 marks each (Total of 100 Marks)

Part II (Final) Theory/Written examination:300 Marks

The Part II theory examination shall be conducted at the end of Third year of MDS

course and consist of three papers, each of three hours' duration. Each paper shall carry 100 marks. The type of questions in the first two papers will be two long essay questions carrying 25 marks each and five short essay questions each carrying ten marks. There will be no options in the first 2 question papers. Third paper will be an essay question paper with three essay questions carrying 50 marks each and the candidate is to answer any two of the essays. Questions on recent advances may be asked in any or all the papers. The syllabus for the theory papers of the concerned specialty should cover the entire field of the subject. Though the topics assigned to the different papers are generally evaluated under designated papers, a strict division of the subject may not be possible and some overlapping of topics is inevitable. Students should be prepared to answer overlapping topics. The theory examinations shall be held sufficiently earlier than the practical/clinical examinations to facilitate evaluation of the answer books. The total marks for the Part II theory examination shall be 300.

Practical Examination: 200 Marks

In case of practical examination, it should aim at assessing competence and skills of techniques and procedures. It should also aim at testing student's ability to make relevant and valid observations, interpretation and inference of laboratory or experimental or clinical work relating to his/her subject for undertaking independent work as a specialist. The total mark for practical/clinical examinations shall be 200.

Viva voce; 100 Marks

Viva voce examination shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills. The candidate may be given a topic for the pedagogy in the beginning of the clinical examination and asked to make a presentation on the topic for 8-10 minutes. The total marks shall be 100 of which 80 would be for the viva voce (20 marks/examiner) and 20 marks for the pedagogy.

3.4. Papers in each year

MDS Part I Examination: Conducted at the end of the first academic year

Paper I : Applied Basic Sciences – Applied Basic Sciences: Applied Anatomy, Physiology, & Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics Growth & Development and Dental plaque, Genetics.

MDS Part II Examination: Conducted at the end of the third academic year

Paper-I : Clinical Pedodontics

Paper-II : Preventive and Community Dentistry as applied to pediatric dentistry

Paper-III : Essay - Descriptive and analyzing type question

3.5. Details of theory exams

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

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 each 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)

(iv) Distribution of topics for each paper will be as follows:

MDS Part I Examination:

Paper I: Applied Basic Sciences: Applied Anatomy, Physiology, and Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics Growth and Development and Dental plaque, Genetics.

MDS Part II Examination:

Paper-I : **Clinical Pedodontics**

1. Conscious sedation, Deep Sedation & General Anesthesia in Pediatric Dentistry
2. Gingival & Periodontal Diseases in Children
3. Pediatric Operative Dentistry
4. Pediatric Endodontics
5. Traumatic Injuries in Children Interceptive Orthodontics
6. Interceptive Orthodontics
7. Oral Habits in children
8. Dental Care of Children with special needs
9. Oral Manifestations of Systemic Conditions in Children & their Management
10. Management of Minor Oral Surgical Procedures in Children
11. Dental Radiology as Related to Pediatric Dentistry
12. Pediatric Oral Medicine & Clinical Pathology
13. Congenital Abnormalities in Children
14. Dental Emergencies in Children & Their Management
15. Dental Materials Used in Pediatric Dentistry
16. Case History Recording
17. Setting up of Pediatric & Preventive Dentistry Clinic

Paper II: **Preventive and Community Dentistry as applied to Pediatric Dentistry**

1. Child Psychology
2. Behavior Management
3. Child Abuse & Dental Neglect
4. Preventive Pedodontics
5. Cariology
6. Preventive Dentistry
7. Dental Health Education & School Dental Health Programmes
8. Fluorides
9. Epidemiology
10. Comprehensive Infant Oral Health Care/Comprehensive cleft care
11. Principles of Bio-Statistics and Research Methodology and Understanding of Computers and Photography

Paper-III: **Essay (Descriptive and Analyzing type questions)**

A 3-hour essay paper, consisting of three descriptive and analyzing type of questions, on any of the major topics in Pediatric and Preventive Dentistry with emphasis on recent advances and the candidate is to answer any two questions.

3.6. Model Question Papers

MDS Part I Examination

MDS. Pediatric and Preventive Dentistry

Paper I – Applied Basic Sciences : Applied Anatomy, Physiology, and Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics, Growth & Development and Dental plaque, Genetics.

Time 3 Hrs. Maximum Mark 100

(Answer all questions.)

Essays **(10x 10 = 100 marks)**

1. Discuss the stages of Amelogenesis along with its applied aspects.
2. How and why is the reaction of the pulpal connective tissue to injury different from that of theconnective tissue elsewhere in the body? Discuss in detail the pathophysiology of the pulp?
3. Muscles of Mastication
4. Growth spurts
5. Development of palate
6. Recombinant DNA technology
7. Role of diet and nutrition and its critical importance in pediatric dentistry.
8. Clotting mechanism and its clinical significance
9. Immunoglobulin
10. Measures of central tendencies

MDS Part II Examination

MDS Pediatric and Preventive Dentistry

Paper – I– Clinical Pedodontics

Time 3 hrs Maximum Marks 100

Long Essays (2x 25= 50 marks)

1. Discuss at length regarding inhalation conscious sedation in pedodontics. Add a note on dissociative anesthesia.
2. Discuss in detail the management of digit sucking habit in a nine year old female child.

Short essays (5 x 10 = 50 marks)

3. Regional Odontodysplasia
4. Tunnel cavity preparation
5. Apexification
6. Titanium trauma splints
7. Localized aggressive periodontitis

MDS Part II Examination

MDS Pediatric and Preventive Dentistry

Paper – II – Preventive and Community Dentistry as applied to Pediatric Dentistry

(Answer all questions)

Time 3 hrs Maximum marks 100

Long Essays (2x 25= 50 marks)

1. Discuss the psychological development of a child from birth to adolescence in the light of various theories of personality development.
2. Elaborate on the variables influencing a space management program. Add a note on palatal arch appliance.

Short essays (5 x 10 = 50marks)

3.Conservative adhesive resin restorations.

4.Transmission of S. mutans.

5. Mouth guards.
6. Case control study.
7. Dental home.

MDS Part II Examination

MDS Pediatric and Preventive Dentistry

Paper III –Essay (Descriptive and Analyzing type questions)

(Answer any TWO questions**)**

Time 3 Hrs. **Maximum Marks 100**

1. Critically evaluate the recent endodontic filling materials used in primary teeth. (50 marks)

2.Concept of Dental Home. (50 marks)

3.Critically evaluate traumatic Injuries in young permanent teeth. (50 marks)

Internal assessment component

Not applicable.

Details of practical/clinical exams

Practical/Clinical Examination

i. Duration - Two days

ii. Time - 9am to 4pm.

iii. Marks - 200

Day I

Exercise I - Case Discussion, Pulp Therapy i.e. Pulpectomy on a Primary Molar.

Exercise 2 - Case Discussion, Crown preparation on a Primary Molar for Stainless Steel crown and cementation of the same.

Exercise 3 - Case discussion, band adaptation for fixed type of space maintainer and impression making.

Day II - Evaluation of Fixed Space Maintainer and Cementation.

Distribution of Marks for the Practical

First Day:

1. Case Discussion, Pulp Therapy i.e. Pulpectomy on a Primary Molar. – **70marks**

1. Case Discussion 20 marks
2. Rubber Dam application 10 marks
3. Working length X-ray 20 marks
4. Obturation 20 marks

2. Case Discussion, Crown preparation on a Primary Molar for Stainless steel crown and cementation of the same. – 50 marks

1. Case discussion10 marks
2. Crown Preparation 20 marks
3. Crown selection and Cementation 20 marks

3. Case discussion, band adaptation for fixed type of space maintainer and-impression making. – **60 marks**

1. Case discussion 20 marks
2. Band adaptation 20 marks
3. Impression 20 marks

Second Day:

1. **Evaluation of Fixed Space Maintainer and Cementation:** 20 marks

TOTAL 200 marks

Viva-voce :100 Marks

i. Viva voce 80 marks

All examiners will conduct viva-voce conjointly on candidate's comprehension, analytical approach, expression, interpretation of data and communication skills.

ii. Pedagogy Exercise: 20 marks

A topic will be given at the beginning of the clinical examination and candidate will have to make a presentation for 8-10 minutes.

Practical/Clinical and Viva Voce Examination

Day	Time	Duration	Exercise
Day I	9am – 10am	1 hour	Detailed Case Examination
	10am – 11.30am	1 ½ hours	Pulpal Treatment
	11.30am – 1pm	1 ½ hours	Orthodontic Appliance (Band Adaptation & Impression)
	2pm – 3.30pm	1 ½ hours	Stainless Steel Crown
	3.30pm – 4.00pm	½ hour	Fabrication of Appliance
Day II	9am – 10am	1 hour	Delivery of Appliance
	10am onwards	Dissertation presentation/Pedagogy and Viva voce	

Number of examiners needed (Internal & External) and their qualifications

Part I Examination:

The University shall appoint one internal and one external examiner of the same specialty for evaluating the Part I answer scripts**.** The Part I answer papers shall be evaluated by external and internal examiners of the same specialty appointed by the University adhering to the evaluators guidelines of KUHS

Part II Examination : There shall be at least four examiners in each branch of study. Out of four, two (50%) should be external examiners and two shall be internal examiners. The qualification and teaching experience for appointment as an examiner shall be as laid downby the DCI. The external examiners shall ordinarily be invited from another recognized University from outside the state. An external examiner may ordinarily be appointed for the same institute for not more than two years consecutively. Thereafter he may be reappointed after an interval of one year. The same set of examiners shall ordinarily be responsible for the practical and oral part of the examination.

The Head of the Department shall ordinarily be one of the examiners and the chairperson of the Board of Examinations; second internal examiner shall rotate after every two consecutive examinations if there are more than two postgraduate teachers in the department other than the Head of the department. No person who is not an active Postgraduate teacher in that subject can be appointed as Examiner. However in case of retired personnel, a teacher who satisfies the above

conditions could be appointed as examiner up to one year after retirement.

For the MDS examination, if there are no two qualified internal examiners in an institute the second internal examiner can be from a neighboring DCI and KUHS approved / recognized Dental College having PG course in the specific specialty. This examiner should be an active PG teacher in the same specialty with the qualifications and experience recommended for a teacher for postgraduate degree programme. The examination can also be conducted by one qualified internal examiner and three qualified external examiners if there is no qualified second internal examiner.

Reciprocal arrangement of Examiners should be discouraged, in that, the internal examiner in a subject should not accept external examinership of a college from which the external examiner is appointed in his subject in the same academic year.

Details of viva

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 = 20 marks

4.INTERNSHIP

Not Applicable for PG Course

5 ANNEXURES

Check Lists for Monitoring: Log Book, Seminar Assessment etc. 5.1

Checklist 1

Model Checklist for Evaluation of Preclinical Exercises

Name of Student:

Date:

Name of the Faculty:

Sl. No:	Items for observation during evaluation	Score
1	Quality of Exercise	
2	Ability to answer questions	
3	Punctuality in submission of exercise	
4	TOTAL SCORE	

Performance	Score
Poor	0
Below Average	1
Average	2
Good	3
Very good	4

Signature of Faculty

Checklist 2

Model Checklist for Evaluation of Journal Review / Seminar Presentation

Name of Student: Date:

Name of the Faculty:

Name of Journal / Seminar:

Sl. No:	Items for observation during evaluation	Score
1	Relevance of Topic	
2	Appropriate Cross references	
3	Completeness of Preparation	
4	Ability to respond to questions	
5	Effectiveness of Audio-visual aids used	
6	Time Scheduling	
7	Clarity of Presentation	
8	Overall performance	
	TOTAL SCORE	

Performance	Score
Poor	0
Below Average	1
Average	2
Good	3
Very good	4

Signature of Faculty

Checklist 3

Model Checklist for Evaluation of Clinical Case and Clinical Work

Name of Student: Date:

Name of the Faculty:

Sl. No:	Items for observation during evaluation	Score
1	History	
	Elicitation	
	Completeness	
2	Examination	
	General Examination	
	Extraoral examination	
	Intraoral examination	
3	Provisional Diagnosis	
4	Investigation	
	Complete and Relevant	
	Interpretation	
5	Diagnosis	
	Ability to defend diagnosis	
6	Differential Diagnosis	
	Ability to justify differential diagnosis	
7	Treatment Plan	
	Accuracy	
	Priority order	
8	Management	
9	Overall Observation	
	Chair side manners	
	Rapport with patient	
	Maintenance of Case Record	
	Quality of Clinical Work	
	Presentation of Completed Case	
10	TOTAL SCORE	

Performance	Score
Poor	0
Below Average	1
Average	2
Good	3
Very good	4

Signature of Faculty

Checklist 4

Model Checklist for Evaluation of Library Dissertation Work

Name of Student: Date:

Name of the Faculty/Guide:

Sl. No:	Items for observation during evaluation	Score
1	Interest shown in selecting topic	
2	Relevance of Topic	
3	Preparation of Proforma	
4	Appropriate review	
5	Appropriate Cross references	
6	Periodic consultation with guide	
7	Completeness of Preparation	
8	Ability to respond to questions	
9	Quality of final output	
	TOTAL SCORE	

Performance	Score
Poor	0
Below Average	1
Average	2
Good	3
Very good	4

Signature of Faculty

Checklist 5

Model Checklist for Evaluation of Dissertation Work

Name of Student: Date:

Name of the Faculty/Guide/Co-guide:

Sl. No:	Items for observation during evaluation	Score
1	Interest shown in selecting topic	
2	Relevance of Topic	
3	Preparation of Proforma	
4	Appropriate review	
5	Appropriate Cross references	
6	Periodic consultation with guide/co-guide	
7	Depth of analysis/Discuss	
8	Ability to respond to questions	
9	Department Presentation of findings	
10	Quality of final output	
	TOTAL SCORE	

Performance	Score
Poor	0
Below Average	1
Average	2
Good	3
Very good	4

Signature of Faculty

CHECKLIST- 6

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE/CO-GUIDE

Name of the Trainee: Date

Name of the Faculty

SI. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1	Periodic consultation with guide / co- guide					
2	Regular collection of case material					
3	Depth of Analysis / Discussion					
4	Department presentation of findings					
5	Quality of final output					
6	Others					
	TOTAL SCORE					

Signature of the guide / co-guide

CHECKLIST - 7

OVERALL ASSESSMENT SHEET

Name of the College: Date:

Name of Department:

Check List No	PARTICULARS	Name of trainee		
		First Year	Second Year	Third Year
1	Preclinical Exercises			
2	Journal Review Presentation			
3	Seminars			
4	Library dissertation			
5	Clinical work			
6	Clinical presentation			
7	Teaching skill practice			
8	Dissertation			
	TOTAL			

Signature of HOD **Signature of Principal**

The above overall assessment sheet used along with the logbook should form the basis for certifying satisfactory completion of course of study, in addition to the attendance requirement.

Key:

Mean score: Is the sum of all the scores of checklists 1 to 6

LOG BOOK

DEPARTMENT OF …….....

MDS Programme

LOG BOOK OF

NAME……..

BIODATA OF THE CANDIDATE

EXPERIENCE BEFORE JOINING P.G. COURSE

DETAILS OF POSTING :

- **FIRST YEAR**
- **SECOND YEAR**
- **THIR YEAR**

DETAILS OF LEAVE AVAILED

PRECLINICAL EXERCISES

LIBRARY DISSERTATION

RESEARCH WORK

PARTICIPATION IN CONFERENCES – CDE PROGRAMMESDETAILS OF PARTICIPATION IN ACADEMIC PROGRAMME SEMINARS /SYMPOSIA PRESENTED

JOURNAL CLUBS

TEACHING ASSIGNMENTS – UNDERGRADUATES / PARAMEDICAL. SPECIAL DUTIES (IF ANY)

INTERNAL ASSESSMENT

DAILY ACTIVITIES RECORD (BLANK PAGES)

ONE PAGE FOR EACH MONTH X 36 PAGES

MISCELLANEOUS

SUMMARY

LOG BOOK-1

ACADEMIC ACTIVITIES ATTENDED

Date	Type of activity - Specify Seminar, Journal club, Presentation, UG teaching	Particulars

Name:

Admission Year: College:

Signature of the guide / co-guide

LOG BOOK - 2

ACADEMIC PRESENTATIONS MADE BY THE TRAINEE

Name :

Admission Year:

College:

Date	Topic	Type of activity - Specify Seminar, Journal club, Presentation, UG teaching

Signature of the guide / co-guide

LOG BOOK - 3

DIAGNOSTIC AND OPERATIVE PROCEDURES PERFORMED

Name

Admission Year:

College:

Date	Name	OP No.	Procedure	Category 0, A, PA, PI

Key:

O- WASHED UP AND OBSERVED - INITIAL 6 MONTHS OF ADMISSION

A - ASSISTED A MORE SENIOR SURGEON -1 YEAR MDS

PA - PERFORMED PROCEDURE UNDER THE DIRECT SUPERVISION OF A SENIOR SURGEON - II YEAR MDS

PI - PERFORMED INDEPENDENTLY - III YEAR MDS

Signature of the guide / co-guide

Annexure: 5.9

Faculty

a. In each department there should be a minimum required full time faculty members belonging to the disciplines concerned with requisite postgraduate qualification and experience for being a PG teacher as prescribed by the DCI. The requirements of the faculty should follow the norms framed by the DCI.

b. To strengthen and maintain the standards of postgraduate training, DCI and KUHS recommends the following minimum faculty requirements (Table 1) for starting and continuation of postgraduate training programs. Any increase of admissions will also be based on the same pattern.

Table 1: Minimum Faculty Requirements

Unit 1

1.Minimum faculty requirement of 1st Unit in an undergraduate institute having basic infrastructure of50 admissions

Department / Specialty	Professor (HOD)	Readers/ Associate Professors	Lecturers/Assistant Professor
Prosthodontics and Crown & Bridge	1	3	4
Conservative Dentistry and Endodontics	1	3	4
Periodontology	1	2	2
Orthodontics &Dentofacial Orthopedics	1	2	2
Oral & Maxillofacial Surgery	1	2	2
Oral & Maxillofacial Pathology and Oral Microbiology	1	2	2
Oral Medicine & Radiology	1	2	2

Pediatric Dentistry	1	2	2
Public Health Dentistry	1	2	2

2 .Minimum faculty requirement of 1st Unit in an undergraduate institute having basic infrastructure of 100 admissions

Department / Specialty	Professor (HOD)	Readers/ Associate Professors	Lecturers/Assistant Professor
Prosthodontics and Crown & Bridge	1	3	6
Conservative Dentistry and Endodontics	1	3	6
Periodontology	1	3	3
Orthodontics &Dentofacial Orthopedics	1	2	3
Oral & Maxillofacial Surgery	1	3	3
Oral & Maxillofacial Pathology and Oral Microbiology	1	2	3
Oral Medicine & Radiology	1	2	3
Pediatric Dentistry	1	2	3
Public Health Dentistry	1	2	3

3. Unit 2 :-

Each department shall have the following additional teaching faculty, over and above the requirement of Unit 1.

Professor	1
Reader /Associate Professor	1
Lecturer / Assistant Professor	2

a. In addition to the faculty staff mentioned above there should be adequate strength of Senior Lecturers/ Lecturers available in the department. The department should also have adequate number of technical and other paramedical staff as prescribed by the Dental Council of India.
b. A department which does not have a Professor and an Assistant Professor with requisite qualifications and experience as laid down by the DCI, shall not start a postgraduate course in that specialty.
c. Faculty who is accepted as Postgraduate teacher in a dental institute starting MDS course will not be accepted for the next one year in any other dental institute.

Clinical / Laboratory Facilities and Equipments

There should be adequate clinical material, space and sufficient number of dental chairs and units, adequate laboratory facilities and should regularly be updated keeping in view the advancement of knowledge and technology and research requirements. The department should have the minimum number of all equipments including the latest ones necessary for the training and as recommended by the DCI/KUHS for each specialty from time to time.