

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



**Master of Dental Surgery (MDS)**  
**Oral and Maxillofacial Surgery**  
**Course Code: 243**  
**(2018-2019 Academic year onwards**  
**Modified as per DCI MDS Regulations 2017)**

## 2. COURSE CONTENT

### 2.1 Title of course:

MDS Oral and Maxillofacial Surgery

### 2.2 . Objectives of course

#### 1. Goals

The goals of postgraduate training in various specialities 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 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.

#### 2.1. 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 carryout research both basic and clinical with the aim of publishing or presenting the work at various scientific gatherings.

#### 2.2. 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.

### **2.3. 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 in management 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 a second 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 diagnosis and surgical and adjunctive treatment of diseases, injuries and defects of the human facial skeleton and associated oral and facial structures.

### **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 surgery 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 Subjects**

The syllabus for the theory of Oral and Maxillofacial Surgery should cover the entire field of the subject and the following topics may be used as guidelines.

The program outlines addresses both the knowledge needed in Oral and Maxillofacial Surgery and allied medical specialties in its scope. A minimum of three years of formal training through a graded system of education as specified will equip the trainee with skill and knowledge at its completion to be able to practice basic oral and Maxillofacial surgeon competently and have the ability to intelligently pursue further apprenticeship towards advance Maxillofacial surgery.

The topics are considered as under:-

- i. Basic sciences
- ii. Oral and Maxillofacial surgery
- iii. Allied specialties

The MDS course in Oral and Maxillofacial Surgery shall have two theory examinations,

(i) **Part I Examination** – consisting of one paper on Basic Sciences, of three hours duration conducted at the end of the first academic year

(ii) **Part II Examination** –consisting of three papers, Paper I, Paper II, Paper III, each of three hours duration, conducted at the end of the third academic year

### **Part-I Examination:**

**Paper-I : APPLIED BASIC SCIENCES:** Applied Anatomy, Physiology, & Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics.

### **Part-II Examinations:**

**Paper-I** : Minor Oral Surgery and Trauma

**Paper-II** : Maxillo-facial Surgery

**Paper-III** : Essay -Descriptive and analysing type question

## **Syllabus for MDS Part I Examination**

### **PAPER – I : APPLIED BASIC SCIENCES: Applied Anatomy, Physiology, & Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics.**

#### **Applied Basic Sciences:**

A thorough knowledge both on theory and principles in general and in particular the basic medical subjects as relevant to the practice of maxillofacial surgery. It is desirable to have adequate knowledge in bio-statistics, Epidemiology, research methodology, nutrition and computers.

#### **1. Anatomy**

Development of face, paranasal sinuses and associated structures and their anomalies: surgical anatomy of scalp temple and face, anatomy and its applied aspects of triangles of neck, deep structures of neck, cranial facial bones and its surrounding soft tissues, cranial nerves tongue, temporal and infratemporal region, orbits and its contents, muscles of face and neck, paranasal sinuses, eyelids and nasal septum teeth gums and palate, salivary glands, pharynx, thyroid and parathyroid glands, larynx, trachea and esophagus, congenital abnormality of orofacial regions, General consideration of the structure and function of the brain and applied anatomy of intra cranial venous sinuses, cavernous sinus and superior sagittal sinus, Brief consideration of autonomous nervous system of head and neck, Functional anatomy of Mastication, Deglutition, speech, respiration and circulation. Histology of skin, oral mucosa, connective tissue, bone, cartilage, cellular elements of blood vessels, lymphatics, nerves, muscles, tongue tooth and its surrounding structures

#### **2. Physiology**

Nervous system-physiology of nerve conduction, pain pathway, sympathetic and parasympathetic nervous system, hypothalamus and mechanism of controlling body temperature; Blood-its composition hemostasis, blood dyscrasias and its management, hemorrhage and its control, blood grouping, cross matching, blood component therapy, complications of blood transfusion, blood substitutes, auto transfusion, cell savers; digestive system composition and functions of saliva mastication deglutition, digestion, assimilation, urine formation, normal and abnormal constituents; Respiration control of ventilation anoxia, asphyxia, artificial respiration, hypoxia - types and management; CVS - cardiac cycle, shock, heart sounds, blood pressure, hypertension; Endocrinology- metabolism of calcium; endocrinal activity and disorder relating to thyroid gland, parathyroid gland, adrenal gland, pituitary gland, pancreas and gonads; Nutrition-general principles balanced diet.

Effect of dietary deficiency, protein energy malnutrition, Kwashiorkor, Marasmus, Nutritional assessment, metabolic responses to stress, need for nutritional support, enteral nutrition, routes of access to GI tract, Parenteral nutrition, Access to central veins, Nutritional support; Fluid and Electrolytic balance/Acid Base metabolism- the body fluid compartment, metabolism of water and electrolytes, factors maintaining hemostasis, causes and treatment of acidosis and alkalosis.

### **3. Biochemistry**

General principles governing the various biological principles of the body, such as osmotic pressure, electrolytes, dissociation, oxidation, reduction etc; general composition of body, intermediary metabolism, carbohydrate, proteins, lipids, enzymes, vitamins, minerals and antimetabolites.

### **4. General Pathology**

Inflammation - Acute and chronic inflammation, repair and regeneration, necrosis and gangrene, role of component system in acute inflammation, role of arachidonic acid and its metabolites in acute inflammation, growth factors in acute inflammation role of NSAIDs in inflammation, cellular changes in radiation injury and its manifestation; wound management - Wound healing factors influencing healing; properties of suture materials, appropriate uses of sutures; hemostasis - role of endothelium in thrombogenesis; arterial and venous thrombi, disseminated intravascular coagulation; Hypersensitivity; Shock and pulmonary failure: types of shock, diagnosis, resuscitation, pharmacological support, ARDS and its causes and prevention, ventilation and support, Neoplasms – classification of tumors, Carcinogens and Carcinogenesis, grading and staging of tumors, various laboratory investigation.

### **5. General microbiology**

Immunity, Hepatitis B and its prophylaxis, Knowledge of organisms, commonly associated with diseases of oral cavity, culture and sensitivity tests, various staining techniques-Smears and cultures, urine analysis and culture.

### **6. Oral pathology and microbiology:**

Developmental disturbances of oral and para oral structures, regressive changes of teeth, bacterial, viral, mycotic infection of oral cavity, dental caries, diseases of pulp and Periapical tissues, physical and chemical injuries of oral cavity, wide range of pathological lesions of hard and soft tissues of the orofacial regions like the cysts odontogenic infection, benign, malignant neoplasms, salivary gland diseases, maxillary sinus diseases, mucosal diseases, oral aspects of various systemic diseases, role of laboratory investigation in oral surgery.

### **7. Pharmacology and therapeutics:**

Definition of terminology used, pharmacokinetics and pharmacodynamics, dosage and mode of administration of drugs, action and fate in the body, drug addiction, tolerance and hypersensitive reactions, drugs acting on CNS, general and local anesthetics, antibiotics and analgesics, antiseptics, antitubercular, sialagogues, hematinics, anti diabetic, Vitamins A, B-complex, C.D.E and K

### **8. Research Methodology and Biostatistics**

Essential features of a protocol for research in humans, Experimental and non-experimental study designs, Ethical considerations of research

### **9. Biostatistics :**

Basic concepts, Sampling, Health information systems - collection, compilation, presentation of data. Elementary statistical methods - presentation of statistical data, Statistical averages - measures of central tendency, measures of dispersion, Normal distribution. Tests of significance - parametric and non - parametric tests (Fisher exact test, Sign test, Median test, Mann Whitney test, Kruskal Wallis one way analysis, Friedman two way analysis, Regression analysis), Correlation and regression, Use of computers.

## **Syllabus for MDS Part II Examination**

### **PAPER I – Minor Oral Surgery and Trauma**

Oral and Maxillofacial Surgery – Definition and scope.

1. General principles and surgical technique with special reference to plastic surgery.

Sterilization and Disinfection.

Scrub technique

Incision

Wound healing

Suture materials and techniques

Dressings

2. Diagnosis in Oral and Maxillofacial Surgery.

History taking

Clinical examinations

Radiographic examination

Clinical laboratory diagnosis

Biochemical profiles

Special investigations

Diagnostic aids – Biopsy, maxillofacial radiology

Sialography, ultrasound, CT scan and MRI

Recent advances in diagnostic aids with reference to oral and maxillofacial surgery including digital radiography, scintigraphy and PET scan

3. Local anesthesia

Properties of local anesthetic drug

Indications, contraindications

Components of local anesthetic solution

Mode of action of the anesthesia

Complications and their management.

4. General anesthesia

Properties of common drugs

Preanaesthetic preparation of the patient and premedication.

Short anaesthesia in Dental chair.

Endotracheal anaesthesia

Intravenous anaesthesia.

Complications and their management.

Hypotensive anesthesia

5. Medical emergencies in oral and maxillofacial surgery.

6. Importance of general conditions of the patient in relation to oral and maxillofacial surgery.

7. Fluid and electrolyte balance

8. Hematology – Blood, Bleeding disorders, coagulation

9. Hemorrhage and shock
10. Medically compromised patients –Management.
11. Recent antibiotics, analgesic and Anti-inflammatory drugs
12. Care of the hospitalized oral and maxillofacial surgery patient.
13. Biomaterials used in Oral and Maxillofacial Surgery.
14. Exodontia and impactions.
15. Acute and chronic infections of the Oral and Maxillofacial region.  
Odontogenic and non-odontogenic infections  
Soft tissue infections  
Facial space infections  
Hard tissue infections  
Osteomyelitis – classification, diagnosis and management  
specific infections of the oral and maxillofacial region  
management of infections  
Osteoradionecrosis and Osteonecrosis.  
Recent concepts in management.
- 16 Cysts of the Head and Neck region – Odontogenic and non-odontogenic,
  - a) Etiology
  - b) Pathology
  - c) Clinical examination
  - d) Diagnosis
  - e) Investigations
  - f) Management
  - g) Recent advances
- 17 Pre-malignant lesions of the oral cavity
  - a. Leukoplakia
  - b. Erythroplakia
  - c. Submucous fibrosis etc,
- 18 Disease of the maxillary sinus
  - a. Conditions involving the maxillary sinus
  - b. Relationship to dental diseases
  - c. Oro-antral fistula and foreign bodies in the maxillary sinus
  - d. Cysts of the maxillary sinus
  - e. Management of diseases of the maxillary sinus
- 19 Neurological disorders of the maxillofacial regions
  - a. Orofacial pain – concepts, pain pathways.
  - b. Neuralgias
  - c. Nerve palsiesd.
  - d. Nerve injuries
  - e. Management

21 AIDS and Hepatitis in relation to oral and maxillofacial surgery

25 Systemic disease in relation to oral and maxillofacial surgery.

Endocrine disorders

Blood Dyscrasias

22 Auto immune diseases

23. Maxillofacial trauma

General examination

Primary care and management of the patient

Treatment planning

Diagnostic aids – recent advances

23. Fractures of the Mandible

Classification

Diagnosis and treatment planning

Different method of treatment

Recent advances in the management.

24. Fractures of the middle third of the facial skeleton

Classification, signs & symptoms

Diagnosis and treatment planning

Different method of treatment

Recent advances in the management.

25. Fractures of the upper third of the facial skeleton

Classification, signs & symptoms

Diagnosis and treatment planning

Different method of treatment

Recent advances in the management.

26. Surgical procedures in relation to endodontic therapy – Apicoectomy

27. Implantology

Endosseous, mucosal, subperiosteal, transosseous implants Osseointegration, tissue integration and tissue regeneration. Intraoral, extraoral and extra cranial implants. Recent advances in implantology

28. Pre-prosthetic surgery

Principles and minor procedures

Grafting technique

Augmentation of alveolar ridge

Vestibuloplasty

29. Surgical Pathology

- a. Wound healing – as related to soft tissues, bone fracture, Dental sockets, grafts etc.



- b. Infections – Gross infections, specific infection of the jaws and mouth. Fungal infections of interest to oral surgeons.
- c. Actinomycosis, Granulomatous lesions of the oral cavity.
- d. Specific, non specific granulomas, pyogenic, lethal midline granulomas etc., Osteomyelitis developing from dentoalveolar abscess, Odontolysis, teeth fracture.
- e. Immune responses of the body, and its role in disease process, collagen diseases are related to the oral cavity. Recent concepts of immune reactions in transplants and oncology.
- f. Developmental abnormalities, atrophy, hypertrophy, dysplasia hypoplasia and hyperplasias, hamartomas – Osseous, Odontogenic etc. Congenital and hereditary anomalies of jaws, atrophy of jaws, diseases of T.M.Joint.
- g. Cyst and cyst like conditions – their pathogenesis, pathology and sequelae. Odontogenic cyst, follicular cyst, radicular cyst, dermoid cysts, median cysts, nasopalatine cysts, globule maxillary cysts, simple retention cysts, retention cysts of jaw
- h. Pre – malignant conditions of the oral cavity, leukoplakia, erythroplakia of Quayrat, Bowens disease, Lichen planus etc. Grading of tumours – significance and prognosis in relation to therapy.
- i. Neoplasms - Benign & malignant, modern concepts of oncogenesis, Diagnostic criteria and methods for benign neoplasm. General character, classification of pathology of benign tumours of jaws, salivary glands and other tissues of oral cavity.
- j. Tumours of oral cavity including bony tumours, classifications, morphology and etiology of benign and malignant tumours.
- K. Disease of the salivary glands and ducts.
- I. Pathology of the Maxillary Sinus
- M. Neurological disorders of the maxillofacial region

## **PAPER II – Maxillo-facial Surgery**

- 1. Tumours of the mouth and jaws
  - a. Benign odontogenic and nonodontogenic tumours.
    - i. Etiology
    - ii. Pathology
    - iii. Diagnosis and Management
    - iv. Ameloblastoma
    - v. Etiology and Pathology
    - vi. Diagnosis and investigations
    - vii. Management
      - (1). En block resections
      - (2). Peripheral osteotomy

(3). Hemimandibulectomy

(4). Maxillectomy

2. Malignant tumours of the oral cavity

a. Carcinomas and sarcomas

b. Etiology

c. Pathology

d. Diagnosis and investigations

e. Staging of tumours

f. Different modalities of treatment with special reference to surgical treatment.

i. Neck dissection

ii. Block dissection.

g. Recent advances in management.

3. Diseases of the Salivary Glands

a. Surgical anatomy

b. Disease of the duct and gland proper

c. Sialadenitis

d. Sialolithiasis –sialolithotomy

e. Treatment planning & management

f. Benign and malignant tumours of salivary gland pathology

g. Investigation with special references to sialography

h. Management.

4. Disease of the Temporomandibular joint

a. Surgical anatomy

b. Clinical examination, diagnostic aids

c. Inflammatory conditions affecting TMJ

d. Developmental disorders / anomalies affecting TMJ.

e. Hypermobility and Hypomobility of TMJ

f. Tumors affecting TMJ

g. Internal derangement affecting TMJ

h. Management of disease of the Temporomandibular joint

i. Surgery of the temporomandibular joint.

5. Orthognathic surgery

Recognition and etiology of facial deformity

Assessment of the patient

Clinical examination

Diagnostic aids- Cephalometrics

Treatment planning

Surgical procedures

Mandible

Midfacial skeleton

6. Plastic and Reconstructive Surgery – Congenital & Acquired Defects

Surgical correction of Cleft lip & palate

Correction of post – traumatic deformities

Major flaps used in reconstruction – skin & mucosal

Repair of bone defects

Microvascular Surgery in orofacial reconstruction

7. Facial Aesthetic Surgical procedures

Rhinoplasty

Liposuction

Face lifting procedures

Laser cosmetic procedures

Neuromodulators

Dermal Fillers

8. Distraction osteogenesis:

Concepts and techniques, Histiogenesis

9. Tissue engineering and stem cell therapy

10. Endoscopy in maxillofacial surgery

11. Computer assisted surgical planning, virtual osteotomies, 3D planning, virtual splints, 3D printing, Stereolithography.

12. Navigation surgery in maxillofacial region.

13. Basics of molecular biology of common oral lesions and its application in oral and maxillofacial surgery.

14. Craniofacial surgery

Basic knowledge of developmental anomalies of the face, head and neck

Basic concepts in the diagnosis and planning of various head and neck anomalies including facial clefts, craniosynostosis, syndromes, etc.

Current concept in the management of Craniofacial anomalies

15. Laser Surgery

The application of laser technology in surgical treatment of lesions

16. Cryosurgery

Principles, applications of cryosurgery in surgical management

**PAPER III – Essay - Descriptive and analysing type question**

A 3 hour essay pertaining to Oral & Maxillofacial surgery, mentioned above with emphasis on recent Advances

**Essential Skills to be learned by the student during the course of the study**

Students shall be on full-time resident job in the department of OMFS and will manage/ help in manage cases of dento- alveolar surgery, trauma, tumors, cysts, facial deformities, oncology, infections and clefts. They are under guidance should also carry out all oral & maxillofacial surgery programme throughout the three academic years, particularly in tutorials, seminars lectures and clinical discussions. Treatment planning and its execution is to be learned under the supervision of a postgraduate Guide.

**Requirements for the students are as follows. Key for the chart below**

O -Observer

A- Assisting a senior

PA- Performs procedure under the direct supervision of a senior specialist

PI- Performs independently

Procedure	Category	Year	Number
Injection I.M. and I.V	PI	I, II	50, 20
Minor suturing and removal of sutures	PI	I	N,A
Incision & drainage of an abscess	PI	I	10
Surgical extraction	PI	I	15
Impacted teeth	PA, PI	I, II	20, 10
Pre prosthetic surgery-	PI		
a)corrective procedures	PI	I	5
b)ridge extension PA, I,II,3			
c) ridge reconstruction	A	II, III	3
OAF closure	PI, PA	II, II	3, 3
Maxillary fractures	PA, A	II, III	3, 5
Orbito- zygomztic fractures	PA, A	II, III	3, 5
Cyst enucleation	PI, PA	I, II	5, 5
Mandibular fractures	PI, PA	I, II	10, 10
Periapical surgery	PI, PA	I	5
Infection management	PI, PA	I, II, III	N, A
Biopsy procedures	PI	I, II, III	N, A
Removal of salivary calculi	PA	II, III	3, 5
Benign tumors	PI, PA	II, III	3, 3
Mid face fractures	PA, A	II, III	3, 5
Implants	PI, PA	II, III	5, 5
Tracheostomy	PA, A	II, III	2, 2
<b>Orthognathic surgery</b>	PA, A	II, III	3
Harvesting bone & cartilage grafts			
a) Iliac crest	PA, O		2, 3
b) Rib	A, O	II, III	2, 3
c) Calvarial	A, O		2, 3
d) Fibula	A, O		2, 3
T.M. Joint surgery	PA, A	II	1, 1
Jaw resections	PA, A	III, II	3, 3
Onco surgery	A, O	III, III	3, 3
Micro vascular anastomosis	A, O	III	3, 5
Cleft lip & palate	PA, A	II, III	5, 10
Distraction osteogenesis	A, O	II, III	2, 3
Rhinoplasty	A, O	III	3, 5
Access osteotomies and base of skull Surgeries	A,0	III	1, 1

The log book and record books are maintained about all work. Detailed history, investigations, treatment planning, preparation and assisting of all types of maxillofacial surgeries – major and cases – is to be recorded and to be presented in the examination.

2.7 Total number of hours

As per the instruction given by the DCI.

## 2.8 Branches if any with definition

Oral and Maxillofacial Surgery

## 2.9 Teaching learning methods

### Method of Training

The training of a postgraduate student shall be full time with 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 speciality 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 at 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 histo- pathological 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 speciality 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.

### **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.

### **2.10 Content of each subject in each year**

Present in clause 2.6

### **2.11 No: of hours per subject**

Present in clause 2.6

## 2.12 Practical training

Present in clause 2.6

## 2.13 Records

Present in clause 2.21

## 2.14 Dissertation: As per Dissertation 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 KUHS website). 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 colour 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 colour. 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 KUHS website) 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 despatched. 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 appear only 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 university 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 University as 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.

## **2.15 Speciality training if any**

Present in clause 2.6



## 2.16 Project work to be done if any

Present in clause 2.6

## 2.17 Any other requirements [CME, Paper Publishing etc.]

Present in clause 2.6

## 2.18 Prescribed/recommended textbooks for each subject.

### Applied 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	Wheeler's Dental Anatomy, Physiology and Occlusion
	Sicher, Harry, Du Brull, Llyod	Oral Anatomy
Oral Histology	Bhaskar B.N. Ed	Orban's Oral Histology and Embryology
	Avery, James K	Essentials of Oral Histology and Embryology
Embryology	Sadler	Langman's Medical Embryology
	Inderbeer Singh	Human Embryology
Physiology	Guyton Arthur and John L Hall	Text Book of Medical Physiology
	Ganong, William F	Review of Medical Physiology
Pharmacology	Hardman, Joel G	Goodman and Gilman's pharmacological basis of Therapeutics
	KD Tripathi	Essentials of Medical Pharmacology
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 and Others	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 J.	Introduction to Biostatistics and

## **Oral and Maxillofacial Surgery**

- Maxillofacial injuries L- Rowe & Williams
- Oral & Maxillofacial Trauma Raymond J Fonseca
- Surgery of the Mouth & Jaws JR. Moore
- Oral & Maxillofacial Surgery Vol I & II Daniel M. Laskin
- Oral & Maxillofacial infections Richard G. Topazion
- Dentofacial Deformities (Vol, II & III) Brunce N., Epker, L C. Fish
- Text book of Oral & Maxillofacial Surgery Neelima A. Malik
- Oral & Maxillofacial Surgery Raymond J Fonseca
- Oral Cancers McGregor
- Local Anesthesia Malamed
- Medical Emergencies Malamed
- Plastic Surgery Joseph J. McCarthy
- Surgical Orthodontics Hell, Profitt, Moore
- TMJ Disorders David A. Keith
- A Practical Guide to Hospital Dentistry George Varghese
- A Practical Guide to the Management of Impacted Teeth George Varghese
- Peterson's Principles of Oral & Maxillofacial Surgery Vol I & II Edited by G.E. Ghali
- Oral and Maxillofacial Surgery Vol I and II Peter Ward Booth
- Craniofacial Distraction Osteogenesis Samchukov
- Approaches to the Facial Skeleton Edward Ellis
- Oral Cancer Jatin Shah
- Medical Problems in Dentistry Scully and Cowson
- Anaesthesia R.D. Miller
- Wylie and Churchill Davidson's A Practice of Anaesthesia Healy, Knight, Lina
- Pain Bonca
- Local flaps in Facial Reconstruction Shah L. Baker
- Plastic Surgery (8vol) Joseph McCarthy
- ENT (7vol) Scott and Brown
- Head and Neck Surgery Stell and Maran
- Salivary Gland Disorders Carlson and Ord
- Contemporary Implant Dentistry Carl E. Misch
- Oral and Maxillofacial Surgery Secrets Abubaker
- Sedation- A Guide to Patient management Malamed
- Infection Control & Management of Hazardous Material Miller & CPalnik
- Clinical Review of Oral & Maxillofacial Surgery Bagheni
- Principles of Dental Suturing: A Complete Guide to Surgical Closure -

Silverstein

- Craniomaxillofacial Reconstruction & Corrective Bone Surgery- Greenberg and Prin
- Bell's Orofacial Pain Oksan, Bell
- Osseointegration in Dentistry: An Overview Worthington, Lang
- Surgical Correction of Dentofacial Deformities- New Concepts William Bell
- Grab and Smith's Plastic Surgery William C. Grab
- Endoscopic Facial Plastic Surgery Gregory S. Keller
- Facial Paralysis: Rehabilitation

## **2.19 Reference books**

As suggested by HOD

## **2.20 Journals**

- 1 Journal of Oral & Maxillofacial Surgery
- 2 Journal of Craniofacial Surgery
- 3 British Journal of Oral & Maxillofacial Surgery
- 4 American Journal of Oral & Maxillofacial Surgery
- 5 Journal of Dental Research
- 6 Journal of American Dental Association.
- 7 Journal of Indian Dental Association.
- 8 Journal foams
- 9 Oral and Maxillofacial Surgery Clinics of North America
- 10 Journal of Dentistry
- 11 International Dental Journal
- 12 Dental Clinics of North America
- 13 Triple 'O' (Jr. of Oral Path., Oral medicine, Oral Surgery and Endodontics)
- 14 Quintessence International.

## **2.21 Logbooks**

### **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 treatments 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**

### **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 library dissertation as per the regulations of KUHS is mandatory for a candidate to appear for the university 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 candidate should have completed the training period before the commencement of examination.

##### **Dissertation**

Approval of the dissertation is mandatory requirement for the candidate to appear for the Part II university examinations.

#### **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 final (Part-II) 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 diary and 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 the 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 Part I examination shall be held at the end of the first academic year and the MDS Part II examination shall be held at the end of the third academic year. The university shall conduct two examinations in a year at an interval of four to six months between two examinations. **Not more than two examinations shall be conducted in an academic year.**

### **3.3 Scheme of examination showing maximum marks and minimum marks**

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

(i) **Theory:** 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 speciality. 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 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.

A candidate who wishes to study in a second speciality, shall have to undergo the full course of three years duration in that specialty.

**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)

**Practical and Clinical Examination: 200 Marks**

**Viva-voce and Pedagogy : 100 Marks**

**Written Examination (Theory) : 400 Marks**

There shall be two theory examinations for the MDS course

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.

#### Part II ( Final) 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 questions in the first 2 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 so that the answer books can be assessed and evaluated before the start of the practical/clinical examination. 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** : Conducted at the end of the first academic year

Paper I : Applied Basic Sciences : Applied Anatomy, Physiology, & Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics.

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

Paper I : Minor Oral Surgery and Trauma

Paper II : Maxillo-facial Surgery

Paper III : Essay - Descriptive and analysing type question

### **3.5 Details of Theory Examination**

The MDS course shall have **two theory examinations**,

(i) **Part I Examinaton** – consisting of one paper on Basic Sciences, of three hours duration, conducted at the end of the first academic year

(ii) **Part II Examination** –consisting of three papers, Paper I, Paper II, Paper III, each of three hours duration, conducted at the end of the third academic year.

Paper I : Applied Basic Sciences : Applied Anatomy, Physiology, & Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics.

Paper I : Minor Oral Surgery and Trauma

Paper II : Maxillo-facial Surgery

Paper III : Essay - Descriptive and analysing type question

### 3.6 Model Question Papers

#### **MDS Part I Examination MDS Oral and Maxillofacial Surgery**

**Paper I : Applied Basic Sciences : Applied Anatomy, Physiology, & Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics.**

Time 3 Hours

Max. Marks 100

- Note: 1) Your answer should be specific to the questions  
2) Draw neat labeled diagrams whenever necessary  
3) Answer all questions

#### **Essays**

**[10X10 = 100MARKS]**

1. Discuss the lymphatic drainage of head and neck and its role in the spread of oral malignancies.
2. Discuss fluid and electrolyte balance in major maxillofacial surgeries
3. Healing of Fracture and factors controlling healing
4. Discuss the factors regulating blood pressure. Add a note on the physiologic responses to moderate hemorrhage
5. Keratocystic Odontogenic Tumor
6. Chemical mediators of inflammation
7. Saliva as a diagnostic aid
8. Principles of antibiotic therapy
9. Malpractice and negligence
10. Hepatitis B and its prophylaxis

#### **MDS Part II Examination MDS Oral and Maxillofacial Surgery Paper- I– Minor Oral Surgery and Trauma**

Time:3 Hours

Max. Marks :100

- Note: 1)Your answer should be specific to the questions  
2) Draw neat labelled diagrams wherever necessary  
3) Answer all questions

#### **Long essays**

**[2X25 = 50marks]**

1. Classify odontogenic tumors. Discuss the options for the surgical management of ameloblastoma of maxilla.
2. Classify condylar fractures of mandible. Discuss the management of displaced condylar fractures.

#### **Short essays [5X10= 50marks]**

3. Caldwell - Luc operation
4. Retrobulbar hemorrhage
5. Oroantral fistula
6. Diplopia
7. Frey's syndrome

**MDS Part II Examination**  
**MDS Oral and Maxillofacial Surgery**  
**Paper- II - MAXILLOFACIAL SURGERY**

Time 3 Hours

Max. Marks:100

- Note: 1) Your answer should be specific to the questions  
2) Draw neat labelled diagrams wherever necessary  
3) Answer all questions

**Long essays**

**[2X 25 = 50marks]**

1. How will you manage a case of bilateral TMJ ankylosis in an 8 year old boy? Discuss in detail the associated complications.
2. Discuss the pre-surgical evaluation and management of mandibular prognathism

**Short essays**

**[5x 10=50marks]**

3. Alveolar bone grafting
4. Cryosurgery
5. Arteriovenous malformation
6. Hemifacial macrosomia
7. Maxillectomy

**MDS Part II Examination**  
**MDS Oral and Maxillofacial Surgery**  
**Paper- III – Essay-Recent advances in Maxillofacial Surgery**

Time 3 Hours

Max. Marks : 100

- Note: 1) Your answer should be specific to the questions  
2) Draw neat labelled diagrams wherever necessary  
3) Answer any TWO questions

1. Craniofacial anomalies (50 marks)
2. Distraction osteogenesis (50 marks)
3. Preprosthetic surgeries (50 marks)

**3.7 Internal assessment component**

Not applicable.

**3.8 Details of practical exams**

**Practical / Clinical examination (Total - 200marks)**

Duration –Two days

Time –9 am to 4 pm

Day I –

1. Minor Oral Surgery – impacted mandibular 3<sup>rd</sup> molar removal or any other surgical procedure under LA. 100marks
2. Two Short cases discussion (2 x20marks) 40marks
3. One long Case discussion 60 marks

Day II-

1. Pedagogy presentation and discussion 20 marks
2. Radiographs, instruments – identification and discussion



### **Viva Voce – (100 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. (20 x 4 =80 marks)

### **3.9 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 speciality 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 down by 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 neighbouring DCI and KUHS approved / recognized Dental College having PG course in the specific speciality. This examiner should be an active PG teacher in the same speciality 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.

### **3.10 Details of Viva Voce Total marks : 100**

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 and thesis presentation : 10 +10 = 20marks

## **4. INTERNSHIP**

**Not applicable for PG Courses**

## 5.ANNEXURES

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

#### Checklist 1

##### Model Checklist for Evaluation of Preclinical Exercises

Name of Student:

Date:

Name of the Faculty-in-charge:

Name of Exercise

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

### 5.2 :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

### 5.3 :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

#### 5.4 :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

## 5.5 :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

## 5.6 : CHECKLIST- 6

### CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE/CO-GUIDE

Name of the Trainee:

Date

Name of the Faculty

Sl.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

## 5.7 : 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

5.8 : 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
- THIRD YEAR

**DETAILS OF LEAVE AVAILED**

**PRECLINICAL EXERCISES**

**LIBRARY DISSERTATION**

**RESEARCH WORK**

**PARTICIPATION IN CONFERENCES – CDE PROGRAMMES**

**DETAILS OF PARTICIPATION IN ACADEMIC PROGRAMME**

**SEMINARS /SYMPOSIA PRESENTED**

**JOURNAL CLUBS**






Signature of the guide / co-guide

5.8.2 :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

5.8.3 :LOG BOOK - 3

**DIAGNOSTIC AND OPERATIVE PROCEDURES PERFORMED**

Name

Admission Year:

College:

Date	Name	OP No.	Procedure	Category O, 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 programmes. Any increase of admissions will also be based on the same pattern.

**Table 1: Minimum Faculty Requirements**

**Unit 1**

1. Minimum faculty requirement of 1<sup>st</sup> Unit in an undergraduate institute having basic infrastructure of 50 admissions

Department / Speciality	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 1<sup>st</sup> Unit in an undergraduate institute having basic infrastructure of 100 admissions

Department / Speciality	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.