



YENEPOYA UNIVERSITY

Deralakatte, Mangaluru -575018

**REGULATIONS AND CURRICULUM GOVERNING
POSTGRADUATE PROGRAM (MDS) IN
ORAL AND MAXILLOFACIAL SURGERY**

(REVISED CURRICULUM – AMENDED UP TO 2017)

ATTESTED

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NOTIFICATION

Sub: Implementation of DCI Regulations 2017 – MDS reg.:-

Ref: (i) Proceedings of the 30th Academic Council meeting held on 20.10.2017
(ii) Gazette Notification Govt. of India dated 5th September 2017 on DCI Regulations 2017

With reference and Subject cited above, Yenepoya University based on the Academic Council proceedings is pleased to implement the DCI regulation 2017 for all the 9 MDS Programs offered with effect from 2018-19 academic year onwards.

B.T. N. [Signature]
REGISTRAR
Registrar
Yenepoya University

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GOALS

The goals of the post- graduate training in Oral & Maxillofacial Surgery is to train the graduate in Dental Surgery who will,

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

OBJECTIVES

The training program in Oral and Maxillofacial Surgery is structured to achieve the following five objectives-

- Knowledge
- Skills
- Attitude
- Communicative skills and ability
- Research

Knowledge:

- To have acquired adequate knowledge and understanding of the etiology, pathophysiology and diagnosis, treatment planning of various common oral and Maxillofacial surgical problems both minor and major in nature
- To have understood the general surgical principles like pre and post surgical management, particularly evaluation, post surgical care, fluid and electrolyte management, blood transfusion and post surgical pain management.
- Understanding of basic sciences relevant to practice of oral and maxillofacial surgery
- Able to identify social, cultural, economic, genetic and environmental factors and their relevance to disease process management in the oral and maxillofacial region.
- Essential knowledge of personal hygiene and infection control, prevention of cross infection and safe disposal of hospital waste keeping in view the high prevalence of hepatitis and HIV.

Skills:

- To obtain proper clinical history, methodical examination of the patient, perform essential diagnostic procedures and order relevant laboratory tests and interpret them and to arrive at a reasonable diagnosis about the surgical condition.
- To perform with competence minor oral surgical procedures and common maxillofacial surgery. To treat both surgically and medically the problems of the oral and Maxillofacial and the related area.
- Capable of providing care for maxillofacial surgery patients.

Attitude:

- Develop attitude to adopt ethical principles in all aspect of surgical practice, professional honesty and integrity are to be fostered. Surgical care is to be delivered irrespective of the social status, caste, creed or religion of the patient
- Willing to share the knowledge and clinical experience with professional colleagues.

- Willing to adopt new techniques of surgical management developed from time to time based on scientific research which is in the best interest of the patient.
- Respect patient right and privileges, including patients right to information and right to seek a second opinion.
- Develop attitude to seek opinion from an allied medical and dental specialists as and when required.

Communication Skills:

- Develop adequate communication skills particularly with the patients giving them the various options available to manage a particular surgical problem and obtain a true informed consent from them for the most appropriate treatment available at that point of time.
- Develop the ability to communicate with professional colleagues.
- Develop ability to teach undergraduates.

COURSE CONTENTS

The specialty of Oral & Maxillofacial Surgery deals with the diagnosis and management of the diseases of stomatognathic system, jaw bones, cranio-maxillofacial region, salivary glands and temporomandibular joints etc. Within this framework it also supports many vital organs like eye, oropharynx, nasopharynx and major blood vessels and nerves. The traumatic injuries of maxillofacial skeleton are independently managed by Oral & Maxillofacial Surgeons. Whenever there are orbital injuries the ophthalmologists are trained only to tackle injuries of the eye ball (globe) but if there are associated injuries of the orbital skeleton, the Maxillofacial Surgeon is involved in its re-construction. Similarly, nasal bone fracture may be managed by ENT surgeons. Most of the time nasal bone fractures are associated with fractures of the maxilla, mandible and zygomatic bones which are being managed by Oral & Maxillofacial Surgeons. The maxillofacial facial injuries at times are associated with head injuries also. The Oral & maxillofacial Surgeon is involved in the management of cleft lip & cleft palate, orthognathic surgery, micro vascular surgery, reconstructive and oncological surgical procedures of maxillofacial region. The speciality of Oral & Maxillofacial Surgery is a multi disciplinary speciality and needs close working in co-ordination with Neurosurgeons, Oncosurgeons, Ophthalmologists, ENT Surgeons and Plastic Surgeons. The Oral & Maxillofacial Surgeons, Ophthalmologist, ENT Surgeons, Plastic Surgeons, Neuro-Surgeons and Oncologists complement each other by performing Surgical Procedures with their respective expertise and knowledge thereby benefiting the patients and students of the respective specialities.

The program outline addresses both the knowledge required 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 surgery competently and have the ability to intelligently pursue further apprenticeship towards advanced Maxillofacial surgery.

The topics are considered as under:-

- A) Applied Basic sciences
- B) Oral and Maxillofacial surgery
- C) Allied specialties

A) Applied Basic Sciences:

Applied Anatomy, Physiology, Biochemistry, General and Oral Pathology and Microbiology, Pharmacology and Knowledge in Basic Statistics.

Applied Anatomy:

1. Surgical anatomy of the scalp, temple and face
2. Anatomy of the triangles of neck and deep structures of the neck
3. Cranial and facial bones and its surrounding soft tissues with its applied aspects in

maxillofacial injuries.

4. Muscles of head and neck; chest, lower and upper extremities (in consideration to grafts/flaps)
5. Arterial supply, venous drainage and lymphatics of head and neck
6. Congenital abnormalities of the head and neck
7. Surgical anatomy of the cranial nerves
8. Anatomy of the tongue and its applied aspects
9. Surgical anatomy of the temporal and infratemporal regions
10. Anatomy and its applied aspects of salivary glands, pharynx, thyroid and parathyroid gland, larynx, trachea, esophagus
11. Tooth eruption, morphology, and occlusion.
12. Surgical anatomy of the nose.
13. The structure and function of the brain including surgical anatomy of intra cranial venous sinuses.
14. Autonomous nervous system of head and neck
15. Functional anatomy of mastication, deglutition, speech, respiration and circulation
16. Development of face, paranasal sinuses and associated structures and their anomalies
17. TMJ: surgical anatomy and function

Physiology:

1. Nervous system

- Physiology of nerve conduction, pain pathway, sympathetic and parasympathetic nervous system, hypothalamus and mechanism of controlling body temperature

2. Blood

- Composition
- Haemostasis, various blood dyscrasias and management of patients with the same
- Hemorrhage and its control
- Capillary and lymphatic circulation
- Blood grouping, transfusing procedures.

3. Digestive system

- Saliva - composition and functions of saliva
- Mastication, deglutition, digestion, assimilation
- Urine formation, normal and abnormal constituents

4. Respiration

- Control of ventilation, anoxia, asphyxia, artificial respiration
- Hypoxia – types and management

5. CardioVascular System

- Cardiac cycle
- Shock
- Heart sounds
- Blood pressure
- Hypertension

6. Endocrinology

- General endocrinal activity and disorder relating to thyroid gland
- Parathyroid gland, adrenal gland, pituitary gland, pancreas and gonads:
- Metabolism of calcium

7. Nutrition

- General principles of a balanced diet, effect of dietary deficiency, protein energy malnutrition, Kwashiorkor, Marasmus.
- Fluid and Electrolytic balance in maintaining haemostasis and significance in minor and major surgical procedures.

Biochemistry:

- General principles governing the various biological activities of the body, such as osmotic pressure, electrolytes, dissociation, oxidation, reduction etc.
- General composition of the body
- Intermediary metabolism
- Carbohydrates, proteins, lipids, and their metabolism
- Nucleoproteins, nucleic acid and nucleotides and their metabolism
- Enzymes, vitamins and minerals
- Hormones
- Body and other fluids.
- Metabolism of inorganic elements.
- Detoxification in the body.
- Antimetabolites.

Pathology:

1. 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 molecular events in cell growth and intercellular signaling cell surface receptors
- Role of NSAIDs in inflammation,
- Cellular changes in radiation injury and its manifestation:

2. Haemostasis

- Role of endothelium in thrombogenesis
- Arterial and venous thrombi
- Disseminated Intravascular coagulation

3. Shock:

- Pathogenesis of hemorrhagic, neurogenic, septic, cardiogenic shock
 - Circulatory disturbances, ischemia, hyperemia, venous congestion, edema, infarction
- 4. Chromosomal abnormalities:**
- Marfans Syndrome, Ehler's Danlos Syndrome, Fragile X- Syndrome
- 5. Hypersensitivity:**
- Anaphylaxis, type 2 hypersensitivity, type 3 hyper sensitivity and cell mediated reaction and its clinical importance, systemic lupus erythematosus.
 - Infection and infective granulomas.
- 6. Neoplasia:**
- Classification of tumors.
 - Carcinogenesis and carcinogens- chemical, viral and microbial
 - Grading and staging of cancers, tumor Angiogenesis, Paraneoplastic syndrome, spread of tumors
 - Characteristics of benign and malignant tumors
- 7. Others:**
- Sex linked agammaglobulinemia.
 - AIDS
 - Management of immuno deficiency patients requiring surgical procedures
 - De George Syndrome
 - Ghons complex, post primary pulmonary tuberculosis – pathology and pathogenesis.

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 endocrinal disturbances
- Diseases of jawbones and TMJ
- Diseases of blood and blood forming organs in relation to oral cavity
- Cysts of the oral cavity
- Salivary gland diseases
- Role of laboratory investigations in oral surgery

Microbiology:

- Immunity
- Knowledge of organisms commonly associated with diseases of oral cavity.
- Morphology cultural characteristics of strepto, staphylo, pneumo, gono, meningo, clostridium group of organisms, spirochetes, organisms of TB, leprosy, diphtheria, actinomycosis and moniliasis
- Hepatitis B and its prophylaxis
- Culture and sensitivity test
- Laboratory determinations
- Blood groups, blood matching, RBC and WBC count
- Bleeding and clotting time etc, smears and cultures
- Urine analysis and cultures.

Applied Pharmacology and Therapeutics:

1. Definition of terminologies used
2. Dosage and mode of administration of drugs.
3. Action and fate of drugs in the body
4. Drug addiction, tolerance and hypersensitivity reactions.
5. Drugs acting on the CNS
6. General and local anesthetics, hypnotics, analeptics, and tranquilizers.
7. Chemo therapeutics and antibiotics
8. Analgesics and antipyretics
9. Antitubercular and antisyphilitic drugs.
10. Antiseptics, sialogogues and antisialogogues
11. Haematinics
12. Antidiabetics
13. Vitamins A, B-complex, C, D, E, K

Research Methodology

Definition, types of research, designing written protocol for research, objectivity in methodology, qualification and records and analysis.

Biostatistics

Introduction, applications, used and limitations of biostatistics in Public Health Dentistry collection of data, presentation of data, measures of central tendency, measures of dispersion, measures of summarizing parametric and non parametric tests of significance, correction and regression, multivariate analysis sampling and sampling techniques, types, errors, bias, trial and calibration

B. Oral & Maxillofacial surgery.

- Evolution of Maxillofacial surgery.
- Diagnosis, history taking, clinical examination, investigations.

- Informed consent/medico-legal issues.
- Concept of essential drugs and rational use of drugs
- Communication skills with patients- understanding, clarity in communication, compassionate explanations and giving emotional support at the time of suffering and bereavement
- Principles of surgical audit – understanding the audit of process and outcome. Methods adopted for the same. Basic statistics.
- Principles of evidence based surgery- understanding journal based literature study; the value of textbook, reference book articles, value of review articles; original articles and their critical assessment, understanding the value of retrospective, prospective, randomized control and blinded studies, understanding the principles and the meaning of various Bio-statistical tests applied in these studies.
- Principles of surgery- developing a surgical diagnosis, basic necessities for surgery, aseptic technique, incisions, flap designs, tissue handling, hemostasis, dead space management, decontamination and debridement, suturing, edema control, patient general health and nutrition.
- Medical emergencies – Prevention and management of altered consciousness, hyper sensitivity reaction, chest discomfort, respiratory difficulty.
- Pre operative workup – Concept of fitness for surgery; basic medical work up; work up in special situation like diabetes, renal failure, cardiac and respiratory illness; risk stratification
- Surgical sutures, drains
- Post operative care- concept of recovery room care, Airway management, Assessment of Wakefulness, management of cardio vascular instability in this period, Criteria for shifting to the ward, pain management
- Wound management- Wound healing, factors influencing healing, basic surgical techniques, Properties of suture materials, appropriate use of sutures.
- Surgical Infections – Asepsis and antisepsis, Microbiological principles, Rational use of antibiotics, special infections like Synergistic Gangrene and Diabetic foot infection, Hepatitis and HIV infection and cross infection.
- Airway obstruction/management – Anatomy of the airway, principles of keeping the airway patent, mouth to mouth resuscitation, Oropharyngeal airway, endotracheal intubation, Cricothyroidectomy, Tracheostomy.
- Anesthesia – stages of Anesthesia, pharmacology of inhalation, intravenous and regional anesthetics, muscle relaxants.
- Facial pain; Facial palsy and nerve injuries
- Pain control – acute and chronic pain, cancer and non-cancer pain, patient controlled analgesia
- General patient management – competence in physical assessment of patients of surgery, competence in evaluation of patients presenting with acute injury, particularly to maxillofacial region. Competence in the evaluation of management of patients for Anesthesia
- Clinical oral surgery – all aspects of dento alveolar surgery
- Pre-prosthetic surgery – A wide range of surgical reconstructive procedures involving their hard and soft tissues of the edentulous jaws.
- Temporomandibular joint disorders – TMJ disorders and their sequelae need expert evaluation, assessment and management. It is preferable to be familiar with diagnostic and therapeutic arthroscopic surgery procedures.

- Tissue grafting – Understanding of the biological mechanisms involved in autogenous and heterogeneous tissue grafting.
- Reconstructive oral and maxillofacial surgery – hard tissue and soft tissue reconstruction.
- Cyst and tumors of head and neck region and their management – including principles of tumor surgery, giant cell lesion of jaw bones, fibro osseous lesions of jaw.
- Neurological disorders of maxillofacial region-diagnosis and management of Trigeminal Neuralgia, MPDS, Bells palsy, Frey’s Syndrome, Nerve injuries
- Maxillofacial trauma – basic principles of treatment, primary care, diagnosis and management of hard and soft tissue injuries, Comprehensive management including polytrauma patients
- Assessment of trauma-multiple injuries patient, closed abdominal and chest injuries, penetrating injuries, pelvic fractures, urological injuries, vascular injuries.
- Orthognathic surgery – The trainee must be familiar with the assessment and correcting of jaw deformities
- Laser surgery – The application of laser technology in the surgical treatment of lesions amenable to such therapy
- Distraction osteogenesis in maxillofacial region.
- Cryosurgeries – Principles, the application of cryosurgery in the surgical management of lesions amenable to such surgeries.
- Cleft lip and palate surgery- detailed knowledge of the development of the face, head and neck, diagnosis and treatment planning, Current concepts in the management of cleft lip and palate deformity, knowledge of nasal endoscopy and other diagnostic techniques in the evaluation of speech and hearing, concept of multi disciplinary team management.
- Aesthetic facial surgery – detailed knowledge of structures of face & neck including skin and underlying soft tissues, diagnosis and treatment planning of deformities and conditions affecting facial skin, underlying facial muscles, bone, eyelids, external ear etc., surgical management of post acne scarring, face lift, blepharoplasty, otoplasty, facial bone recountouring etc.
- Craniofacial surgery – basic knowledge of developmental anomalies of face, head and neck, basics concept in the diagnosis and planning of various head and neck anomalies including facial cleft, craniosynostosis, syndromes, etc. Current concepts in the management of craniofacial anomalies.
- Head and neck oncology – understanding of the principles of management of head and neck oncology including various pre cancerous lesions, Experience in the surgical techniques of reconstruction following ablative surgery.
- Micro vascular surgery.
- Implantology – principles, surgical procedures for insertion of various types of implants.
- Maxillofacial radiology/ radio diagnosis
- Other diagnostic methods and imaging techniques
- Robotic surgery and tissue engineering.

C) Allied Specialties:

- General medicine: General assessment of the patient including children with special emphasis on cardiovascular diseases, endocrinal, metabolic respiratory and renal diseases, Blood dyscrasias
- General surgery: Principles of general surgery, exposure to common general surgical procedures.
- Neuro – surgery: Evaluation of a patient with head injury, knowledge & exposure of various Neuro – surgical procedures
- ENT/Ophthalmology: Examination of ear, nose, throat, exposure to ENT surgical procedures, ophthalmic examination and evaluation, exposure to ophthalmic surgical procedures
- Orthopedic: basic principles of orthopedic surgery, bone diseases and trauma as relevant to Maxillofacial surgery, interpretation of radiographs, CT, MRI and ultrasound
- Anesthesiology: Evaluation of patients for GA technique, general anesthetic drugs use and complications, management of emergencies, various IV sedation techniques.
- Plastic Surgery- Basic Principles

Paper wise distribution of syllabus:

PART- I (Ist MDS):

Applied Basic Sciences

PART-II:

Paper– I:

Minor Oral Surgery and Maxillofacial Trauma

- **Principles of Surgery:** Developing A Surgical Diagnosis, Basic Necessities For Surgery, Aseptic Technique, Incisions, Flap Design Tissue Handling, Haemostasis, Dead Space Management, Decontamination And Debridement, Suturing, Oedema Control, Patient General Health And Nutrition.
- **Medical Emergencies:** Prevention and management of altered consciousness (syncope, orthostatic hypotension, seizures, diabetes mellitus, adrenal insufficiency), hypersensitivity reactions, chest discomfort, and respiratory difficulty.
- **Examination and Diagnosis:** Clinical history, physical and radiographic, clinical and laboratory diagnosis, oral manifestations of systemic diseases, implications of systemic diseases in surgical patients.
- **Haemorrhage and Shock:** Applied physiology, clinical abnormalities of coagulation, extra vascular hemorrhage, and hemorrhagic lesions, management of secondary hemorrhage, shock.
- **Exodontia:** Principles of extraction, indications and contraindications, types of extraction, complications and their management, principles of elevators and elevators used in oral surgery.

- **Impaction:** Surgical anatomy, classification, indications and contraindications, diagnosis, procedures, complications and their management.
- **Surgical aids to eruption of teeth:** Surgical exposure of unerupted teeth, surgical repositioning of partially erupted teeth.
- **Transplantation of teeth**
- **Surgical Endodontics:** Indications and contraindications, diagnosis, procedures of periradicular surgery
- **Preprosthetic Surgery:** Requirements, types (alvoloplasty, tuberosity reduction, mylohyoid ridge reduction, genial reduction, removal of exostosis, vestibuloplasty)
- **Procedures to Improve Alveolar Soft Tissues:** Hypermobile tissues- operative / sclerosing method, epulis fissuratum, frenectomy and frenotomy
- **Infections of Head and Neck:** Odontogenic and non Odontogenic infections, factors affecting spread of infection, diagnosis and differential diagnosis, management of facial space infections, Ludwig angina, cavernous sinus thrombosis.
- **Chronic infections of the jaws:** Osteomyelitis (types, etiology, pathogenesis, management) osteoradionecrosis
- **Maxillary Sinus:** Maxillary sinusitis – types, pathology, treatment, closure of Oro – antral fistula, Caldwell- luc operation
- **Cysts of the Orofacial Region:** Classification, diagnosis, management of OKC, dentigerous, radicular, non Odontogenic, ranula
- **Neurological disorders of the Maxillofacial Region:** Diagnosis and management of trigeminal neuralgia, MPDS, bell's palsy, Frey's syndrome, nerve injuries.
- **Implantology:** Definition, classification, indications and contraindications, advantages and disadvantages, surgical procedure.
- **Anesthesia**

Local Anesthesia:

Classification of local anesthetic drugs, mode of action, indications and contra indications, advantages and disadvantages, techniques, complications and their management.

General Anesthesia:

Classification, stages of GA, mechanism of action, indications, and contra indications, advantages and disadvantages, post anesthetic complications and emergencies, anesthetic for dental procedures in children, pre medication, conscious sedation, legal aspects for GA

Maxillofacial Trauma:

- Surgical Anatomy of Head and Neck.
- Etiology of Injury.
- Basic Principles of Treatment
- Primary Care: resuscitation, establishment of airway, management of hemorrhage, management of head injuries and admission to hospital.
- Diagnosis: clinical, radiological
- Soft Tissue Injury of Face and Scalp: classification and management of soft tissue

- wounds, injuries to structure requiring special treatment.
- Dento Alveolar Fractures: examination and diagnosis, classification, treatment, prevention.
 - Mandibular Fractures: classification, examination and diagnosis, general principles of treatment, complications and their management
 - Fracture of Zygomatic Complex: classification, examination and diagnosis, general principles of treatment, complications and their management.
 - Orbital Fractures: blow out fractures
 - Nasal Fractures
 - Fractures of Middle Third of the Facial Skeleton: emergency care, fracture of maxilla, and treatment of le fort I, II, III, fractures of Naso orbito ethmoidal region.
 - Ophthalmic Injuries: minor injuries, non-perforating injuries, perforating injuries, retro bulbar hemorrhage, and traumatic optic neuropathy.
 - Traumatic Injuries To Frontal Sinus: diagnosis, classification, treatment
 - Maxillofacial Injuries in Geriatric and Pediatric Patients.
 - Gun Shot Wounds and War Injuries
 - Osseointegration in Maxillofacial Reconstruction
 - Metabolic Response to Trauma: neuro endocrine responses, inflammatory mediators, clinical implications
 - Healing of Traumatic Injuries: soft tissues, bone, cartilage, response of peripheral nerve to injury
 - Nutritional consideration following Trauma.
 - Tracheostomy: indications and contraindications, procedure, complications and their management.

Paper – II :Maxillofacial Surgery

a) Salivary gland

- Sialography
- Salivary fistula and management
- Diseases of salivary gland – developmental disturbances, cysts, inflammation and sialolithiasis
- Mucocele and Ranula
- Tumors of salivary gland and their management
- Staging of salivary gland tumors
- Parotidectomy

b) Temporomandibular Joint

- Etiology, history signs, symptoms, examination and diagnosis of temporomandibular joint disorders
- Ankylosis and management of the same with different treatment modalities
- MPDS and management
- Condylectomy – different procedures
- Various approaches to TMJ

- Recurrent dislocations – Etiology and Management

c) Oncology

- Biopsy
- Management of pre-malignant tumors of head and neck region
- Benign and Malignant tumors of Head and Neck region
- Staging of oral cancer and tumor markers
- Management of oral cancer
- Radical Neck dissection
- Modes of spread of tumors
- Diagnosis and management of tumors of nasal, paranasal, neck, tongue, cheek, maxilla and mandible
- Radiation therapy in maxillofacial regions
- Lateral neck swellings

d) Orthognathic surgery

- Diagnosis and treatment planning
- Cephalometric analysis
- Model surgery
- Maxillary and mandibular repositioning procedures
- Segmental osteotomies
- Management of apertognathia
- Genioplasty
- Distraction osteogenesis

e) Cysts and tumors of oro facial region

- Odontogenic and non-Odontogenic tumors and their management
- Giant Cell lesions of jawbone
- Fibro osseous lesions of jawbone
- Cysts of jaw

f) Laser surgery

- The application of laser technology in surgical treatment of lesions

g) Cryosurgery

- Principles, applications of cryosurgery in surgical management

h) Cleft lip and palate surgery

- Detailed knowledge of the development of the face, head and neck

- Diagnosis and treatment planning
- Current concepts in the management of cleft lip and palate deformity
- Knowledge of Naso endoscopy and other diagnostic techniques in the evaluation of speech and hearing
- Concept of multidisciplinary team management

i) Aesthetic facial surgery

- Detailed knowledge of the structures of the face and neck including skin and underlying soft tissue
- Diagnosis and treatment planning of deformities and conditions affecting facial skin
- Underlying facial muscles, bone, Eyelids, external ear
- Surgical management of post acne scarring, facelift, blepharoplasty, otoplasty

j) 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

**TEACHING/ LEARNING ACTIVITIES AND MONITORING LEARNING
PROGRESS**

TEACHING / LEARNING ACTIVITIES:

The post graduate is expected to complete the following at the end of :

I Year

Study of applied basic sciences including practicals (wherever necessary), basic computer sciences, exodontia, seminars on basic topics, selection of dissertation topic, library assignment topic, attending O.T, ward rounds, Medical Record keeping, Pre-clinical exercises, preparation of synopsis and its submission within the six months after admission to the university as per calendar of events.

Rotation and postings in other departments:

General medicine	- 1 month
Anesthesia	- 1 month
Neuro Surgery	- 1 month
General surgery	- 15 days
Ophthalmology	- 15 days

ENT - 15 days
Radiology (CT, MRI, USG) - 15 days

II Year

- Minor oral surgery and higher surgical training
- Submission of library dissertation
- Oncology posting – 1 month

III Year

- Maxillofacial surgery
- Submission of dissertation to the university, six months before the final examination

Monitoring Learning Progress:

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

It is essential to monitor the learning progress to each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring to be done by the staff of the department bases on participation of students in various teaching/learning activities. It may be structures and time bound with minimal requirements.

Inter disciplinary seminars: Each post graduate shall present at least 1 seminar during the interdisciplinary activity of the institute.

POST GRADUATES DAILY SCHEDULE WHO ARE POSTED IN THE DEPARTMENT OF ORAL & MAXILLOFACIAL SURGERY

Monday.....Journal club presentation for IInd year and III MDS
Tuesday.....Seminar presentation for IInd MDS & case presentation
Wednesday..... OT day
Thursday.....Seminar presentation for III MDS
Friday.....Basic science class for Ist MDS/ case presentation
Saturday.....OT day

POSTGRADUATE PRECLINICAL EXERCISE

S NO	Nature of work	Staff signature	Remarks
1	Suturing Techniques i. Simple interrupted suture ii. Vertical mattress suture iii. Horizontal mattress suture iv. Simple continuous suture v. Continuous locking suture Figure of 8 suture		
2	Wiring Techniques i. Arch bar wiring ii. Risdon wiring iii. Ivy eyelet wiring iv. Gilmer's wiring v. Helms wiring vi. William's wiring vii. Clove Hitch wiring viii. Kazanjian wiring ix. Ernst's wiring x. Figure of 8 wiring xi. Essig's wiring Continuous or multiple loop wiring		
3	i. Gunning splint ii. Orthodontic splint iii. Cephalometric tracing		

Syllabus for PG's during their Peripheral postings

1	General Medicine	<ul style="list-style-type: none"> ➤ Complete detailed case histories, with diagnosis, minimum 5 in no. ➤ Discussion on preoperative assessment of patient for surgery and investigations for the same ➤ Active participation in ward rounds, discussions, OPD's ➤ Exposure to reading ECG and Chest X-Ray ➤ General assessment of the patient including children with special emphasis on cardiovascular diseases, endocrinal, metabolic respiratory and renal diseases, blood dyscrasias.
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2	General Surgery	<ul style="list-style-type: none"> ➤ Minimum 5 case history presentations ➤ Assist minimum 5 Surgeries ➤ Preoperative assessment for surgery, exposure to pre and post operative management and investigations. ➤ Active participation in ward rounds, discussions, OPD's
3	Anaesthesia	<ul style="list-style-type: none"> ➤ Minimum 2 Endo tracheal intubations ➤ Placing IV Cannula each day ➤ Pre and Post operative patient management from anesthesia point of view. ➤ Active participation in OT, discussion etc ➤ General Anesthetic drugs uses and complications, management of emergencies ➤ Various IV sedation techniques
4	ENT	<ul style="list-style-type: none"> ➤ Examination of Ear nose and throat ➤ Assisting minimum 2 cases ➤ Discussion on emergency airway management ➤ Active participation in ward rounds, Discussions, OPD's
5	Radiology	<ul style="list-style-type: none"> ➤ Reading various radiographs, chest x-rays in particular ➤ CT/MRI/FNAC and guided ultrasound to be performed and learn to read all
6	Neuro Surgery	<ul style="list-style-type: none"> ➤ Minimum 10 cases with presentation ➤ Assist minimum 10 surgeries ➤ Head injury, protocol, Assessment, GCS ➤ Assisting CSF tapping ➤ Assisting and observing Tracheotomy procedure ➤ Exposure to various neurosurgical procedures ➤ Active participation in ward rounds, discussions, OPD's
7	Ophthalmology	<ul style="list-style-type: none"> ➤ Eye examination and VA(Visual Aucity) assessment ➤ Diplopia assessment ➤ Exposure to ophthalmic surgical procedures ➤ Active participation in ward rounds, Discussions, OPD's

YEAR BY YEAR PROGRAMME

I Year (First 6 months) - May to October

1. Clinical cases extractions & UG teaching
2. Basic science classes
3. Completing the preclinical work
4. Selection of thesis, library dissertation, short term study – to be completed by the end of July
5. Clinical & theory exam at the end of 3 months
6. Training in implantology

7. Seminars on basic science topics
8. Attending O.T and ward rounds
9. Preparation of synopsis and its submission within the six 6 months
10. Hands on skill training in simulation centre.

Second term :(6 months) (rotational postings in other department):

1. Anesthesia - 1month
2. General medicine - 1month
3. Neuro Surgery - 1 month
4. Ophthalmology - 15 days
5. General Surgery - 15 Days
6. ENT - 15 days
7. Radiology - 15 days

Examination on basic sciences at the end of first year

II year

1. Onco surgery posting- 1 month
2. Micro vascular Surgery Posting (Optional)
3. Posting in Trauma Centre Malasia (Optional)
4. Craniofacial Postings One month
5. Minor Oral Surgery
6. Submission of Library Dissertation
7. Completion of short term project
8. Theory & clinical examination in minor oral surgery
9. BLS/ACLS certification (YU/AHA) (Optional)

III year

1. Maxillofacial Surgery
2. Submission of Dissertation in 1st term i.e. six months before the final examination
3. Final University exam at the end of 3rd year.

ACADEMIC PERFORMANCE

END OF FIRST ACADEMIC YEAR				
Sl. no	Details	To be completed by	Quota	Compl/Incom
1	Pre-clinical exercise	August	-	
2	Seminars presented	May	5 +1	
3	Cases presented	May	5	
4	Journals presented	May	5	
5	Entry level theory examination	August	Pass/fail	
6	Poster presentation	May	1	
7	Conference attended	May	1	

8	CDE attended	May	3	
9	Completion of log book	May	Submission	
10	University examination in Basic Science Paper	APRIL	1	
11	Completion of Medical Posting	May (Jan - May)		
12	Leaves availed	Till May		
Clinical Cases to be done				
1	Injections IM/IV	May	30/10	
2	Surgical Extractions	May	5	
3	Pre-Prosthetic surgery	May	5	
4	Incision and Drainage	May	5	
Clinical cases to be assisted				
1	Biopsy procedures	May	3	
2	Periapical Surgery	May	3	
3	Cyst enucleation	May	2	
4	OAF closure	May	2	
5	Removal of Impacted teeth(A)	May	5	
Cases to be observed				
1	Facial fracture management	May	5	

ACADEMIC PERFORMANCE

END OF SECOND ACADEMIC YEAR				
Sl no	Details	To be completed by	Quota	Compl/Incom
1	Short study completion	May		
2	Completion of Library dissertation	May	1	
3	Paper & Poster Presentation	May	1+1	
4	Seminar presented	May	5	
5	Case presented	May	5	
6	Journal presented	May	5	
7	Completion of cancer centre posting	May	1 Month	
8	CDE attended	May	3	
9	Conference attended	May	1	

10	Theory class for Undergraduates	May	2	
11	Annual evaluation examination	APRIL	1	
12	Log book	May		
13	Leaves availed	Till may		
Cases to be performed				
1	Injections IM/IV	May	20/10	
2	Biopsy	May	6	
3	Removal of impacted teeth/ transalveolar extraction	May	10/5	
4	OAF closure	May	3	
5	Incision and drainage abscess	May	4	
6	Pre-prosthetic surgery corrective procedure	May	5	
Cases to be assisted				
1	Ridge extension procedure	May	5	
2	Cyst enucleation procedure	May	5	
3	Removal of salivary calculi	May	3	
4	Mandibular fracture management	May	5	
5	Tracheostomy	May	2	
6	Implant placement	May	2	
7	Cleft lip & palate surgery	May	5	
Cases to be observed				
1	Orthognathic surgery	May	3	
2	Harvesting bone and cartilage graft Iliac crest Rib Calvarial Fibula	May	5	
3	Emergency management for OMFS patients in casualty/Accident & Emergency		5	

ACADEMIC PERFORMANCE

END OF THIRD ACADEMIC YEAR (ELIGIBLE FOR UNIVERSITY EXAMINATION)				
S no	Details	To be completed by	Quota	Compl/Incom

1	Completion of thesis	Nov	submission	
2	Seminar presentation	Jan	5	
3	Journal discussion	Jan-	5	
4	Case presentations	Jan	5	
6	Paper Presentation	Jan	1	
7	Scientific paper Presentation	Dec	1	
8	Completion of Clinical log book	Dec	submission	
11	Conference attended	Feb	1	
12	CDE attended	Feb	3	
13	Theory class for Undergraduates	Feb	2	
14	Academic data file	Feb	Submission	
15	Completion of log book	Mar	submission	
16	Mock exam theory	May	1	
17	Mock exam clinical	May	1	
18	Leaves availed	Till May		
Cases to be done				
1	Removal of impacted teeth done		15	
2	Mandibular fractures		10	
3	Mid face fractures		5	
4	Benign tumors		3	
5	Emergency management for OMFS patients in casualty/Accident & Emergency		5	
Cases to be assisted				
1	Removal of Impacted tooth		10	
2	Preprosthetic Surgery –Ridge reconstruction		3	
3	Benign Tumor Management		3	
4	Midface # Management/ Mandible		5	
5	Tracheostomy		2	
6	Skin graft harvesting		2	
7	Orthognathic surgery		5	
8	Implant placement		2	
9	T.M.J. Surgery		3	

10	Onco Surgery		5	
11	Jaw resection		3	
12	Harvesting bone graft a) Iliac Crest – 3 cases b) Rib/ Calvarial – 2 cases		5	
13	Cleft lip & Palate Surgery		5	
14	Distraction Osteogenesis		2	
15	Rhinoplasty		3	

ELIGIBILITY TO APPEAR FOR UNIVERSITY EXAMINATION

- Attendance: University mandates that minimum of 80 % of attendance is required for a candidate to appear for University examination in each academic year.
- Journal Clubs : 5 in a year
- Seminars : 5 in a year
- Clinical Case presentations : 4 in a year
- Lectures taken for undergraduates : 1 in a year
- Scientific Paper/Poster Presentations : 4 Paper/Poster during three years of
In state/National level Conference training period
- Clinic Pathological Conferences : 2 presentations during three years
of training period
- Scientific Publications : one Publication in any indexed
Scientific journal
- Submission of Synopsis : One synopsis within six months from
the date of commencement of the
course
- Submission of Dissertation : One Dissertation within six months
before appearing for the university
examination
- Submission of Library Dissertation : One Dissertation within eighteen
months
from the date of commencement of
the course.

- **INTERNAL EXAMINATIONS**

- ❖ Candidate shall have pass marks in Basic Science examination conducted three months after admission to the course by the Department.
- ❖ Candidate shall have pass marks in Part-I examination (Basic Science) conducted at the end of first year by the University
- ❖ Candidates shall have pass marks in annual examination conducted at the end of second year by the collage.
- ❖ Candidate shall have pass marks in Preparatory examination conducted prior to University examination by the collage.
- Department requirement: Candidate shall complete all their seminars, journal discussion, case presentation, log book, conference presentations and publications.

INTERNAL AND UNIVERSITY EXAMINATION SCHEDULE

- Entry level theory examination (for fresh batch)-second week of August.
- University exam in Basic science, single paper at the end of 1st year (3 hrs paper with 100 marks) .
- Internal examination at the end of second year in Minor Oral Surgery/Trauma/Tumours with 2 papers.
- In the 3rd year –Mock exam in University pattern both clinical and theory (1 -2 months before the university exam)

Scheme of Examination:

A. Theory:	Part-I: Basic Sciences Paper	- 100 Marks
	Part-II: Paper-I, Paper-II & Paper-III	- 300 Marks
		(100 Marks for each Paper)

Written examination shall consist of Basic Sciences **Paper (Part-I)** of three hours duration and should be conducted at the end of First year of MDS course. Part-II Examination will be conducted at the end of Third year of MDS course. **Part-II** Examination will consist of **Paper-I, Paper-II & Paper-III**, each of three hours duration. **Paper-I & Paper-II** shall consist of two long answer questions carrying 25 marks each and five questions carrying 10 marks each. **Paper-III** will be on Essays. In **Paper-III** three Questions will be given and student has to answer any two questions. Each question carries 50 marks. Questions on recent advances may be asked in any or all the papers. Distribution of topics for each paper will be as follows:

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

PART- II

Paper – I : Minor Oral Surgery and Maxillofacial Trauma

Paper – II : Maxillofacial Surgery

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

*The topics assigned to the different papers are generally evaluated under those sections. However 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.

B. Practical / Clinical Examination - **200 Marks**
1. Minor Oral Surgery - 100 Marks

Each candidate is required to perform the minor oral surgical procedures under local anaesthesia. The minor surgical cases may include removal of impacted lower third molar, cyst enucleation, any similar procedure where students can exhibit their professional skills in raising the flap, removing the bone and suturing the wound.

2. Case presentation and discussion: 100 Marks
(a) One long case - 60 Marks
(b) Two short cases - 40 Marks (20 marks each)

C. Viva Voce - **100 Marks**

i. Viva-Voce examination: 80 Marks

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

ii. Pedagogy: 20 Marks

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

MDS PRACTICAL EXAM PATTERN

1ST DAY

Exercise No.	Details	Time
1	Minor oral surgery Each candidate is required to perform the minor oral surgical procedures under local anaesthesia. The minor surgical case includes removal of impacted lower third molar. <ul style="list-style-type: none"> a. Recording case history b. Examination c. Local Anaesthesia Injection d. Performing the procedure e. Discussion & submission 	1 hour 30 minutes 10 min 10 min 5 min 45 min 20 min
2	2 short cases Case is allotted pertaining to orofacial region <ul style="list-style-type: none"> a. Record only relevant history, local examination, chair side investigation b. Formulate provisional / differential diagnosis c. Formulate treatment plan 	2 X 20 min
	<ul style="list-style-type: none"> d. Presentation & discussion 	2 X 15 min
3	1 long case In the given case <ul style="list-style-type: none"> a. Record detailed history, perform examination, chair side investigation b. Evaluation of radiographs & other investigations c. Perform provisional/ differential diagnosis d. Provide final diagnosis e. Formulate treatment plan 	60 min
	Presentation & discussion	2 X 15 min

2ND DAY

Exercise No.	Details	Time
1	Viva Voce	1 hour/candidate
2	Pedagogy	8-10 minutes/candidate

ASSESSMENT PERFORMA'S AND LOG BOOKS

SCHEDULE – I

MODEL CHECKLIST FOR EVALUATION OF JOURNAL REVIEW PRESENTATIONS.

Name of the Trainee:

Date:

Name of the Faculty / Observer:

Sl. No.	Items for observation during presentation	Poor	Below Average	Average	Good	Very Good
1.	Article chosen was					
2.	Extent of understanding of scope and objectives of the paper by the candidate.					
3.	Whether cross-references have been consulted.					
4.	Whether other relevant publications consulted.					
5.	Ability to respond to questions on the paper / subject.					
6.	Audio – Visual aids used.					
7.	Ability to defend the paper.					
8.	Clarity of presentation.					
9.	Any other observation.					
	Total Score					

SCHEDULE-II

MODEL CHECK LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the Trainee:

Date Name of the Faculty / Observer:

Sl. No.	Items for observation during presentation	Poor	Below Average	Average	Good	Very Good
1.	Completeness & Preparation.					
2.	Clarity of presentation.					
3.	Understanding of subject.					
4.	Whether other relevant publications consulted.					
5.	Whether cross-references have been consulted.					
6.	Ability to answer the questions.					
7.	Time scheduling.					
8.	Appropriate use of audio – visual aids.					
9.	Overall performance.					
10.	Any other observation.					
	Total Score					

SCHEDULE-III

(a) MODEL CHECK LIST FOR EVALUATION OF CLINICAL WORK IN Outpatient Department

(To be completed once a month by respective unit heads including posting in other department)

Name of the Trainee :

Date :

Name of the Unit Head :

Sl. No.	Items for observation during presentation	Poor	Below Average	Average	Good	Very Good
1.	Regularity of attendance.					
2.	Punctuality.					
3.	Interaction with colleagues and supportive staff.					
4.	Maintenance of case records.					
5.	Presentation of cases.					
6.	Investigations work up.					
7.	Chair-side manners.					
8.	Rapport with patients.					
9.	Over all quality of clinical work.					
	Total Score					

EVALUATION OF CLINICAL CASE PRESENTATION

Name of the Trainee :

Date : Name of the Faculty / Observer :

Sl. No.	Items for observation during presentation	Poor	Below Average	Average	Good	Very Good
1.	Completeness of history.					
2.	Whether all relevant points elicited.					
3.	Clarity of presentation.					
4.	Logical order.					
5.	Mentioned all positive and negative points					
6.	Accuracy of general physical examination.					
7.	Diagnosis: Whether it follows logically from history and findings.					
8.	Investigations required.					
	Complete list.					
	Relevant order.					
	Interpretation of investigations.					
9.	Ability to react to questioning Whether it follows logically from history and					
10.	Ability to defend diagnosis.					
11.	Ability to justify differential diagnosis.					
12.	Others.					
	Grand Total					

Note: Please use a separate sheet for each faculty member.

SCHEDULE-IV

MODEL CHECKLIST FOR EVALUATION OF TEACHING SKILL

Name of the Trainee :
Faculty / Observer :

Date : Name of the

Sl. No	Items for observation	Poor	Below Average	Average	Good	Very Good
1.	Communication of the purpose of the talk					
2.	Evokes audience interest in the subject.					
3.	The introduction.					
4.	The sequence of ideas.					
5.	The use of practical examples and / or illustrations.					
6.	Speaking style (enjoyable, monotonous, etc. specify)					
7.	Attempts audience participation.					
8.	Summary of the main points at the end.					
9.	Asks questions.					
10.	Answers questions asked by the audience.					
11.	Rapport of speaker with his audience.					
12.	Effectiveness of the talk.					
13.	Uses audio-visual aids appropriately.					

SCHEDULE-V

(See clause (1) of sub-regulation (2) of regulation 11)

(a) MODEL CHECKLIST FOR DISSERTATION PRESENTATION

Name of the Trainee :

Date : Name of the

Faculty / Observer :

Sl. No.	Prints to be considered.	Poor	Below Average	Average	Good	Very Good
1	Interest shown in selecting topic.					
2	Appropriate review.					
3	Discussion with guide and other faculty.					
4	Quality of protocol.					
5	Preparation of proforma					
	Total Score					

(b) **CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO-GUIDE**

Name of the Trainee :

Date:

Name of the Faculty / Observer :

Sl. No.	Items for observation during presentation	Poor	Below Average	Average	Good	Very Good
1	Periodic consultation with guide / co-guide.					
2	Regular collection of case material					
3	Depth of analysis / discussion.					
4	Quality of final output.					
5	Others					
	Total Score					

SCHEDULE-VI
OVERALL ASSESSMENT SHEET

Date :

SI. No.	Faculty Member	Name of Trainee and Mean Score									
		A	B	C	D	E	F	G	H	I	J
1											
2											
3											

Signature of Head of the Department

Signature of Principal

Note: The overall assessment sheet used along with the logbook shall form the basis for certifying satisfactory completion of course of study, in addition to the attendance required.

KEY:

Faculty member : Name of the faculty doing the assessment.

Log book

Table 1

ACADEMIC ACTIVITIES ATTENDED

Name :

Admission Year:

College :

Date	Type of activity (Specify Seminar, Journal club, presentation, under-graduate teaching)	Particulars

Table 2

ACADEMIC PRESENTATIONS MADE BY THE TRAINEE

Name :

Admission Year:

College :

Date	Topic	Type of activity (Specify Seminar, Journal club, presentation, under-graduate teaching)

Table 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 six months of admission

A-Assisted senior surgeon-I year MDS

PA- Performed procedure under the direct supervision of a senior surgeon-II year MDs

PI-Performed independently –III year MDS

Summary of Amendments

Scheme of examination before revision

Total theory Marks - 300

Total number of theory papers - 4

Maximum marks for each paper - 75

Revised Scheme of examination

Theory examinations shall be held in two parts.

Part 1 and Part 2

Part 1 Shall be on Basic Sciences (one theory paper) and will be held at the end of the 1st year of the program

Part 2 Shall be on the specialty concerned 3 papers.

Each paper shall have maximum of 100 marks.

Total theory marks - 400