

ORAL & MAXILLOFACIAL FACIAL **SURGERY**

SYLLABUS

The program outlines addresses both the knowledge needed in Oral and Maxillofacial Surgery and allied medical specialties in its scope. A minimum 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:
- Basic sciences
- Oral and Maxillofacial surgery
- Allied specialties

Topics for MDS Part I

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.

➤ Applied Anatomy Part I

Surgical anatomy of scalp, temple and face anatomy and its applied aspects. Anatomy of deep structures of neck, craniofacial bones and its surrounding soft tissues, orbit and its contents, eyelids and nasal septum, teeth, gums, thyroid and parathyroid glands, trachea and esophagus, congenital abnormality of Orofacial regions. General consideration of the structure and function, brain and applied anatomy of intracranial 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, lymphatic, nerves, muscles, tongue

➤ Applied Physiology Part I

Nervous system- physiology of nerve conduction, sympathetic and parasympathetic nervous system, hypothalamus and mechanism of controlling body temperature, digestive system digestion, assimilation, urine formation, normal and abnormal constituents.

➤ Applied Biochemistry Part I

General principles governing the various biological principles of the body such as osmotic, pressure, electrolytes, dissociation, oxidation, reduction etc, general composition of body enzymes and antimetabolites

➤ Applied General Pathology Part-I

Wound management- wound healing factors influencing healing properties of suture materials, appropriate uses of sutures, Hypersensitivity, Shock and pulmonary failure, types of shock, diagnosis, resuscitation, pharmacological support, ARDS and its causes and prevention, ventilation and support.

➤ Applied General Microbiology Part I

Culture and sensitivity tests, various staining techniques – Smears and cultures, urine analysis and culture

➤ Applied Oral Pathology and microbiology Part-I

Regressive changes of teeth, bacterial, viral, mycotic infections of oral cavity, dental caries, diseases of pulp and Periapical tissues, wide range of pathological lesions of hard and soft tissues of the Orofacial regions like the odontogenic infection, maxillary sinus diseases, mucosal diseases, role of laboratory investigation in oral surgery.

➤ Applied Pharmacology and therapeutics Part-I

Dosage and mode of administration of drugs, action and fate in the body, drug addiction, tolerance and hypersensitive reactions, antiseptics, antitubercular, sialagogues, hematinics, antidiabetic, vitamins A, B complex, C,D,E,K.

➤ Applied Computer science Part-I

Use of computers in surgery, components of computer and its use in practice, principles of word processing, spreadsheet function, database and presentations, the internet and its use. The value of computer based systems in biomedical equipment.

➤ ORAL AND 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
- Principles of surgery- developing a surgical diagnosis, basic necessities for surgery aseptic techniques, incisions, flap designs, tissue handling, hemostasis, dead space management, decontamination and debridement, suturing, edema control, patient general health and nutrition.
- 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 cardiovascular instability in this period, Criteria for shifting to the ward, pain management.

Topics for MDS Part II

➤ ORAL AND MAXILLOFACIAL SURGERY

- Communication skills with patients – Understanding clarify in communication, compassionate explanations and giving emotional support at the time of suffering and bereavement
- 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.
- Medical emergencies – Prevention and management of altered consciousness, hypersensitivity reaction, chest discomfort, respiratory difficulty.
- 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, 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 resuscitation, Oropharyngeal airway, endotracheal intubation, Cricothyroidectomy, Tracheotomy
- 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 for 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 the 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.
- Cyst and tumors of head and neck region and their management- including principles of tumor surgery, giant cell lesion of jaw bones, fibro-osseous lesion of jaws
- 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, patients with closed abdominal and chest injuries or penetrating injuries, pelvic fractures, urological injuries, vascular injuries
- Distraction osteogenesis in maxillofacial region
- Implantology principles- surgical procedures for insertion of various types of implants

Allied specialties

- ▮ Neuro-surgery: Evaluation of a patient with head injury, examination of various Neurosurgical procedures.
- ▮ ENT/ Ophthalmology: Examination of ear, nose throat, exposure to ENT surgical procedures, ophthalmic examination and evaluation, exposure to ophthalmic surgical procedures.
- ▮ Orthopaedic: Basic principles of Orthopaedic surgery, bone diseases and trauma as relevant to Maxillofacial surgery, interpretation of radiographs, CT, MRI and Ultrasound.

Topics for MDS Part III

❖ ORAL & MAXILLOFACIAL SURGERY

- Principles of surgical audit – understanding the audit of process and outcome. Methods adopted for the same, basic statistics.
- Tissue grafting – understanding of the biological mechanisms involved in autogenous and heterogenous tissue grafting. Reconstructive oral and maxillofacial surgery- hard tissue and soft tissue reconstruction.
- Laser surgery – The application of laser technology in the surgical treatment of lesions amenable to such therapy.
- Cleft lip and palate surgery – detail 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 facial 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, facial bone recontouring etc.
- Craniofacial surgery- basic concept of developmental anomalies of face, head and neck, basics concepts 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

SUGGESTED BOOKS

1. Text book of Oral & Maxillofacial Surgery – Laskin Vol. 1 & 2
2. Principles of Oral & Maxillofacial Surgery – Peterson Vol. 1 & 2
3. Maxillofacial Injuries – Row & Williams Vol.1 & 2
4. Maxillofacial Trauma Fonseca Vol. 1 &2
5. Maxillofacial Infections – Topazian
6. Text book of Oral & Maxillofacial Surgery – Peter Ward booth Vol.1 & 2
7. Maxillofacial Trauma & reconstruction- Peter Ward booth
8. Plastic Surgery- Mathes Vol. 1 to 5
9. Oral Oncology – J.P.Jain
10. Oral Cancer- McGregor
11. Minor Oral Surgery – G.L. Howe
12. Extraction of teeth- G.I.Howe
13. Text book of Oral & Maxillofacial Surgery – Fonseca Vol. 1 to 7
14. Text book of Preprosthetic Surgery – Starshack
15. Dentofacial deformities – Bell Vol.1 & 3
16. Facial esthetics & Dentofacial deformities – Epker Vol 1 to 4
17. Principles of Oral & Maxillofacial Surgery – Moore
18. Complications of Oral & Maxillofacial Surgery – Kaban
19. Current advances in Oral & Maxillofacial Surgery – Irby & Shellon
20. Controversies in Oral & Maxillofacial Surgery
21. Operative Maxillofacial Surgery – Langdon & Patel
22. Local anesthesia – Malamed
23. Bennett's text book of local anesthesia – Monheims
24. Text book of local analgesia – Roberts
25. Distraction Osteogenesis – Sanchukov
26. Distraction Osteogenesis- McCarthy

SUGGESTED PERIODICALS

1. Journal of Oral & Maxillofacial Surgery
2. British Journal of Oral & Maxillofacial Surgery
3. International Journal of Oral & Maxillofacial Surgery
4. Oral medicine, Oral surgery, Oral pathology, Oral Radiology & Endodontics
5. Journal of Craniofacial surgery
6. Journal of Cranio Maxillofacial Surgery
7. Oral & Maxillofacial Surgery clinics of North America
8. Atlas of Oral & Maxillofacial Clinics of North America
9. Plastic & Reconstructive Surgery
10. Oral Oncology
11. British Dental Journal
12. Journal of American Dental Association
13. Australian Dental Journal
14. Journal of Canadian Dental Association

Academic Clinical programme (*applicable for all three years*)

- Seminars to be presented and attended once in a week
- Journal clubs (departmental and interdepartmental) to be conducted once in fifteen days
- Every candidate shall maintain a logbook to record his/hers work of participation in all activities such as journal clubs, seminars, CDE programs etc. this work shall be scrutinized and certified by the head of the departmental and head of the institution and presented to the university every year.

Year by year programme

1 year

First term

Dissection, basic sciences, basic computer sciences, exodontia, seminars on basic topics, selection of dissertation topic, library assignment topic, attending O.T and ward rounds, preparation of synopsis and its submission within six months after admission to the university as per calendar of events

Second term (rotation and postings in other department)

Emergency – on rotation basis 1 month

General medicine – 2 months

General surgery – 2 months

Anaesthesia - 1 month

Examination of basic sciences – one paper of three hours duration to be conducted by the college/university

II year

Minor oral surgery and higher surgical training

Submission of library assignment by the end of first term

Rotation and postings in other department

Oncology – 2 months

Ophthalmology – 15 days

Neurology – 1 month

ENT – 1 month

Orthopaedic – 1 month

Radiology – 15 days

Plastic surgery – 1 month

Emergency – on rotation basis 2 months

Examination on minor oral surgical procedures – one paper of three hours duration to be conducted by the college.

III year

Emergency – on rotation basis 2 months

Maxillofacial surgery, submission of dissertation in the first term, i.e. six months before the final examination to the university

Examination of three hours duration three months before the final examination to be conducted by the college. It is desirable to enter general surgical skills and operative procedures that are observed, assisted or performed in the log book.

Final examination at the end of the third year

Sl.No	Procedure	Category	Year	Number
1	Injection I.M. and I.V	P1	I, II	50,20
2	Minor suturing and removal of sutures	P1	I	NA
3	Incision & drainage of an abscess	P1	I	10
4	Surgical extraction	P1	1	15
	Impacted teeth	P1, PA	I	50,20
	Pre prosthetic surgery			
	a. Corrective procedures	P1 PA	I I, II	15 3
	b. Ridge extension	A	Ii, iii	3
	c. Ridge reconstruction			
	Oaf Closure	P1, PA	I, II	3,2
	Cyst enucleation	P1, PA	I, II	5,5
	Mandibular fractures	P1, PA	I, II	10,10
	Peri-apical surgery	P1, PA	I	5
	Infection management	P1, PA	I, II	NA
	Biopsy procedures	P1	I, II	NA
	Removal of salivary calculi	PA	I, II	3,5
	Benign tumors	PA, A	II, III	3,3
	Mid face fractures	PA, A	II, III	3,5
	Implants	PA, A	II, III	5,5
	Tracheotomy	PA,A	II, III	2,2
	Skin grafts	PA	II, III	3,5
	Orthognathic surgery	PA, A	II, III	3
	Harvesting bone & cartilage Grafts			
	a. Iilac crest	PA	III	
	b. Rib	A	III	3
	c. Calvarial	A	III	2
	d. Fibula	A	III	2

	T.M. Joint surgery	PA,A	II, III	1
	Jaw resections	PA, A	II, III	3,3
	Onco surgery	A, O	II, III	3,3
	Micro vascular anastomosis	A, O	III	5,10
	Cleft lip & palate	PA, A	III	10,15
	Distraction osteogenesis	A.O	III	2,3
	Rhinoplasty	A,O	III	3,5
	Access osteotomies and base of skull surgeries	A,O	III	1,3

FORMATIVE EVALUATION PATTERN

MDS Part I

Theory and Practical Exam every 6 months.

Theory – Paper I & II

Portion- Applied Basic Sciences and Minor Oral Surgery

Practical – Performing Exodontia

MDS Part II

Theory and Practical Exam every 6 months.

Theory – Paper I - IV

Portion- Complete Portion **except** Supramajor Oral Maxillofacial Surgery

Practical – Performing surgical removal of third molar.

MDS Part III

Theory and Practical Exam every 6 months.

Theory – Paper I - IV

Portion- Complete Portion

Practical – Performing surgical removal of third molar.

Apart from the above, every student is evaluated on day to day basis based on –

1. Treatment on out patient & in patient basis
2. Seminar presentations
4. Journal club presentations

5. Case presentation

6. Theory Exam – Part I - Every 3 months, Part II - Every 2 months, Part III - Every month

YEAR WISE DUTIES OF PG's

FIRST YEAR

In addition to the duties as per curriculum proposed by DCI / Dr. Ram Manohar Lohia Awadh University, 1st year P.G's posted in U.G. clinic are also responsible for the following:-

1. Conducting the undergraduate students if some assistance is required by them in undergraduate clinic.
2. Helping the undergraduate students if some assistance is required by them in exodontias and other minor surgical procedures.
3. Recording complete history, getting the investigations (including biopsy) done and making the diagnosis of patients for the minor (impaction, apicoectomy etc) as well as major surgical cases coming to the department.
4. Minor cases thus selected and worked, on by 1st year P.G's will be handed over to 2nd year P.G. and the same 1st year P.G will assist the senior PG in conducting the minor surgery the next day.
5. Ensuring the cleanness, sterilization & fumigation of PG section. He /She will also assist the senior PG in conducting minor surgeries in PG clinics.
6. Ensuring that all the electric / electronic gadget in the department are switched off at the of the working day.
7. To attend ward round twice daily.
8. Any other work assigned to them by the HOD

In performing all duties mentioned above, 1st year P.G students will be closely observed by the senior lecturers and other seniors M.D.S. staff posted in respective sections of the department.

SECOND YEAR

2nd year P.G. students are supposed to conduct the minor surgeries allotted to them by the HOD under close supervision of a teaching staff. Each step of the surgical procedure performed shall be observed and evaluated by the supervision MDs staff and record should be maintained and submitted to the HOD for the final approval.

In addition to the duties as per curriculum proposed DCI/Dr. Ram Manohar Lohiya Awadh University, 2nd year P.G posted is also responsible for the following:

1. Helping & guiding the 1st year students in performing their above mentioned duties.

2. Pre anesthetic evaluation and preparation of the patients for minor / major surgery under G.A / L.A in operation theatre.
3. Keeping (along with 3rd year students) the material, instruments, medicines and medicament ready for use on the patient before during and after the surgery.
4. After complete evaluation and discussion with the teaching staff, performing the minor surgical procedures on patients selected by the 1st year P.G Student for him / Her. These minor surgeries are to be performed strictly under close supervision of teaching staff.
5. Attending to the case coming in the saraswati hospital and research center on the designated date of emergency duty. In case they fill the case cannot be handled by them a request to the consultant on call should be made immediately without wasting time.
6. Presurgical preparation of the patient and shifting the patient to OT in time after taking the recent consent of patient / guardian for surgery / Anesthesia. The surgical and anesthetic risks involved should be explained to the patient in detailed in writing.
7. Proper documentation of the pre, Intra , Post surgical & follow up record (Photograph, Radiographs, cast models and investigation record etc.) Record should be submitted within a week after patient is discharged. Records of the follow up of the patient should be maintained carefully and completely as per the treatment plan. Counter signatures of the teaching staff is must on all the records.
8. Post operative care of the patients under of faculty.
9. To arrange and attend ward round twice daily.
10. Any other duties assigned to them by HOD

THIRD YEAR

In addition to the duties as per curriculum proposed DCI/Dr. Ram Manohar Lohiya Awadh University, 3rd year P.G posted is also responsible for following : -

1. All cases posted for surgery should be presented by them at least a day prior to the OT day.
2. Attending to the casualties coming in the Saraswati Hospital & Research Centre on the designated date of the emergency duty. In case they feel the case cannot be handled by them a request to the consultant on call should be made immediately without wasting time.
3. After complete evaluation and discussion with the teaching staff, performing the minor surgical procedures on patients selected by the 1st year P.G student for him/her. These minor surgeries are to be performed strictly under close supervision of the teaching staff.
4. 3rd year students are responsible for the total preoperative preparation and postoperative management of the major cases. They may take the help of 1st and 2nd year PG student.
5. They have to arrange (along with 2nd Year P.G student) the materials, instruments, medicines and medicaments ready for the use on the patient before, during and after the surgery.

6. Presurgical preparation of the patient and shifting the patient to OT in time after taking the written consent of the patient/guardian for surgery/ anaesthesia. The surgical and anesthetic risks involved should be explained to the patient in detail in writing.
7. Proper documentation of the pre,intra, post surgical and follow-up records (photographs, radiographs, cast models and investigation records etc.)
8. To arrange/ attend morning and evening ward round daily.
9. Any other duty assigned to them by HOD

SUMMATIVE EVALUATION PATTERN

Scheme of MDS Examination:-

(A) Theory Examination

There shall be four paper for the examination. Each paper shall be of three hours duration. Pattern of question paper is as follows:

For Paper I to III-

Sr.No.	Nature of question	Division of marks	Total marks
1.	Long Answer Question	2 x 20	40
2.	6 out of 7 short Answer Questions	6 x 10	60
	Total Marks		100

For Paper IV-

Sr. No.	Nature of question	Division of marks	Total marks
1.	Essay (1 out of 2)	1 x 100	100

(B) Practical/Clinical Examination

300 Marks.

- | | |
|---|-----------|
| 1. Minor Oral Surgery (Surgical Removal of Mandibular third molar) | 150 |
| 2. Long Case Discussion | 100 |
| 3. Short Case Discussion | <u>50</u> |

Total 300 Marks

Number of days for conduct of practical examination upto 6 student shall be 2 days. In case the student are more than 6, it may exceed to the 3rd day in concurrence with the University. Examination will be conducted by 4 examiners – 2 internal and 2 external examiners.

(C) Viva voce Examination

100 Marks

Grand Viva - 80

Pedagogue - 20