

<b>Subject Code: 1RI3000102</b>	<b>Subject Title: Essentials of Disciplinary Research Subject-1</b> <b>Subject sub-title: Basic Oral And Maxillofacial Surgery</b>
<b>Pre-requisite Subject</b>	<b>- NONE -</b>

**Objectives of course:**

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

- Knowledge
- Skills
- Attitude
- Communicative skills and ability

**Learning outcomes:**

The program outlines addresses both the knowledge needed in Oral and Maxillofacial Surgery. 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:-

- © Basic sciences
- © Oral and Maxillofacial surgery

<b>Teaching Scheme ( Credit Distribution)</b>				<b>Assessment Scheme (Weightage)</b>	
<b>Lecture</b>	<b>Tutorial</b>	<b>Practical</b>	<b>Credit</b>	<b>Hall Exam</b>	<b>Continuous Evaluation</b>
4	--	--	4	60%	40%

Continuous evaluation is based on assignments/quiz/presentation/small projects as per the supervisor instructions.

<b>Subject Contents</b>			
<b>Sr. No.</b>	<b>Topic</b>	<b>No. of Lecture</b>	<b>Weightage (%)</b>
1	Evolution of Maxillofacial surgery. Diagnosis, history taking, clinical examination, investigations. Informed consent/medico-legal issues.	2	2
2	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	1	2
3	• 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	2	2

	retrospective, prospective, randomized control and blinded studies, understanding the principles and the meaning of various Bio-statistical tests applied in these studies		
4	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.	2	4
5	Medical emergencies – Prevention and management of altered consciousness, hyper sensitivity reaction, chest discomfort, respiratory difficulty	2	4
6	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	2	3
7	Wound management- Wound healing, factors influencing healing, basic surgical techniques, Properties of suture materials, appropriate use of sutures	1	2
8	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.	2	2
9	• Airway obstruction/management – Anatomy of the airway, principles of keeping the airway patent, mouth to mouth resuscitation, Oropharyngeal airway, endotracheal intubation, Cricothyroidectomy, Tracheostomy. 30• Anesthesia – stages of Anesthesia, pharmacology of inhalation, intravenous and regional anesthetics, muscle relaxants.	3	4
10	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	1	2
11	Tissue grafting – Understanding of the biological mechanisms involved in autogenous and heterogeneous tissue grafting.	2	2
12	Reconstructive oral and maxillofacial surgery – hard tissue and soft tissue reconstruction.	4	4
13	Orthognathic surgery – The trainee must be familiar with the assessment and correcting of jaw deformities	2	4

14	Laser surgery – The application of laser technology in the surgical treatment of lesions amenable to such therapy	2	3
15	Distraction osteogenesis in maxillofacial region.	2	3
16	Cryosurgeries – Principles, the application of cryosurgery in the surgical management of lesions amenable to such surgeries.	2	3
17	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.	3	4
18	Hair transplant perspectives Types of hair loss and classification of hair loss defects	3	3
19	Hair transplantations techniques	2	3
20	Hair repair techniques	2	2
21	Business consideration for hair transplant surgeon	1	2
22	Ancillary measures	1	2
23	Other diagnostic methods and imaging techniques	1	2

**List of Textbook References:**

1. Handbook of Local Anesthesia Malamed, Stanley
2. Local Anesthesia in Dentistry Howe, Geofferu L
3. Textbook of oral and maxillofacial surgery Malik, Neelima Anil
4. Contemporary oral and maxillofacial surgery Hupp, James R
5. Oral and maxillofacial trauma vol.- 1 ,2 Fonseca, Raymond
6. Tissue engineering; application in oral and maxillofacial surgery & Periodontics Lynch, Samuel
7. Surgical correction of facial deformities Mani, Varghese
8. Maxillofacial trauma and esthetic facial reconstruction Booth, Peter Ward
9. Hair Transplantation, Fifth Edition (Series in Cosmetic and Laser Therapy) Hardcover – 17 Dec 2010 by [Walter P. Unger](#) , [Ronald Shapiro](#)
10. Peterson's principles of oral and maxillofacial surgery vol.- 1,2 Miloro, Michael
11. Hair Transplant 360 Vol.3 Advances, Techniques, Business Development, And Global Perspectives Hardcover – 2014 by [Lam Samuel M](#) (Author)

**List of Article References:**

1. **Abbas I, Jamil M, Jehanzeb M, Ghous SM.** Temporomandibular joint ankylosis: experience with interpositional gap arthroplasty at Ayub Medical College Abbottabad. J Ayub Med Coll Abbottabad. 2005; 17(4):67-9.

2. **Song JY, Kim SG, Choi HM, Kim HJ.** Severe bony ankylosis of the temporomandibular joint on one side and contralateral adhesion: A case report. *Imaging science in dentistry.* 2015 Jun 1; 45(2):103-8.
3. **Movahed R, Mercuri LG.** Management of temporomandibular joint ankylosis. *Oral and Maxillofacial Surgery Clinics.* 2015 Feb 1; 27(1):27-35.
4. **Vijay P, Pardhe N, Sunil VS, Bajpai M, Chhibber N.** Unilateral Ankylosis of Temporomandibular Joint (TMJ) with Contralateral Condylar Aplasia and Related Orthopedic Deformity–Syndromic or Nonsyndromic? *Journal of clinical and diagnostic research: JCDR.* 2015 Jan; 9(1):ZD34.
5. **Sporniak-Tutak K, Janiszewska-Olszowska J, Kowalczyk R.** Management of temporomandibular ankylosis–compromise or individualization—a literature review. *Medical science monitor: international medical journal of experimental and clinical research.* 2011; 17(5):RA111.
6. **Mérida-Velasco JR, Rodríguez-Vázquez JF, Mérida-Velasco JA, Sánchez-Montesinos I, Espín-Ferra J, Jiménez-Collado J.** Development of the human temporomandibular joint. *The Anatomical Record: An Official Publication of the American Association of Anatomists.* 1999 May 1; 255(1):20-33.
7. **Kreutziger KL.** Surgery of the temporomandibular joint. I. Surgical anatomy and surgical incisions. *Oral surgery, oral medicine, oral pathology.* 1984 Dec 1; 58(6):637-46.
8. **Mérida-Velasco JR, Rodríguez-Vázquez JF, Mérida-Velasco JA, Sánchez-Montesinos I, Espín-Ferra J, Jiménez-Collado J.** Development of the human temporomandibular joint. *The Anatomical Record: An Official Publication of the American Association of Anatomists.* 1999 May 1; 255(1):20-33.
9. **Mabongo M.** Temporomandibular joint ankylosis in children. *IOSR J Dental Med Sci.* 2013; 12:35-41.
10. **Yew CC, Ab Rahman S, Alam MK.** Temporomandibular joint ankylosis in a child: an unusual case with delayed surgical intervention. *BMC pediatrics.* 2015 Dec; 15(1):169.
11. **Topazian RG.** ETIOLOGY OF ANKYLOSIS OF TEMPOROMANDIBULAR JOINT: ANALYSIS OF 44 CASES. *Journal of oral surgery, anesthesia, and hospital dental service.* 1964 May; 22:227-33.
12. **Malik Neelima Anil** Chapter-22 Ankylosis of the Temporomandibular Joint and its Management **BOOK TITLE: TEXTBOOK OF ORAL AND MAXILLOFACIAL SURGERY**
13. **El-Hakim IE, Metwalli SA.** Imaging of temporomandibular joint ankylosis. A new radiographic classification. *Dentomaxillofacial Radiology.* 2002 Jan 1; 31(1):19-23.
14. **Kaban LB, Perrott DH, Fisher K.** A protocol for management of temporomandibular joint ankylosis. *Journal of oral and maxillofacial surgery.* 1990 Nov 1; 48(11):1145-51.

**CONTINUOUS ASSESSMENT** includes assignments, tutorials, research related progress, literature survey of 3 research papers from peer-reviewed international journals and paper presentations at national /international conferences and publications in indexed journals.

<b>Subject Code: 1RI3000103</b>	<b>Subject Title: Essentials of Disciplinary Research Subject-2</b> <b>Subject sub-title: Advanced Oral And Maxillofacial Surgery</b>
<b>Pre-requisite Subject</b>	<b>- NONE -</b>

**Objectives of course:**

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**Learning outcomes:**

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<b>Subject Contents</b>			
<b>Sr. No.</b>	<b>Topic</b>	<b>No. of Lecture</b>	<b>Weightage (%)</b>
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2.	Medical emergencies – Prevention and management of altered consciousness, hyper sensitivity reaction, chest discomfort, respiratory difficulty	2	4
3.	Pre operative workup – Concept of fitness for surgery; basic medical work up; work up in special situation like diabetes, renal failure, cardiac and	2	3

	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		
4.	Wound management- Wound healing, factors influencing healing, basic surgical techniques, Properties of suture materials, appropriate use of sutures	1	2
5.	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.	2	2
6.	• Airway obstruction/management – Anatomy of the airway, principles of keeping the airway patent, mouth to mouth resuscitation, Oropharyngeal airway, endotracheal intubation, Cricothyroidectomy, Tracheostomy. 30 • Anesthesia – stages of Anesthesia, pharmacology of inhalation, intravenous and regional anesthetics, muscle relaxants.	3	4
7.	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	1	2
8.	Tissue grafting – Understanding of the biological mechanisms involved in autogenous and heterogeneous tissue grafting.	2	2
9.	Reconstructive oral and maxillofacial surgery – hard tissue and soft tissue reconstruction.	4	4
10	Orthognathic surgery – The trainee must be familiar with the assessment and correcting of jaw deformities	2	4
11	Laser surgery – The application of laser technology in the surgical treatment of lesions amenable to such therapy	2	3
12	Distraction osteogenesis in maxillofacial region.	2	3
13	Cryosurgeries – Principles, the application of cryosurgery in the surgical management of lesions amenable to such surgeries.	2	3
14	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	3	4

	facial muscles, bone, eyelids, external ear etc., surgical management of post acne scarring, face lift, blepharoplasty, otoplasty, facial bone recountouring etc.		
15	Hair transplant perspectives Types of hair loss and classification of hair loss defects	3	3
16	Hair repair techniques	2	2
17	Rhinoplasty	3	3
18	Facial Rejuvenation	2	2
19	Face Lift Surgery	4	4
20	Orthomorphic Surgery	3	3
21	TMJ replacement surgery	3	3
22	Bone augmentation techniques	2	2
23	Advanced Implantology: Zygoma & Pterygoid Implants	2	2

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1. Handbook of Local Anesthesia Malamed, Stanley
2. Local Anesthesia in Dentistry Howe, Geofferu L
3. Textbook of oral and maxillofacial surgery Malik, Neelima Anil
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**List of Article References:**

1. **Hernández BM, Villasana M, Ernesto J.** Temporomandibular joint ankylosis treated with arthroplasty in a patient with reumathoid arthritis. A case report. Revista Odontológica Mexicana. 2011; 15(3):163-8.
2. **Chidzonga MM.** Temporomandibular joint ankylosis: review of thirty-two cases. British Journal of Oral and Maxillofacial Surgery. 1999 Apr 1; 37(2):123-6.

3. **Moss ML, Rankow RM.** The role of the functional matrix in mandibular growth. *The Angle Orthodontist.* 1968 Apr; 38(2):95-103.
4. **Al-Hudaïd A, Hussien M, Al-Wesabi M, Aldialami A, Helmi J.** Conventional versus Modified Preauricular Incision Approaches to the Management of Temporomandibular Joint Ankylosis in Sana'a City, Yemen: A Comparative Clinical Study. *Yemeni Journal for Medical Sciences.* 2017 Dec 28; 11(1):53-9.
5. **Al-Kayat A, Bramley P.** A modified pre-auricular approach to the temporomandibular joint and malar arch. *British Journal of Oral Surgery.* 1979 Jan 1; 17(2):91-103.
6. **Weinberg S, Kryshchalskyj B.** Facial nerve function following temporomandibular joint surgery using the preauricular approach. *Journal of oral and maxillofacial surgery.* 1992 Oct 1; 50(10):1048-51.
7. **Thomas AF** Surgery of the TMJ: Facial nerve injury with modified dissection technique. *J Craniomandib Disord Facial Oral Pain* 1990
8. **Kimberly:** Auriculotemporal Syndrome following the Preauricular Approach to TMJ Surgery. *J Oral Maxillofac Surg* 1991
9. **Simon W:** Facial nerve function following TMJ surgery using the preauricular approach. *J Oral Maxillofac Surg* 1992
10. **Matthew Hall:** Facial nerve function following TMJ Surgery. *J Oral Maxillofac Surg*, 1985
11. **H. Matsuura, H. Miyamoto** The effect of gap arthroplasty on TMJ ankylosis: an experimental study *Int. J. Oral Maxillofac. Surg.* 2001
12. **Dimitroulis:** The interpositional dermis-fat graft in the management of TMJ ankylosis *Int. J. Oral Maxillofac. Surg.* 2004
13. **Dolanmaz:** Reconstruction of TMJ Using Distraction Osteogenesis: A Case Report. *Turk J Med Sci,* 2001
14. **Sadakah:** Intraoral distraction osteogenesis for the correction of facial deformities following temporomandibular joint ankylosis: a modified technique. *Int J Oral Maxillofac Surg.* 2006
15. **Gregory:** Treatment of TMJ Ankylosis Using Computer-Assisted and Image-Guided Surgical Technique, *AAOMS • 2005, Scientific Poster Session*
16. **Ellen Wen-Ching Ko:** TMJ Reconstruction in Children Using Costochondral Grafts. *J Oral Maxillofac Surg,* 1999
17. **S. E. Bond** Reconstruction of the TMJ by the transfer of the free vascularized second metatarsal *British Journal of Oral and Maxfac Surg* 2004
18. **Wax et al:** Retrospective Analysis of TMJ Reconstruction with Free Fibula Microvascular Flap. *Laryngoscope* June 2000
19. **Raja Kummoona:** Chondro-osseous iliac crest graft for one stage reconstruction of the ankylosed TMJ in children. *J Max Fac Surg,* 1986
20. **Hong Yong Long:** Modified Coronoid Process Grafts Combined With Sagittal Split Osteotomy for Treatment of Bilateral TMJ Ankylosis *J Oral Maxillofac Surg,* 2002
21. **Gunaseelan R:** Condylar reconstruction in extensive ankylosis of temporomandibular joint in adults using resected segment as autograft - A new technique. *Int J Oral Maxillofac Surg.* 1997
22. **P. C. Salins:** New perspectives in the management of Cranio mandibular ankylosis: *Int J Oral Maxillofac Surg,* 2000
23. **Erdem:** The Use of Acrylic Marbles for Interposition Arthroplasty in the Treatment Of TMJ Ankylosis: Follow Up Of 47 Cases: *Int J Oral Maxfac Surg* 2001

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