Course Specifications

Course Title:	**Local Anaesthesia and Exodontia.**
Course Code:	**MDS 213**
Program:	**Bachelor of Dental Surgery (BDS)**
Department:	**Maxillofacial Surgery and Diagnostic Sciences**
College:	**College of Dentistry**
Institution:	**Majmaah University**

Table of Contents

A. Course Identification

1. Credit hours: 2 hours
2. Course type **a.** University ☐ College ☐ Department ☑ Others ☐ **b.** Required ☑ Elective ☐
3. Level/year at which this course is offered: 2nd Year
4. Name of faculty member responsible for the course: Dr.Divakar Thiruvenkata Krishnan
4. Pre-requisites for this course (if any)**:** 113 ANA
5. Co-requisites for this course (if any)**:** None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	30	100%
2	**Blended**		
3	**E-learning**		
4	**Correspondence**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	30
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	30
Other Learning Hours*		
1	**Study**	30
2	**Assignments**	15
3	**Library**	15
4	**Projects/Research Essays/Theses**	
5	**Others**(specify)	
	Total	60

***** The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description:-Course Description: **This course covers patient assessment and suitability for local anesthesia and surgery. It introduces the students to the concept of pain control and widens their knowledge in the neuro-physiology of the oral cavity and pharmacokinetics of local anesthesia drugs. It also addresses the potential local and systemic complications of LA and how to manage them. In second part of the course, indications and contra-indications for teeth extraction, post-operative instructions and follow up and possible complications and their management are discussed.**
2. Course Main Objective:- The main purpose for this course is to equip students with knowledge of the local Anastasia , exodontia and to know the procedural details to perform without complications

3. Course Learning Outcomes

CLOs		AlignedPLOs
K0	**Knowledge:**	
K1.7	Recall the normal orofacial anatomy, and physiology of nerve conduction,	K1
K3.9	Describe the pharmacological properties of local anesthetic agent	K3
2	**Skills :**	
S3.2	To understand the technique of local anaesthesia for specific tooth and to determine the strategies for management and removal of tooth.	S3
3	**Competence:**	
C2.5	Demonstrate leadership skills and coordinate with fellow colleagues to submit a group task or assignment	C2

C. Course Content

No	List of Topics	Contact Hours
1	**Introduction** History of Anaesthesia, Osteology, and anatomy of Maxilla and Mandible:	2
2	**Neurophysiology** Structure and classification of nerve, Electrophysiology and Electrochemistry of Nerve Conduction	2
3	**Pharmacology of Local Anesthetics** Pharmacokinetics of Local Anesthetics, Ester Local Anesthetics,Amide Local Anesthetics, Excretion,Systemic Actions of Local Anesthetics.	1
4	**Pharmacology of Vasoconstrictors** Pharmacology of Specific Agents,Mechanisam of Action local and Systemic effects, Maximum Doses	1
5	**Clinical Action of Specific Agents** Selection Of A Local Anesthetic, clasifications, maximum dose calculation	1
6	**Armamentarium** **The Syringe(**Types of Syringes,Nondisposable Syringes,Self-aspirating syringe) **The Needle(**Types,Anatomy of A Needle,Local Gauge,Problems With Needles) **The Cartridge**	1
7	**Basic Techniques of Local Anaesthesia** • Surface or Topical Anaesthesia • Infiltration Anaesthesia or Local Infiltration • Maxilla and Mandible Technique • Types of Infiltration Anaesthesia • Submucosal Injection • Subperiosteal Injection • Supplementary Injections • Intraligament (Periodontal or Peridental) Injection • Intrapulpal Anaesthesia • Intraosseous Injection Technique • Intraseptal Anaesthesia • Local Infiltration of the Palate • Field Block • Nerve block	2
8	**Local Anaesthesia techniques for mandible** • IA Nerve Blocks • Direct Technique	2

	• Indirect Technique • Long Buccal Nerve Block • Mental Nerve Block and Incisive Nerve Block • Gow-Gates' Mandibular Nerve Block • Akinosi (Closed Mouth) Mandibular Nerve Block • Extra oral Techniques for Anaesthesia • Aesthetic Technique for Mandibular Nerve	
9	**Local Anaesthesia techniques for Maxilla** • NERVE BLOCKS, Intraoral Nerve Blocks • Infraorbital Nerve Block • Posterior Superior Alveolar Nerve Block • Nasopalatine Nerve Block • Greater Palatine Nerve Block • Nerve Blocks for Maxillary Nerve • Extra oral Nerve Blocks • Infraorbital Nerve Block • Maxillary Nerve Block	2
10	**Local & systemic Complications of LA:** • Complications arising from the drugs or chemicals used for local anaesthesia Complications arising from injection techniques • Needle-stick injuries • Failure to obtain local anaesthesia • Complications arising from both • Bizarre neurological symptoms • Vasodepressor syncope • Adverse drug reactions • Allergic reactions • Toxic reactions • Vasoconstrictor (epinephrine) overdose • Idiosyncratic reactions • Emergency drugs • Equipment used for treatment of complications	2
11	• **Management of patients with compromising medical conditions.**Cardiovascular Problems • Pulmonary Problems • Renal Problems • Hepatic Disorders • Endocrine Disorders • Hematologic Problems • Neurologic Disorders • Pregnancy	2
12	**Armamentarium for Basic Oral Surgery** • Instruments for incising tissue • Instruments for elevating mucoperiosteum • Instruments for retracting soft tissue • Instruments for controlling hemorrhage • Instruments for removing bone • Instruments for removing soft tissue • From bony defects	3

	• Instruments for suturing mucosa • Instruments for irrigation • Dental elevators • Extraction forceps	
13	**Extraction of teeth and roots** • Clinical examination • Radiographic examination • Extraction of teeth • Knowledge of tooth morphology • Application of force related to tooth morphology • Use of forceps • Use of elevators to assist and facilitate • Extraction procedure • The supporting hand • Chair position • Order of extraction of teeth	3
14	**Principles of Uncomplicated Exodontia** • Indications for removal of teeth • Contraindications for the removal of teeth • Clinical evaluation of teeth for removal • Radiographic examination of tooth for removal • Relationship of associated vital structures • Configuration of roots • Condition of surrounding bone • Patient and surgeon preparation • Chair position for forceps extraction • Mechanical principles involved in tooth extraction • Postextraction care of tooth socket • Perioperative and postoperative complications • Infection control in surgical practice	3
15	**Revision**	1

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	TeachingStrategies	AssessmentMethods
K 0	**Knowledge**		
K1.1	Recall the normal orofacial anatomy and physiology of nerve conduction	Lectures / group discussion	Recall/Factual Questions in Written exam , Assignments, quiz
K3.1	To Describe the pharmacological properties of local anesthetic agent and to explain the anesthetic techniques	Lectures / group discussion	Recall/Factual Questions in Written exam , Assignments, quiz
S 0	**Skills :**		
S3.1	Explain the techniques for administering of local anesthetics and tooth removal.	Lectures / group discussion	Conceptual, Analytical or Evaluative questions in Written exams , Assignments, quiz
C 0	**Competence:**		
C2.1	Demonstrate leadership skills and coordinate with fellow colleagues to submit a group task or assignment	Lectures / group discussion	The group task / Assignment will be supervised closely and the work done by each student will be evaluated using rubrics

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quiz 2(1+1)	Week4th&Week 20th	10%
2	Midterm exam – Theory	Week 6th	40%
3	Behavior / Professionalism	During the course	5%
4	Assignment	During the course	5%
5	Final Theory Exam	To be announced	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice : The student shall avail the consultancy during the displayed office hours

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	• Contemporary oral and maxillofacial surgery 6th edition. • Local anesthesia handbook by Malamed, 6th edition
Essential References Materials	• Journal of Oral and Maxillofacial Surgery. • International Journal of Oral and Maxillofacial Surgery.
Electronic Materials	None
Other Learning Materials	None

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	✓ Lecture room suitable for 30 students
Technology Resources (AV, data show, Smart Board, software, etc.)	✓ Projector ✓ Smart board with all the accessories ✓ Internet
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	✓ Course Evaluation Survey ✓ Quality of Exam Survey
	Faculty	✓ CLO Mapping with teaching & assessment. ✓ Course Blueprinting ✓ Grade Analysis ✓ Psychometric Analysis
	Peers	✓ Grade Verification
Extent of achievement of course learning outcomes	Faculty member / Quality assurance committee	✓ Direct assessment outcome analysis ✓ Course report preparation
Quality of learning resources, etc	Students / Faculty	✓ Academic advising survey ✓ Student experience survey

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes,Quality oflearning resources, etc.)
Evaluators (Students,Faculty, Program Leaders,Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Department Council**
Reference No.	Meeting #6
Date	30/8/1440