



Course Specifications

Institution:	College of Dental Medicine
Academic Department :	Maxillofacial Surgery and Diagnostic Sciences Department
Programme :	BDS
Course :	Local Anaesthesia and Exodontia 213 MDS
Course Coordinator :	Mouetaz Kheirallah
Programme Coordinator :	Abdulrahman Alatram
Course Specification Approved Date :	16/ 11 / 1435 H



A. Course Identification and General Information

1 - Course title :	Local Anaesthesia and Exodontia	Course Code:	213 MDS
2. Credit hours :	(2)		
3 - Program(s) in which the course is offered:	BDS		
4 – Course Language :	English		
5 - Name of faculty member responsible for the course:	Mouetaz Kheirallah		
6 - Level/year at which this course is offered :	2nd		
7 - Pre-requisites for this course (if any) :	<ul style="list-style-type: none"> • ANA 113 		
8 - Co-requisites for this course (if any) :	<ul style="list-style-type: none"> • 		
9 - Location if not on main campus :	(Zulfi)		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	95 %
B - Blended (traditional and online)	<input checked="" type="checkbox"/>	What percentage?	5 %
D - e-learning	<input type="checkbox"/>	What percentage? %
E - Correspondence	<input type="checkbox"/>	What percentage? %
F - Other	<input type="checkbox"/>	What percentage? %
Comment: Using smart board, attractive Audio-visual Aids and practical demonstration			

B Objectives

<p>What is the main purpose for this course?</p> <p>Patient assessment and his suitability for local anaesthesia and surgery, pain control, pharmacokinetics of the drugs used in local anaesthesia and complications, how to avoid and how to manage. Exodontia covers control of infection, the different methods for extraction, and the used instruments. Also, it covers indications and contraindications for teeth extraction, post-operative instructions and follow-up. Lastly, complications which may occur during or after extraction and surgery, how to reduce and manage.</p>
<p>Briefly describe any plans for developing and improving the course that are being implemented:</p> <p>At this stage the student is afraid of clinical work, for that it is necessary to be trained before clinical training by adding one credit hour for preclinical training.</p>



C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
History of Anesthesia, Osteology of Maxilla and Mandible: <ul style="list-style-type: none"> - Early of anesthesia and discovery of inhalation anesthesia - Body of Maxilla (sides, base, processes) - Palatine bone - Mandible (body, ramus) 	1	1
Neuroanatomy, Neurophysiology: <ul style="list-style-type: none"> - Trigeminal nerve (functions, attachment, divisions, course, types of fibers, trigeminal Ganglion, roots, branches, pterygopalatine Ganglion, desirable properties of local anesthetics, the axon. - Anatomy of a neuron, - Physiology of peripheral nerves. - Electrochemistry (repolarization, membrane channels, impulse propagation, factors affecting nerve conduction). - Effectiveness of local anesthetic agents. 	1	1
Theories of pain perception and mode of action of local anesthetic agents: <ul style="list-style-type: none"> - Fundamentals of impulse generation - Specificity Theory, Pattern Theory, Gate-control Theory, - Dual nature of pain, Pain Reaction, - Mechanism of action: acetylcholine theory, surface charge theory, membrane expansion theory, specific receptor theory. 	1	1
Local Anesthetic Agents and Vasoconstrictors: <ul style="list-style-type: none"> - Properties of an ideal local anesthetic agent. - Classifications - <i>Water-soluble topical anesthetic agents</i> - <i>Lidocaine hydrochloride,</i> - Injectable local anesthetic agents - Local anesthetic agents with or without a vasoconstrictor, - Large dose - Selection of local anesthetic agents - Vasoconstrictors: action, classifications, adrenergic receptors, dilution of vasoconstrictors, pharmacology of specific agents, Epinephrine, Norepinephrine, - Medical status of the patient, contraindications. 	2	2
Local Anesthetic Cartridges and Vials:	2	2





- Clinical relevance, methods of pain control, indications, contraindications, advantages, disadvantages, peripheral alcohol Injections, extra cranial nerve section and nerve avulsion, intracranial section of the posterior sensory root - Essential components (Syringes, Cartridges and Needles)		
Uses of local anesthesia: Diagnostic use, Therapeutic use, Perioperative use.	1	1
Basic Techniques of Local Anesthesia: Topical Anesthesia, Infiltration Anesthesia (types) , maxilla and mandible technique, submucosa injection, paraperiosteal injection	1	1
Basic Techniques of Local Anesthesia: subperiosteally injection, supplementary injections, intraligament injection, intrapulpal anesthesia, intraosseous injection technique, intraseptal anesthesia, local infiltration of the palate.	1	1
Basic Techniques of Local Anesthesia: - Field block and nerve block, intraoral nerve blocks, infraorbital nerve block, posterior superior alveolar nerve block, nasopalatine nerve block, greater palatine nerve block, nerve blocks for maxillary nerve, extraoral nerve blocks, infraorbital nerve block, maxillary nerve block.	1	1
Basic Techniques of Local Anesthesia: - Injection techniques for mandibular nerve and its branches, intraoral nerve blocks, pterygomandibular block, direct technique, indirect technique, long buccal nerve block, mental nerve block and incisive nerve block. - Gow-Gates' mandibular nerve block, Akinosi mandibular nerve block, extraoral techniques.	1	1
- Complications arising from drugs or from injection techniques or both: needle-stick injuries, failure to obtain local anesthesia, bizarre neurological symptoms. - Vasodepressor syncope - Adverse drug reactions: allergic reactions, toxic reactions, - <i>Vasoconstrictor (Epinephrine) Overdose</i> - Idiosyncratic Reactions - Emergency drugs and equipment used for treatment of complications.	1	1
History and Physical Examination: - Observation of Patient, Medical Examination, Patient identification, Chief complaint, Review of systems, Physical examination, Assessment and plan.	1	1
MANAGEMENT WITH COMPROMISING CONDITIONS - Cardiovascular problems, Pulmonary Problems, Renal Problems, Hepatic Disorders, Endocrine Disorders, Hematologic Problems, Neurologic Disorders, Pregnancy	1	1
Armamentarium for Basic Oral Surgery	1	1



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.	1	1
Extraction of teeth and roots - Extraction procedure, The supporting hand, Chair position, Order of extraction of teeth, Extractions in children under out-patient general anesthesia.	1	1
Extraction of teeth and roots - Extraction with surgeon seated, Fracture of the tooth, The transalveolar approach, Removal of roots after the socket has healed, Arrest of hemorrhage. - Post-extraction instructions	1	1
Principles of Uncomplicated Exodontia - Indications for removal of teeth - Contraindications for removal of teeth. - Clinical evaluation of teeth for removal	1	1
Principles of Uncomplicated Exodontia - Relationship of Associated Vital Structures - Configuration of Roots - Condition of Surrounding Bone - Mechanical principles involved in exodontia.	1	1
PROCEDURE FOR CLOSED EXTRACTION - Role of Opposite Hand - Role of Assistant during Extraction - Specific techniques for removal of each tooth.	1	1
- Modifications for Extraction of Primary Teeth - Post extraction care of tooth socket. - Perioperative and Postoperative Complications	2	2
Infection Control in Surgical Practice	1	1

2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	12	0	0	0	0	12
Credit	12	0	0	0	0	12



3. Additional private study/learning hours expected for students per week.

2

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Learn the art of assessing patients and their suitability for all minor surgical procedures, by taking systematic history, including detailed medical history, thorough physical examination and the proper use of investigations.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice, and class Participation
1.2	Study and learn the applied surgical anatomy of the area and understand the neuroanatomy.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice, and class Participation
1.3	Appreciate and understand the physiology of pain and pain conduction in order to understand the mechanism of action of anesthetic agents.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice, and class Participation
1.4	Understand the pharmacokinetics and the mode of action of the various local anesthetic agents, the techniques employed to block nerve conduction and produce anesthesia. The student, also, should study the possible complications, their etiology, signs and symptoms, prevention and their management.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice, and class Participation
1.5	Study and learn the methods and techniques employed to institute infection control measures, sterilization, asepsis and disinfection.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice
1.6	Learn about the indications and	Textbook,	Written exams,



	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
	contraindications for extraction of teeth, study the different techniques and the methods used to perform teeth removal.	discussion, websites and audiovisual	Questioning, Review test, performance notice, and class Participation
1.7	Learn about the intra-alveolar technique and the principles of forceps and elevators use.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice, and class Participation
1.8	Study the indications for trans-alveolar technique, the designing of flaps, the methods employed for bone removal and the different types of suture material.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice, and class Participation
1.9	Understand and give post-operative instructions and medications when necessary.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice, and class Participation
1.10	Recognize and manage the different complications encountered during extraction of teeth or immediately following the extraction.	Textbook, discussion, websites and audiovisual	Written exams, Questioning, Review test, performance notice, and class Participation
2.0	Cognitive Skills		
2.1	Assigned project work	Textbooks, websites, seminars, Handouts.	Exams by written and oral quizzes. Questioning, Review test, performance notice.
2.2	Group participation	Textbooks, websites,	Exams by written and oral quizzes.





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
		seminars, Handouts.	Questioning, Review test, performance notice.
2.3	Discussions	Textbooks, websites, seminars, Handouts.	Exams by written and oral quizzes. Questioning, Review test, performance notice.
3.0	Interpersonal Skills & Responsibility		
3.1	A cooperative and open atmosphere is expected during all class meetings.	Eye to eye contacts and group works	Group discussions and assigned readings
3.2	Students are encouraged to work together and to study together.	Eye to eye contacts, group works	Group discussions and assigned readings
3.3	No wireless devices (cell phones, pagers, PDAs), and no devices with ear plugs are allowed during exams, quizzes, or classes.	-	-
4.0	Communication, Information Technology, Numerical		
4.1	Oral (verbal) Questions	By using attractive Audiovisual Aids. Justifications and brief descriptions	Let them ventilate their feelings and exams
4.2	Communication with students through University Website	By using attractive Audiovisual Aids. Justifications and brief descriptions	-
5.0	Psychomotor		
5.1	Not applicable		





5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	1st exam	At the 7 TH week	25%
2	2ed exam	During the semester	25%
3	Quiz and Assignment	11 TH week	10%
4	Final exam	End of the semester	40%

D. Student Academic Counseling and Support

Arrangements for availability of faculty for individual student consultations and academic advice. Office hours 6HRS/ week

E. Learning Resources

1. List Required Textbooks :

- Handbook of Local Anesthesia by Stanley F. Malamed
- Tooth Extraction: A Practical Guide By Paul Robinson
- Textbook prepared by course director from different references

2. List Essential References Materials :

- **Handbook of Local Anesthesia by Stanley F. Malamed**
- **Tooth Extraction: A Practical Guide By Paul Robinson**

3. List Recommended Textbooks and Reference Material :

- **Contemporary Oral and Maxillofacial Surgery By Peterson, Ellis, Hupp, Tucker. 4 editions (2003).**

4. List Electronic Materials :

- **Textbook prepared by course director**
- **Video for anesthesia techniques**
- **Presentations**

5. Other learning material :

- **Anatomy 3D for head and neck anatomy**

F. Facilities Required





1. Accommodation

- **In the Classroom, number of seats is 20**
- **Laptop and Data show,**
- **Smart Board**

2. Computing resources

- **Laptop**
- **Smart Board**

3. Other resources

- **Practical demonstration**

G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

- **Using questioners as an evaluation tools**

2. Other Strategies for Evaluation of Teaching by the Program/Department Instructor :

- **Assess the teacher's abilities and potentials by using evolutionary tools which are fulfil the reliable, unambiguous, measurable, achievable criteria's.**

3. Processes for Improvement of Teaching :

- **In service educational process means of updating the recent trends in educational process, involving in research**

4. Processes for Verifying Standards of Student Achievement

- **By using evaluation tools and skill assessment**

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

- **Prepare work sheet for review; refresh the previous knowledge, and panel discussions.**

Course Specification Approved
Department Official Meeting No (1) Date 16 / 11 / 1435 H





Course's Coordinator

Name : Moutaz Kheirallah

Signature : 

Date : 18/ 12 / 1435 H

Department Head

Name : Moutaz Kheirallah

Signature : 

Date : 18/ 12 / 1435 H

