**National Commission for Academic Accreditation & Assessment**

**Course Specification**

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| Institution: College of Dentistry.  |
| College/Department : Biomedical Dental Science (BDS) |

**A Course Identification and General Information**

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| 1. Course title and code:Applied Surgical Anatomy, Local Anaesthesia & Exodontia. BDS-0701312  |
| 2. Credit hours: 02 |
| 3. Program(s) in which the course is offered. Bachelor degree BDS Dentistry |
| 4. Name of faculty member responsible for the course: Dr. Haytham Ahmed Al Mahalawy |
| 5. Level/year at which this course is offered: 3rd year - 6th Semester |
| 6. Pre-requisites for this course: 0710222; 0711221; 0712321 |
| 7. Co-requisites for this course (if any): None |
| 8. Location if not on main campus: College of Dentistry |

**B Objectives**

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| 1. Summary of the main learning outcomes for students enrolled in the course.After completing this course, students should be able to:* Describe the applied surgical anatomical considerations related to Local Anaesthesia & Exodontia.
* Discuss the concepts and mechanisms of pain & innervations (neurophysiology)
* Recognize the pharmacokinetics and the pharmacodynamics of local anaesthetic drugs
* Recognize the properties of different types of local anesthetic drugs and vasoconstrictors used in dental practice
* Describe the different techniques of local anaesthesia
* Identify complications of local anesthesia (local & systemic complications)
* Discuss the Medical assessment of patients before LA and tooth extraction
* Identify the indications, contraindications and complications of Exodontia
* Select appropriate surgical armamentarium.
* Perform different techniques of local anesthesia on a simulation model.
* Perform simple tooth extraction on a simulation model.
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| 2. Briefly describe any plans for developing and improving the course that are being implemented. (eg increased use of IT or web based reference material, changes in content as a result of new research in the field)* Peer review of lecture classes
* Using black board software to engage the students in learning activities & increase their interactions.
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**C.Course Description**(Note: General description in the form to be used for the Bulletin or Handbook should be attached)

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| 1 Topics to be Covered  |
| List of Topics | No ofWeeks | Contacthours |
| **Applied surgical Anatomy** | 2 | 2 |
| **Neurophysiology and anatomy of dental pain** | 1 | 1 |
| **Principles of Local anesthesia.** | 2 | 2 |
| **Techniques of Local anesthesia.** | 1 | 1 |
| **Complications of Local anesthesia.** | 2 | 2 |
| **Pre-surgical medical assessment**  | 1 | 1 |
| **Principles of Uncomplicated Extraction** | 1 | 1 |
| **Principles of Surgical Extraction** | 1 | 1 |
| **Complications of tooth extraction** | 2 | 2 |
| **Post-extraction care, instructions and prescription**  | 1 | 1 |

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| 2 Course components (total contact hours per semester):  |
| Lecture: 14 | Tutorial:  | Laboratory: 14 | Practical/Field work/Internship | Other: |

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| 3. Additional private study/learning hours expected for students per week. (This should be an average :for the semester not a specific requirement in each week)4 hours |

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| 4. Development of Learning Outcomes in Domains of Learning For each of the domains of learning shown below indicate:* A brief summary of the knowledge or skill the course is intended to develop;
* A description of the teaching strategies to be used in the course to develop that knowledge or skill;
* The methods of student assessment to be used in the course to evaluate learning outcomes in the domain concerned.
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| **a. Knowledge**  |
| * Description of the knowledge to be acquired

After completing this course, students should be able to: (I-4) Describe the innervations, blood supply, lymphatic drainage,bone structure and musculature of the oro-facial region.* Describe the anatomical landmarks of the mandible and maxilla,

(I-16) Describe the techniques of local anesthesia and their complications* Discuss the concepts and mechanisms of pain & innervations.
* Recognize the pharmacokinetics and the pharmacodynamics of local anesthetic drugs and their formulation, routes and methods of administration, actions, fate, and local and systemic effects
* Recognize the principles of local anesthesia and different techniques for obtaining local anesthesia.
* Describe local and systemic complications of local anesthesia

(I-15) Discuss the principles of oral surgery including exodontia.* Recall the fundamental principles of aseptic technique.
* Describe the concepts and techniques of uncomplicated tooth extraction
* Describe the concepts and techniques of surgical tooth extraction
* Mention the basic oral surgical instruments that are necessary for performing local aneshesia and dental extractions.
* Discuss the complications of teeth extraction
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| (ii) Teaching strategies to be used to develop that knowledge• Lectures • Small group discussion• Assignments |
| (iii) Methods of assessment of knowledge acquired• Short assay questions• Multiple choice questions (MCQs) • Matching questions |
| **b. Cognitive Skills** |
| (i) Description of cognitive skills to be developedAfter completing this course, students should be able to:* Differentiate between various types of local anesthesia.
* Estimate the proper dose of local anesthesia
* Select the suitable local anaesthetic drug for each case.
* Recognize the appropriate management of the complications of local anesthesia.

**(II-12) Select appropriate surgical armamentarium including local anesthesia and suture materials.*** Select LA Armamentarium
* Select the appropriate technique for administration of local anaesthesia
* Select the appropriate surgical instruments and equipment

**(II-13) Assess the difficulties associated with various dento-alveolar surgical procedures.** * Recognize the indications, contra-indications and complication of teeth extraction.
* Estimate the difficulty of teeth extraction after clinical and radiographic examination. ( simple or surgical extraction)
* Recognize the appropriate management of expected complications arising from tooth extraction.
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| (ii) Teaching strategies to be used to develop these cognitive skills* Lectures
* Small group discussion
* Case-based teaching
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| (iii) Methods of assessment of students cognitive skills * Short-answer questions
* MCQs
* Case based questions
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| **c. Interpersonal Skills and Responsibility**  |
| (i) Description of the interpersonal skills and capacity to carry responsibility to be developed**After completing this course, the students would be able to:*** Demonstrate awareness of own limitations, and identify developmental needs and approaches for improvements
* Conduct themselves in a professional manner (*i.e.* dress, and hygiene)
* Take responsibility for appropriate share of team work
* Take responsibility for arriving on time.
* Be accountable for deadlines; complete assignments and responsibilities on time
* Take responsibility for appropriate handling of equipment.
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| (ii) Teaching strategies to be used to develop these skills and abilities* + Role modeling
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| (iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility* Observations by faculties
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| **d. Communication, Information Technology and Numerical Skills**  |
| (i) Description of the skills to be developed in this domain.* Effectively communicate with faculties and colleagues
* Demonstrate basic skills and positive attitude towards learning.
* Search, collect, organize and interpret biomedical information from different databases and sources
* Use information and communication technology to complete assigned tasks
* Maintain records of own practice for analysis and improvement
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| (ii) Teaching strategies to be used to develop these skills • Role-playing with peers |
| (iii) Methods of assessment of students numerical and communication skills • Faculty feedback• Formalized faculty observation of students |
| **e. Psychomotor Skills (if applicable)** |
| (i) Description of the psychomotor skills to be developed and the level of performance required (III-5) Perform various techniques of local anesthesia * Perform different techniques of local anesthesia on a simulation model

(III-6) Perform simple and surgical extraction of erupted teeth and buried roots * Perform simple tooth extraction on simulation model.
* Performing different suturing techniques on a simulation model
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| (ii) Teaching strategies to be used to develop these skills• Demonstration• Role modelling • Supervised practice |
| (iii) Methods of assessment of students psychomotor skills1-Practical exam for Local anesthesia and tooth extraction on simulation models with checklist rating scale by faculty 2-Objective structured practical examination (OSPE) |

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| 5. Schedule of Assessment Tasks for Students During the Semester |
| Assessment  | Assessment task (eg. essay, test, group project, examination etc.) | Week due | Proportion of Final Assessment |
| 1 | Quiz in Applied Anatomy | 3rd | 10% |
| 2 | 1st Quiz | 5th  | 10% |
| 3 | 1st Practical Exam: L.A. at simulation lab | 7th | 10% |
| 4 | 2nd Quiz | 10th | 10% |
| 5 | 2nd Practical Exam: Extraction at simulation lab | 12th | 10% |
| 6 | Dept. Discretion in the form of two assignments Basis of evaluation: layout, heading, content, references used, and summary | Dead time for each assignment will be announced | 10% |
| 7 | Final Practical Exam L.A. & Exodontia | 15th | 10% |
| 8 | Final Written Exam | 15th | 30% |

**D.Student Support**

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| 1. Arrangements for availability of teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)All the faculties are available for feedback and provide the students with feedbacks after the lectures and clinical sessions.The faculties are available for 4 hours each week (office hours) for consultation and academic advising. |

##### E Learning Resources

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| 1. Required Text(s)

• Malamed, Handbook of Local Anaesthesia. Mosby, c.v. co. ltd, 5th Edition, 2002.• Paul D. Robinson.1st Edit. 2000,Tooth extraction a practical guide • Peterson L, Ellis E, Hupp, J and Tucker, M. Contemporary Oral And Maxillofacial Surgery Mosby, C.V.Co.Ltd, 4th Edition 2003* The Anatomical Basis of Dentistry. 3rd ed. St. Louis; Toronto: Mosby; 2009
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| 2. Essential References * Pedlar & Frame. Oral & Maxillofacial Surgery – An objective based textbook, Churchill Livingstone 1st edition, 2001.
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| 3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)* Wolef's Dental Anatomy, Rickne C. Scheid and Gabnel Weiss, Lippincott, Williams and Wilkins 8th Edition 2012
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| 4-.Electronic Materials, Web Sites etcBlack board software  |
| 5- Other learning material such as computer-based programs/CD, professional standards/regulationsDVD of different local anaesthesia injection techniques |

**F. Facilities Required**

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| Indicate requirements for the course including size of classrooms and laboratories (ie number of seats in classrooms and laboratories, extent of computer access etc.) |
| 1. Accommodation (Lecture rooms, laboratories, etc.) |
| 2. Computing resources |
| 3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)  |

**G Course Evaluation and Improvement Processes**

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| 1 Strategies for Obtaining Student Feedback on Effectiveness of TeachingStudent survey at the end of each topic taught in the classroomStudent feedback collected after each examStudent feedback taken after the clinical sessions |
| 2 Other Strategies for Evaluation of Teaching by the Instructor or by the DepartmentPeer review and discussion of lectures taken by the faculty |
| 3 Processes for Improvement of TeachingPeer review and discussion of lectures taken by the facultyIntroduce the assigned reading in a preceding classStudent feedback collected after each exam |
| 4. Processes for Verifying Standards of Student Achievement (eg. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) |
| 5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. |