**King Saud University**

**College of Dentistry**

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| **Course Specification** | | |
| Course Title : | **Clinical Restorative Procedures** | |
| Course Code : | **313 RDS** | |
| Course Director(s): | **Dr. Salah AlShethri - DUC**  **Dr. Khulood AlMansour - MUC** | |
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| Department : | **College of Dentistry** | |
| Academic Year : | **1432-1433H (2011-2012G)** | |

**Course Specification**

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| Institution | King Saud University |
| College/Department | College of Dentistry |

**A- Course Identification and General Information**

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| 1.  Course title and code | Clinical Restorative Procedures – 313 RDS |
| 2.  Credit hours: | 3 hours |
| 3.  Program(s) in which the course is offered.  (If general elective available in many programs indicate this rather than list programs) | Bachelor of Dental Sciences, BDS |
| 4.  Name of faculty member responsible for the course | Dr. Salah AlShethri - DUC  Dr. Khulood AlMansour - MUC |
| 5.  Level/year at which this course is offered : | Third Year |
| 6.  Pre-requisites for this course (if any) | Pre-Clinical Operative course 213 RDS |
| 7.  Co-requisites for this course (if any) | 211 MFS- Local Anesthesia & Exodontia |
| 8.  Location if not on main campus | Darriyah University Campus (DUC)  Malaz University Campus (MUC |

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| **B- Objectives**  1.  Summary of the main learning outcomes for students enrolled in the course.  The course provides the student with knowledge and skills required to handle, prevent, and treat patients with simple restorations (carious and non-carious lesions).  All lectures are aiming to the reinforcement of the previous knowledge gained in the early operative courses and help in updating the student’s information.  It will be directed towards the clinical application of the principles of different cavity preparations as well as different types of restorative materials.  E.g. At the end of this course, the students should be able to:-   1. Diagnose caries and identify patient at high risk. 2. Write a proper treatment plan and educate the patient on his/her dental needs. 3. Diagnose dental pain and make differential diagnosis of dental pain. 4. Perform pulp vitality test using different methods. 5. Educate and motivate patient to oral hygiene. 6. Select proper instruments (hand cutting instruments, burs, etc.) for cavity preparation. 7. Perform all clinical practice to the highest professional level. 8. Select and use liners and bases properly. 9. Use matrices and wedges correctly. 10. Make amalgam restoration to a biologically, physiologically, and mechanically acceptable level. 11. Make resin composite restorations to a biologically, physiologically, and mechanically acceptable level. 12. Make glass ionomer restorations to a biologically, physiologically, and mechanically acceptable level. 13. Use the acid-etch techniques correctly. 14. Make proper finishing and polishing for all types of restorations. 15. Restore non-carious lesion (e.g. abrasion, erosion, and other defects). |
| 2.  Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material,  changes in content as a result of new research in the field)   * Update the content periodically. * Increase use of web-based references. * Emphasize on linking theoretical information with clinical practice. |

**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 | | | | | | | |
| Topic | | | No. Of Weeks | | Contact hours | | |
| Introduction to 313 RDS course | | | 1 | | 1 | | |
| Examination, Diagnosis and Treatment Planning | | | 2 | | 2 | | |
| Explanation of Clinical Manual and Regulations | | | 1 | | 1 | | |
| Control of moisture | | | 1 | | 1 | | |
| Dental Caries: Diagnosis and Clinical Manifestation | | | 1 | | 1 | | |
| Dental Caries: Caries Risk Assessment and Management | | | 1 | | 1 | | |
| Concepts of Conservative Cavity Design and Management | | | 1 | | 1 | | |
| Tooth Colored Restorations: Part 1, Part II, Part III  (Resin composite) | | | 3 | | 3 | | |
| Tooth Colored Restorations: Part IV, Part V  (Glass Ionomer Cement) | | | 2 | | 2 | | |
| Theoretical information and clinical application | | | 1 | | 1 | | |
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| 2. Course components (total contact hours per semester): | | | | | | | | |
| Lecture:  14 | Tutorial: | Practical/Fieldwork/Internship  90 contact hours in clinical sessions of the academic year | | | | | 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) |

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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 of 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. |
| **a.  Knowledge**  i)  Description of the knowledge to be acquired  Upon completion of the course the student should be able to:   * Diagnose oral disease particularly dental caries (caries etiology) and identify patient at high risk. * Diagnose dental pain and make differential diagnosis of dental pain. * Know when and how to perform pulp vitality test using different methods. * Know how to write a proper treatment plan and educate patient on his/her dental needs. * Know when and how to give oral hygiene and dietary instructions and motivate patients. * Know proper instruments selection (hand cutting instruments, burs, etc.) for cavity preparation. * Know how to design a cavity, for amalgam restoration, to a biologically and mechanically acceptable level. * Know when and how to properly select and use liners and bases. * Know when and how to correctly use matrices and wedges. * Know when and how to perform amalgam restoration to a biologically, physiologically and mechanically acceptable level. * Know proper procedures for finishing and polishing of amalgam restorations. * Know how to design cavities for composite resin to a biologically and mechanically acceptable level. * Know when and how to correctly use the acid-etch technique. * Know when and how to manipulate and place light-cured composite restorative resin. * Know when and how to manipulate and place the glass ionomer and RMGI materials. * Know proper procedures for finishing and polishing of resin composite, G.I., and RMGI restorations. * Know how to differentiate between caries and non-carious lesions e.g. abrasion, erosion and other defects), and how to treat them. |
| (ii)  Teaching strategies to be used to develop that knowledge  Lectures, quizzes, class group discussion and practical knowledge building through clinical application and discussion. |
| (iii)  Methods of assessment of knowledge acquired   * Direct questions, class participation, weekly quizzes, final exam, practice with close supervision. * 5 minute quiz every week. The questions are MCQs/Short Notes. * Final examination is given at the end of the first semester. It will include all types of questions i.e. MCQs, Short Notes. * In every clinical session each student will frequently go through brief discussion at all different stages of the clinical session and treatment procedure performed. It will be included in the overall grade for that session. |
| **b.  Cognitive Skills** |
| (i)  Cognitive skills to be developed  1. Ability to think critically and analytically (EXAMPLE)   * To analyze and record the clinical status of the oral cavity with regard to soft tissues, oral hygiene, gingival inflammation, active and arrested carious lesions and restorations using dental instruments and dental radiographic examination to arrive at a well-established treatment plan based on a problem list. * To apply concepts and principles learned during pre-clinical training to new situations in the restorative clinic during treatment of the patient. * To analyze different diagnostic findings and understand different treatment strategies which will depend on the influence of all variants affecting the patient status, e.g. index of caries activity. |
| (ii)  Teaching strategies to be used to develop these cognitive skills  Lectures, group discussion, homework reading, and practical implementation (clinical practice). Clinical supervision and guidance for proper treatment plan. |

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| (iii)  Methods of assessment of students cognitive skills  Supervisor will evaluate and grade the student in the clinic upon their ability to discuss the case and their clinical findings to reach a treatment plan including the treatment procedure. | | | | |
| **c. Interpersonal Skills and Responsibility** | | | | |
| 1. Description of the interpersonal skills and capacity to carry responsibility to be developed  * Student should value the role of the dentist as a health care provider to deal with patients, supervisor, dental assistants, and classmates in a high level of professionalism. * Student should build up a relationship of trust with patients and give proper explanations regarding their needs and concerns. * Student should value time and be responsible to finish the clinical procedure on time. | | | | |
| (ii)  Teaching strategies to be used to develop these skills and abilities   * Discuss the ethical guidelines and its application in dentistry with students. * Emphasize the importance of time management during treatment of the patient. * Clinical practice, discussion, and close supervision. | | | | |
| (iii)  Methods of assessment of students interpersonal skills and capacity to carry responsibility   * Grading and close supervision (direct observation) during clinical practice. * Criteria based evaluation done for all clinical steps for proper standardization. * Rotation of instructors every 3 to 4 weeks to cover different group of student to help in standardization. | | | | |
| **d.   Communication, Information Technology and Numerical Skills** | | | | |
| (i)  Description of the skills to be developed in this domain.   * To communicate effectively with all working team and patients. * To know about new equipment and materials in restorative dentistry. | | | | |
| (ii)  Teaching strategies to be used to develop these skills  Lectures, clinical practice, and group discussion. | | | | |
| (iii)  Methods of assessment of students numerical and communication skills    Clinical observation and feedback from instructors or from the clinical staff if needed. | | | | |
| **e.  Psychomotor Skills (if applicable)** | | | | |
| (i)  Description of the psychomotor skills to be developed and the level of performance required   * Apply concepts and principles gained from pre-clinical training to the new situations in the restorative clinic during treatment of patients. * To administer pulp vitality tests properly. * Apply the correct techniques for administering local anesthesia, R.D., and matrices. * Demonstrate correct usage of equipment, procedures, and restorative materials. * Select and use proper instruments for cavity preparation. * Design and prepare a cavity to a biologically and mechanically acceptable level. * Make a restoration to a biologically, physiologically, and mechanically acceptable level. * Do proper finishing and polishing technique. * Apply aseptic technique. | | | | |
| (ii)  Teaching strategies to be used to develop these skills  - Clinical practice with pre-clinical reading and adequate preparation of the planned procedure.  - Clinical supervision with guidance and help when needed.  - Clinical demonstration for some procedures when needed. | | | | |
| (iii)  Methods of assessment of students psychomotor skill  Direct clinical supervision and evaluation (grading). | | | | |
| 5. Schedule of Assessment Tasks for Students During the Semester | | | | |
| Assessment | Assessment task (e.g. essay, test, group project, examination etc.) | | Week due | Proportion of Final Assessment |
| 1 | Quizzes | weekly | | 10% |
| 2 | Clinical work (requirements) | weekly | | 50% |
| 3 | Final written exam | Week 15 | | 30% |
| 4 | Subjective assessment |  | | 10% |

**D- Student Support**

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| 1. Arrangements for availability of faculty for individual student consultations and academic advice. (include amount of time faculty are available each week)   * Available at working time. * Available at office hours. * Available at clinical session for supervision, support, advice, and help. * Available through e-mail and phone. |

**E- Learning Resources**

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| 1. Required Text(s)   The Art & Science of Operative Dentistry. Sturdevant, 5th Edition (2006). |
| 2. Essential References  Schwartz's Fundamentals of Operative Dentistry 3rd Edition (2006). |
| 3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)   * Akpata Textbook of Operative Dentistry, 1997 Class Publishing BARB House, London. * Pickard’s Manual of Operative Dentistry (8th edition), E.A.M. Kidd, B.G.N. Smith and T.F. Watson, Oxford University Press. * Journal of Operative Dentistry (J Oper Dent). * Journal of American Dental Association (JADA). * King Saud University Journal of Dental Sciences (KSUJDS). |
| 4-Electronic Materials, Web Sites etc  <http://ksu.edu.sa> (KSU)  <http://dent.ksu.edu.sa/> (KSU, college of dentistry)  <http://KSUJDS.ksu.edu.sa> (KSUJDS)  <http://www.jopdent.org/journal/journal.php> (J Oper Dent)  <http://jada.ada.org> (JADA)  <http://www.iusd.iupui.edu/Depts/Lib/> (dental school library, IUPUI, Indiana)  <http://www.ncbi.nlm.nih.gov/sites/entrez> (pub med midline search engine) |
| 5-Other learning material such as computer-based programs/CD, professional standards/regulations |

**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.)    Smart class room linked to the internet for online educational materials. |
| 2. Computing resources    Computers are very important for students with internet access for educational resources. |
| 3. Other resources (specify - e.g. If specific laboratory equipment is required, list requirements or attach list)  Provide the clinical halls with a left handed oriented dental chairs and equipment. |

**G   Course Evaluation and Improvement Processes**

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| 1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching   * Questionnaires distributed to obtain student feedback. * Meeting periodically with the students and take their impression. * Direct contact with course director through phone or e-mail. |
| 2  Other Strategies for Evaluation of Teaching by the Instructor or by the Department      Feedback from contributors and weekly discussion during clinical sessions. |
| 3  Processes for Improvement of Teaching   * Attending lectures and courses to improve teaching skills and methods (through the development department of the university). * Feedback from contributors in the division especially fourth year instructor and contributors. |
| 4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution)  Feedback of fourth year instructor and contributors as they come into contact with students next year. |
| 5.  Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.  At the end of each year, the course is reviewed and short comings are corrected. Also feedback from students are collected and incorporated to improve the course in the future. The Division and then the Department discuss the course and its outcome during their periodic meetings. |