

**Umm Al-Qura University**

**Faculty of Dentistry**

**Vice Deanship of Academic Development & Community Service**

وحدة تطوير المناهج

**Curriculum Development Unit**

**جامعــة أم القــرى**

**كلية طب الأسنان**

**وكالة الكلية للتطوير الأكاديمي وخدمة المجتمع**

**Kingdom of Saudi Arabia**

**The National Commission for Academic Accreditation & Assessment**

**Course Specifications**

**(CS)**

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| **Course Name** | Preclinical fixed prosthodontics  |
| **Course Code** | 19 03 430 05 |
| **Academic Level** | 4th Level |
| **Semester** | 1st & 2nd  |
| **Study Plan No** | 33 |
| **Department** | Oral & Maxillofacial Surgery and Rehabilitation |
| **Division** | Fixed Prosthodontics |
| **Academic Year** | 2018-2019AD – 1439 -1440 AH |
| **Contact hours** | Theoretical | 2 / week |
| Practical | 3 / week |
| Clinical | Non / week |
| **Total Contact Hrs** | 5 / week |
| **Total Credit Hrs** | 7 |

 UQU-DENT:F0401-01/02

**Course Specifications**

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| Institution**:**  Umm Al Qura University Date of Report: 20/5/2018  |
| College/Department: Faculty of Dentistry /Oral and maxillofacial Department.  |

**A. Course Identification and General Information**

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| 1. Course title and code: Preclinical Fixed Prosthodontics / Code:19 03 430 05 |
| 2. Credit hours: 7 credit hours |
| 3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)**:** Bachelor Degree of Dental Medicine and Surgery (B.D.S.)       |
| 4. Name of faculty member responsible for the course: Dr.Zeinab Nabil EmamAssociate Professor Fixed Prosthodontics  |
| 5. Level/year at which this course is offered: Fourth year (first and second semester). |
| 6. Pre-requisites for this course (if any): Successful completion of the 3rd year courses. |
| 7. Location if not on main campus |
| 8. Mode of Instruction (mark all that apply)40%%555%%%%yes a. Traditional classroom What percentage?  b. Blended (traditional and online) What percentage?10yes c. e-learning What percentage? d. Correspondence What percentage? f. Other What percentage?50yesComments:1. Traditional classroom: through interactive lectures.
2. E-learning: in the form of computer based group assignments.

f. Other: Through practical sessions where students perform different procedures of fixed prosthosdontics  |

**B. Objectives**

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| 1. What is the main purpose for this course?

The course enhances the basic skills of the students preparing them to enter the clinical stage of fixed prosthodontics.The course provides integration of dental biomaterials together with the principles and techniques of different procedures of fixed prosthodontics. The course provides students with the necessary knowledge of the biomaterials used in the field of fixed prosthodontics. In addition, it supports the students with principles of tooth preparation and laboratory steps necessary for the construction of fixed prosthodontics. The course will provide students with different skills needed to perform fixed prosthodontics tooth preparations.  |
| 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):2.1- More focusing on electronic learning through using King Abdullah Digital Library.2.2**-** Implementing interactive lectures & increasing the time for discussion with students.2.3- Implementing assessment methods that depend on student self-directed learning.2.4-Using rubrics as objective assessment tools for evaluating students during practical sessions, student's assignments & for evaluating practical exam. |

**C. Course Description (Note: General description in the form to be used for the Bulletin or handbook should be attached)**

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|  | **List of Topics** | **No. of weeks** | **Contact hours** |
| 1 | Introduction to fixed prosthodontics and biomaterials | **1**  | **2hr** |
| 2 | Terminology &classification | **1** | **2hr** |
| 3 | Instruments & introductiont principles of tooth preparation | **1** | **2hr** |
| 4 |  Mechanical Principles of tooth preparation | **1** | **2hr** |
| 5  |  Biological principles of tooth preparation | **1** | **2hr** |
| 6 |  Esthetic principles of tooth preparation | **1** | **2hr** |
| 7 | Impression materials and techniques | **2** | **4hr** |
|  8 | Composition and properties of gypsum products and die materials | **2** | **4hr** |
| 9 | Working cast and dies | **1** | **2hr** |
| 10 |  Wax material and techniques of construction of wax pattern |  **1** | **2hr** |
| 11 | Investment materials and techniques | **2** | **4hr** |
| 12 | Spruing and communication with dental laboratory | **1** | **2hr** |
| 13 | Dental casting alloys and casting techniques | **4** | **8hr** |
| 14 | Casting failure and metal ceramic restoration | **2** | **4hr** |
| 15 | All ceramic materials , techniques of construction and strengthening of dental ceramics | **4** | **8hr** |
| 16 | Laminate veneer restoration | **1** | **2hr** |
| 17 | Restoration of endodontically treated teeth | **1** | **2hr** |
| 18 | Provisional restoration materials and techniques of construction | **1** | **2hr** |
| 19 |  Partial coverage restorations | **1** | **2hr** |
|  |  Total | **28** | **56hr** |

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|  **List of Topics** | **No. of weeks** | **Contact hours** |
|  Demo for full veneer metal crown preparation |  1 | **3hr** |
|  Full veneer metal crown preparation  |  6  | **18hr** |
|  Demo for all ceramic crown preparation  |  1  | **3hr** |
|  All ceramic crown preparation  |  6  | **18hr** |
|  Demo for different impression techniques | 1 | **3hr** |
|  Demo for the laboratory steps for full veneer metal crown construction | 1 | **3hr** |
|  Demo Veneered crown preparation  | 1 | **3hr** |
|  Veneered crown preparation  | 6 | **18hr** |
|  Demo for path of insertion | 1 | **3hr** |
|  Preparation for a posterior bridge with path of insertion | 3 | **9hr** |
|  Practical exam   | 1 | **3hr** |
|  Total | 28 | **84hr** |

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| 2. Course components (total contact hours and credits per two semesters):  |
|  | Lecture | Tutorial | Laboratory | Practical | Other: | Total |
| ContactHours | 56hrs2hs/week/semester. |  |  | 84 hrs3hs/week/semester. |  | 140 contact hours. |
| Credit | 4 credit hours. |  |  | 3 credit hours. |  | 7 credit hours. |

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| 3. Additional private study/learning hours expected for students per week. 4 hrs/ week |

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

Course Learning Outcomes, Assessment Methods, and Teaching Strategy work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning, assessment, and teaching.

The ***National Qualification Framework*** provides five learning domains. Course learning outcomes are required. Normally a course has should not exceed eight learning outcomes which align with one or more of the five learning domains. Some courses have one or more program learning outcomes integrated into the course learning outcomes to demonstrate program learning outcome alignment. The program learning outcome matrix map identifies which program learning outcomes are incorporated into specific courses.

On the table below are the five NQF Learning Domains, numbered in the left column.

**First**, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. **Fourth**, if any program learning outcomes are included in the course learning outcomes, place the @ symbol next to it.

Every course is not required to include learning outcomes from each domain.

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|  | **NQF Learning Domains** **And Course Learning Outcomes** | **Course Teaching****Strategies** | **Course Assessment****Methods** |
| **1.0** | **Knowledge** |
| 1.1 | State properties of different dental biomaterials used in fixed prosthodontics. | - Interactive lectures with class discussion.- Computer based group assignments.-Group assignments presentation discussion | - Quiz/each semester.-Midyear written examination.- Final written examination.- OSPE. |
| 1.2 | Recognize different principles of tooth preparation.  |
| 1.3 | Outline different steps of tooth preparation and laboratory fabrication of fixed prosthodontics.  |
| **2.0** | **Cognitive Skills** |
| 2.1 | Correlate the principles of tooth preparation and dental biomaterials for construction of fixed prosthodontics. | - Interactive lectures with class discussion.-Computer based group assignments.-Group assignments presentation discussion | - Quiz/each semester.- Midyear written exams.- Final written exams- OSPE. |
| **3.0** | **Interpersonal Skills & Responsibility** |
| 3.1 | Write assignments in due time and participation in class discussions  | Computer based group assignments.Group assignments presentation discussion | Presentation assessmentusing rubrics . |
| **4.0** | **Communication, Information Technology, Numerical** |
| 4.1 | Present knowledge effectively through IT learning resources (Website, King Abdullah Digital Library).  | Computer based group assignments.Group assignments presentation discussion | Presentation assessmentusing rubrics  |
| **5.0** | **Psychomotor** |
| 5.1 | Prepare anterior teeth to receive ceramo-metal crown and all-ceramic crown. | Practical sessions to train students on different types of tooth preparations and laboratory steps for construction of full metal crown. | - 1st semester minimal practical experiences &competency examination.- Midyear practical examination.- 2nd semester minimal practical experiences & competency examination.- Final semester practical examination. |
| 5.2 | Prepare posterior teeth to receive full metal crown, ceramo-metal crown and all-ceramic crown. |

**Suggested Guidelines for Learning Outcome Verb, Assessment, and Teaching**

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| **NQF Learning Domains** | **Suggested Verbs** |
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| **Knowledge** | list, name, record, define, label, outline, state, describe, recall, memorize, reproduce, recognize, record, tell, write |
| **Cognitive Skills** | estimate, explain, summarize, write, compare, contrast, diagram, subdivide, differentiate, criticize, calculate, analyze, compose, develop, create, prepare, reconstruct, reorganize, summarize, explain, predict, justify, rate, evaluate, plan, design, measure, judge, justify, interpret, appraise |
| **Interpersonal Skills & Responsibility** | demonstrate, judge, choose, illustrate, modify, show, use, appraise, evaluate, justify, analyze, question, and write |
| **Communication, Information** **Technology, Numerical** | demonstrate, calculate, illustrate, interpret, research, question, operate, appraise, evaluate, assess, and criticize. |
| **Psychomotor** | demonstrate, show, illustrate, perform, dramatize, employ, manipulate, operate, prepare, produce, draw, diagram, examine, construct, assemble, experiment, and reconstruct |

Suggested ***verbs not to use*** when writing measurable and assessable learning outcomes are as follows:

Consider Maximize Continue Review Ensure Enlarge Understand

Maintain Reflect Examine Strengthen Explore Encourage Deepen

Some of these verbs can be used if tied to specific actions or quantification.

**Suggested assessment methods and teaching strategies are:**

According to research and best practices, multiple and continuous assessment methods are required to verify student learning. Current trends incorporate a wide range of rubric assessment tools; including web-based student performance systems that apply rubrics, benchmarks, KPIs, and analysis. Rubrics are especially helpful for qualitative evaluation. Differentiated assessment strategies include: exams, portfolios, long and short essays, log books, analytical reports, individual and group presentations, posters, journals, case studies, lab manuals, video analysis, group reports, lab reports, debates, speeches, learning logs, peer evaluations, self-evaluations, videos, graphs, dramatic performances, tables, demonstrations, graphic organizers, discussion forums, interviews, learning contracts, antidotal notes, artwork, KWL charts, and concept mapping.

Differentiated teaching strategies should be selected to align with the curriculum taught, the needs of students, and the intended learning outcomes. Teaching methods include: lecture, debate, small group work, whole group and small group discussion, research activities, lab demonstrations, projects, debates, role playing, case studies, guest speakers, memorization, humor, individual presentation, brainstorming, and a wide variety of hands-on student learning activities.

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

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| Assessment | Assessment Task(e.g. essay, test, group project, examination, speech, oral presentation,etc.) | Week due | Proportion of Total Assessment |
| 1 |  1st Quiz | 10th Week | 5% |
| 2 |  Group assignment (semester 1)  |  12th Week |  10% |
| 3 |  Logbook Submission  (Practical Requirements) | 13th. Week | 10% |
| 4 |  Midyear practical exam | 14th Week | 10% |
| 5 |  Midyear Written exam | 14th  Week | 10% |
| 6 |  2nd Quiz |  20th Week | 5% |
| 7 |  Group assignment (semester 2)  |  26th Week | 10% |
| 8 |  Logbook Submission  (Practical Requirements) | 27 Week | 10% |
| 9 |   Final practical exam | 28th Week | 10% |
|   OSPE  | 28th Week | 5% |
| 10 |  Final Written exam | 28th Week | 15% |
| Total | 28 Week | 100% |

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**D. Student Academic Counseling and Support**

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| 1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)1 hr per week |

**E. Learning Resources**

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| 1. List Required TextbooksShillingburg HT, Sather DA, Wilson EL, Cain JR, Mitcell DL, Blanco LJ, Kessler JC: Fundamentals of Fixed Prosthodontics, 4th Edition 2012, Quintessence Publications Inc. |
| 2. List Essential References Materials (Journals, Reports, etc.)Rosenstiel SF (Editor of Journal of Prosthetic Dentistry) available at <http://www.journals.elsevier.com/journal-of-prosthetic-dentistry>Last updated 2014, last accessed 8/1/2014 |
| 3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)1. Rosenstiel SF, Land MF, Fujimoto J: Contemporary Fixed Prosthodontics, 4th Edition 2006, Mosby.2. Felton DA (Editor of Journal of Prosthodontics) available at [http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1532-849X](http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291532-849X) last updated 2014, last accessed 8/1/2014 3. Zarb GA (Editor of International Journal of Prosthodontics) available at <http://www.quintpub.com/journals/ijp/gp.php?journal_name=IJP> last updated 2014, last accessed 8/1/2014 |
| 4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)Weber HT (President of American Academy of Prosthodontics) available at <http://www.academyofprosthodontics.org/>Last update 2013, last accessed 8/1/2014 |
| 5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.Weber HT (President of American Academy of Prosthodontics) available at Glossary of Prosthodontic Terms [http://www.academyofprosthodontics.org/\_Library/ap\_articles\_download/GPT8.pd\\\\\](http://www.academyofprosthodontics.org/_Library/ap_articles_download/GPT8.pd%5C%5C%5C%5C%5C) |

**F. Facilities Required**

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| Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.) |
| 1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)\_ Classrooms: are supplied with audiovisual equipment, data show, large screens, screen pointers and all equipment needed for power point presentation of lectures.\_ Laboratories: are supplied with wide study benches, data show, large screens, good lighting sources and other equipment needed for training of students on such skills( preparation of anterior and posterior teeth to receive different fixed restorations aided by phantoms in the phantom lab). |

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| 2. Computing resources (AV, data show, Smart Board, software, etc.)All students will have the opportunity to use computer with internet access in a comfortable place. This will enable the students to search for the learning issues of the PBL and SDL tutorials |
| 3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) Classroom for SDL sessions. |

**G Course Evaluation and Improvement Processes**

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| 1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching-A course evaluation questionnaire is designed to assess the effectiveness of the course regarding objectives, teaching facilities, instructor, assessment process and resources. It is distributed to all the students at the end of the course, data is analyzed, interpreted and discussed by the course director or committee in order to issue an improvement plan for any difficulties facing the students.-Group discussion with the students to validate the questionnaire results. |
| 2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor-Peer observation from colleagues to obtain feedback and suggestions for improvement.-An annual course report. |
| 3 Processes for Improvement of Teaching* Workshops to facilitate exchange of experiences among faculty members.
* Regular meetings where problems are discussed and solutions given.
* Discussion of challenges in the classroom with colleagues and supervisors.
* Staff members attend professional development workshops and conferences.
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| 4. Processes for Verifying Standards of Student Achievement (e.g. 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)-Double checking of the students answers by two evaluators.-External examiners recruitment is helpful for verifying students' performance. |

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| 5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.-Curriculum review committee reviews the curriculum periodically and suggests improvements.-Regular meetings for staff members teaching the course to discuss improvements at least once/semester. |

**Faculty or Teaching Staff: \_**

 Dr. Ibrahim Hamouda, Professor of Biomaterials.

 Dr. Nadia badr, Professor of Biomaterials.

 Dr.Zeinab Nabil Emam ,Associate professor of fixed prosthodontics.

 Dr. Omar Abu Ella Assisstant Professor of Fixed Prosthodontics.

 Dr. Mohamed Fattouh, Assisstant Professor of Fixed Prosthodontics.

Dr. Shereen Mohamed Abdelmeguid**,** Assisstant Professor of Fixed Prosthodontics.

 Dr. Khalid Elbanna, Assisstant professor of Fixed Prosthodontics.

**Signature: Dr. Zeinab Nabil Emam Date Report Completed : 20/5/2018.**

**Received by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dean/Department Head:** Dr Alla Mekki

**Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: 20/5/2018.**