

**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)**

|  |  |  |
| --- | --- | --- |
| **Course Name** | Orthodontics | |
| **Course Code** | 19 02 620 04 | |
| **Academic Level** | 6th Level | |
| **Semester** | 1st & 2nd | |
| **Study Plan No** | 33 | |
| **Department** | Preventive Dentistry | |
| **Division** | Orthodontics | |
| **Academic Year** | 2018-2019 AD – 1439 -1440 AH | |
| **Contact hours** | Theoretical | 1/ week |
| Practical | 3 / week for 23 weeks |
| Clinical | 3 / week for 5 weeks |
| **Total Contact Hrs** | 4 / week | |
| **Total Credit Hrs** | 5 | |

UQU-DENT:F0401-01/02

**Course Specifications**

|  |
| --- |
| Institution Date of Report  Umm Al Qura University 15/5/2018 |
| College/Department : **Faculty of Dentistry/ Preventive Dentistry Department** |

**A. Course Identification and General Information**

|  |
| --- |
| 1. Course title and code: : **Orthodontics – Code 190 262 004** |
| 2. Credit hours:  **5** Credits. |
| 3. Program(s) in which the course is offered.  **Bachler degree of dental science (BDS)** |
| 4. Name of faculty member responsible for the course  **Dr. Tamer Bedair ---- Ass. Prof. of Orthodontics** |
| 5. Level/year at which this course is offered  **Sixth year** (1st. and 2nd. semester) |
| 6. Pre-requisites for this course (if any)  **Successful completion of fifth year** |
| 7. Location if not on main campus: this course is offered  In the main campus at Al-Abedia area. |
| 8. Mode of Instruction (mark all that apply)  55 %  √  a. Traditional classroom What percentage?  b. Blended (traditional and online) What percentage?  c. E-learning What percentage?  5 %  √  d. Correspondence What percentage?  e. Other What percentage?  40 %  √  Comments:  a. Traditional classroom: In the form of face to face interactive lectures.  c. E-learning: In the form of group assignments (written and oral presentations).  e. Other: In the form of practical and clinical sessions. |

**B Objectives**

|  |
| --- |
| 1. What is the main purpose for this course?  By the end of this course the student should be able to identify and differentiate between skeletal and dental malocclusion with particular understanding for their different orthodontic management strategies and their anticipated complications. |
| 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. Using a variety of assessment methods (oral presentation, group assignments, practical and clinical requirements).  2.2. Implementing interactive lectures & increasing the time for discussion with students.  2.3. Implementing assessment methods that depends on student self-directed learning.  2.4. Using rubrics as objective assessment tools for evaluating students' assignments & requirements. |

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

|  |  |  |
| --- | --- | --- |
| 1. Topics to be Covered | | |
| List of Topics | No. of  Weeks | Contact Hours |
| 1. Growth and Development of Craniofacial Complex | 3 | 12 |
| 1. Development of the Normal Occlusion | 2 | 8 |
| 1. Description of normal occlusion in adults | 1 | 4 |
| 1. Soft tissue morphology | 1 | 4 |
| 1. Terminology &classification of malocclusion | 1 | 4 |
| 1. Etiology of malocclusion | 3 | 12 |
| 1. Tissue changes in orthodontic tooth movement | 2 | 8 |
| 1. Sequelae of untreated malocclusion | 1 | 4 |
| 1. Examination & Diagnosis of malocclusion | 3 | 12 |
| 1. Treatment of Malocclusion 2. Preventive Orthodontics | 1 | 4 |
| 1. Treatment of Malocclusion 2. Interceptive Orthodontics | 2 | 8 |
| 1. Treatment of Malocclusion 2. Adult treatment | 2 | 8 |
| 1. Orthodontic Appliances | 2 | 8 |
| 1. Principle of Design of Appliances | 1 | 4 |
| 1. Therapeutic Extraction in Orthodontics | 1 | 4 |
| 1. Orthodontic Retention & Relapse | 1 | 4 |
| 1. Iatrogenic Effects of Orthodontic Treatment | 1 | 4 |
| Total | 28 | 112 |

|  |  |  |
| --- | --- | --- |
| 1. Topics to be Covered | | |
| List of Topics | No. of  Weeks | Contact Hours |
| 1. Wire Bending Exercise | 2 | 6 |
| 1. Adam's Clasp Demonstration & Practice | 3 | 9 |
| 1. Palatal Spring Demonstration & Practice | 3 | 9 |
| 1. Short Labial Arch Demonstration & Practice | 3 | 9 |
| 1. Tongue Guard Demonstration & Practice | 3 | 9 |
| 1. Revision | 1 | 3 |
| 1. Diagnosis (Cephalometric Analysis) | 3 | 9 |
| 1. Diagnosis (Cast Analysis) | 1 | 3 |
| 1. Exposure to orthodontic appliances | 1 | 3 |
| 1. Clinic – Impressions | 1 | 3 |
| 1. Clinic - Classification of patient’s malocclusion | 2 | 6 |
| 1. Clinic - Case diagnosis | 2 | 6 |
| 1. General Revision & Delivery of Requirements   ***( Adam’s, Palatal Spring, Short Labial, Tongue Guard***) | 3 | 9 |
| Total | 28 | 84 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2. Course components (total contact hours and credits per 2 semester): | | | | | | |
|  | Lecture | Tutorial | Laboratory | Practical and Tutorial | Other: Clinical | Total |
| Contact  Hours | 28 |  |  | 6 9 | 15 | 112 |
| Credit | 2 |  |  | 2. 46 | 0. 54 | 5 |

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

|  |
| --- |
| 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.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **NQF Learning Domains**  **And Course Learning Outcomes** | **Course Teaching**  **Strategies** | **Course Assessment**  **Methods** |
| **1.0** | **Knowledge** | | |
| 1.1 | Recognize orthodontic terminology as well as concepts of cranio-facial growth, development of normal occlusion. | Interactive lectures  Group assignments  Practical sessions  Requirements | * Quiz I * Quiz II * Mid-Year written Exam * Final Written Exam * Assessment of the assignment & Assignment   presentation using rubric |
| 1.2 | Recognize different classifications, etiology, clinical features and diagnosis of malocclusion. |
| 1.3 | Describe biological concepts, modalities and complication of orthodontic treatments |
| **2.0** | **Cognitive Skills** | | |
| 2.1 | Correlate between the etiological factors and types of malocclusion, diagnostic findings and different treatment modalities | Interactive lectures  Group assignments  Practical sessions  Requirements | * Quiz I * Quiz II * Mid-Year written Exam * Final Written Exam * Assessment of the assignment & Assignment   presentation using rubric |
| **3.0** | **Interpersonal Skills & Responsibility** | | |
| 3.1 | Use the medical resources and develop learning, presentation and time management skills. | Group assignments | * Presentation assessment (using rubric) |
| **4.0** | **Communication, Information Technology, Numerical** | | |
| 4.1 | Gather reliable medical information from medical web sites and Use CD & E- textbooks and other medical software. | Group assignments | * Presentation assessment (using rubric) |
| **5.0** | **Psychomotor** | | |
| 5.1 | Utilize orthodontic instruments to acquire different orthodontic wire bending skills | Practical and clinical sessions | * Assessment of the practical and clinical requirements I, II using rubric * Final Practical examination using rubric |
| 5.2 | Perform cephalometric tracing and cast analysis and clinical diagnosis |

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

|  |  |
| --- | --- |
| **NQF Learning Domains** | **Suggested Verbs** |
| **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 |

|  |  |  |  |
| --- | --- | --- | --- |
| 5. Schedule of Assessment Tasks for Students During the Semester | | | |
|  | Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.) | Week Due | Proportion of Total Assessment |
| 1 | Quiz I | 6th Week | 5% |
| 2 | Continuous Evaluation (Practical and Clinical Requirements I ) | 11th Week | 7.5% |
| 3 | Mid-Year written Exam | 18th-19th Weeks | 15% |
| 4 | Quiz II | 24th Week | 5% |
| 5 | Continuous Evaluation ( Practical and Clinical Requirements II ) | 25th Week | 7.5% |
| 7 | Final Requirement Submission | 27th - 28th Weeks | 10% |
| 8 | Final Practical Exam | 32nd Week | 10% |
| 8 | Final Clinical Exam | 32nd Week | 10% |
| 9 | Final Written Exam | 33rd -34th Weeks | 30% |
|  | Total |  | 100 % |

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.

**D. Student Academic Counseling and Support**

|  |
| --- |
| 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)  Academic advice 4 hours per week |

**E. Learning Resources**

|  |
| --- |
| 1. List Required Textbooks:  1- Proffit WR, Fields HW, Sarver D.  Contemporary Orthodontics, 5th ed. St. Louis:  Mosby Co., 2013.  2- [Graber](http://www.amazon.com/s/ref=ntt_athr_dp_sr_1?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Lee%20W.%20Graber%20DDS%20%20MS%20%20PhD) LW, [Vanarsdall RL](http://www.amazon.com/s/ref=ntt_athr_dp_sr_2?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Robert%20L.%20Vanarsdall%20Jr.%20DDS) and [Vig](http://www.amazon.com/s/ref=ntt_athr_dp_sr_3?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Katherine%20W.%20L.%20Vig%20BDS%20%20MS%20%20FDS%28RCS%29%20%20DOrth) KWL. Orthodontics: Current Principles and Techniques, 5th ed. St. Louis:  Mosby Co., 2012 |
| 2. List Essential References Materials (Journals, Reports, etc.)  1. [Cobourne MT. Handbook of Orthodontics,](http://www.amazon.com/s/ref=ntt_athr_dp_sr_1?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Martyn%20T.%20Cobourne%20BDS%28Hons%29%20%20FDSRCS%28Eng%29%20%20FDSRCS%28Edin%29%20%20MSc%20%20MOrth%20RCS%28Eng%29%20%20FDSOrth%20RCS%20%20PhD) 1st ed. St. Louis: Mosby Co., 2010  2. English [JD,](http://www.amazon.com/s/ref=ntt_athr_dp_sr_1?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Jeryl%20D.%20English%20DDS%20%20MS) [Peltomaki T and](http://www.amazon.com/s/ref=ntt_athr_dp_sr_2?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Timo%20Peltomaki%20DDS%20%20MS%20%20PhD) [Litschel](http://www.amazon.com/s/ref=ntt_athr_dp_sr_3?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Kate%20Pham-Litschel%20DDS%20%20MS) KP. Mosby’s Orthodontic Review, 1st ed. St. Louis:  Mosby Co., 2009  3. [Rakosi](http://www.amazon.com/Thomas-Rakosi/e/B001K6ZJC2/ref=ntt_athr_dp_pel_1)Thomas Rakosi (Author)  › [Visit Amazon's Thomas Rakosi Page](http://www.amazon.com/Thomas-Rakosi/e/B001K6ZJC2/ref=ntt_athr_dp_pel_pop_1)  Find all the books, read about the author, and more.  See [search results](http://www.amazon.com/s/ref=ntt_athr_dp_sr_pop_1?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Thomas%20Rakosi) for this author  Are you an author? [Learn about Author Central](http://authorcentral.amazon.com/gp/landing/ref=ntt_atc_dp_pel_1)  T, [Jonas](http://www.amazon.com/s/ref=ntt_athr_dp_sr_2?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=I.%20Jonas) I, [Graber](http://www.amazon.com/s/ref=ntt_athr_dp_sr_3?_encoding=UTF8&sort=relevancerank&search-alias=books&field-author=Thomas%20Graber) TM. Color Atlas of Dental Medicine: Orthodontic Diagnosis, 1st ed. [Stuttgart](http://www.google.com.sa/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CEwQ0gIoAzAA&url=http%3A%2F%2Fen.wikipedia.org%2Fwiki%2FStuttgart_%28region%29&ei=fSjQUtDRIcrB0QXutoHwBA&usg=AFQjCNGeAp70Ebh9g2eY2vQAIRxnMKLo3Q): Thieme, 1993 |
| 3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)    1- [Turpin](http://www.journals.elsevier.com/american-journal-of-orthodontics-and-dentofacial-orthopedics/editorial-board/david-l-turpin-dds-msd/#contact) DL. American journal of Orthodontics and Dentofacial Orthopedics, published by Elsevier for the [American Association of Orthodontics](http://www.braces.org/). Available at: “http://www.ajodo.org”  2- McLaughlin RP. Angle Orthodontics, published for The Edward H. Angle Society of Orthodontists. Available at: “http://www.angle.org” |
| 4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)   1. Ramadan M. published for 4Dent International Community; 2006, Available at: “[www.4dent.net](http://www.4dent.net)” Accessed Jan. 10, 2014 |
| 5. Other learning material such as computer-based programs/CD, professional standards or regulations and software. |

**F. Facilities Required**

|  |
| --- |
| 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.)  The accommodation required for the teaching of this course includes the following:  a. Classrooms:  Each teaching classroom in the faculty is large enough to accommodate 60 students at one time & it includes enough number of comfortable seats arranged in rows with spaces between them. These classrooms are supplied with audiovisual equipments, data show, a large screen, screen pointers & other equipments needed for the PowerPoint presentation of lectures.  b. Technical Lab  Benches for students to measure arches and carry out space analysis, viewers to trace cephalometric radiographs. |
| 2. Computing resources (AV, data show, Smart Board, software, etc.)  All students 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 SDL tutorials. |
| 3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)  Study areas for students to revise their lessons. |

**G Course Evaluation and Improvement Processes**

|  |
| --- |
| 1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching  1.1. 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.  1.2. Focus group discussion with the students to validate the questionnaire results. |
| 2. Other Strategies for Evaluation of Teaching by the Program/Department Instructor  2.1. A course evaluation questionnaire is designed to assess the effectiveness of the course. It is distributed to instructors who participated in teaching the course at the end of the semester; data is analyzed, interpreted and discussed by the course director or committee.  2.2. An annual course report is compiled by the course director or committee in light of the results of students performance as well the results of the course evaluation questionnaire by students. |
| 3. Processes for Improvement of Teaching  Self &student assessment of teaching methods. |
| 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)  4.1. Double checking of the students answers by two raters or evaluators.  4.2. External examiners recruitment is helpful for verifying students' performance. |
| 5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.  The course is revised annually after its delivery in light of the results of students' performance (students' grades) and the results of the course evaluation questionnaire by both students and teaching staff. The course director or committee discusses these issues and put an improvement plan for each spotted problem. They revise the course content and intended learning objectives. Any changes in objectives, teaching strategies or assessment methods should be documented in the course specification of the next year. Major changes should not be considered except after being approved by the curriculum committee. |

**Faculty or Teaching Staff:** Dr. Tamer Bedair  **Signature**

(Assistant Professor of Orthodontics)

**Signature:** Tamer Bedair  **Date Report Completed: 15/ 5/2018**

**Received by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Department Head**

**Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**