**National Commission for Academic Accreditation & Assessment**

**Course Specification**

**Clinical Orthodontics (PDS 621), Semester 1, 1435-36 H (2014-15 G)**

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| Institution: University of Dammam |
| College/Department: College of Dentistry, Department of Preventive Dental Sciences  Division of Orthodontics |

**A. Course Identification and General Information**

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| 1. Course title and code: Clinical Orthodontics (PDS 621) |
| 2. Credit hours: Three Credit Hours (2 theoretical + 1 clinical session per week) |
| 3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs): Bachelor of Dentistry |
| 4. Name of faculty member responsible for the course: Dr. Thikriat Al-Jewair |
| 5. Level/year at which this course is offered: Sixth year, first semester |
| 6. Pre-requisites for this course (if any): Introduction to Orthodontics (PDS 512) |
| 7. Co-requisites for this course (if any): All fifth year courses |
| 8. Location if not on main campus: College of Dentistry, New campus |

**B. Objectives**

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| 1. Summary of the main learning outcomes for students enrolled in the course.  After successfully completing this course, the students will be able to:   1. Conduct an oral examination of a child or adolescent patient 2. Obtain accurate radiographs and diagnostic models 3. Identify and manage space problems 4. Design, construct and adjust selected removable and fixed orthodontic appliances 5. Recognize clinical indications and limitations of orthodontic appliances |
| 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)   1. Implementation of Evidence Based Practice in the course content 2. Assigning free topics to student groups as seminars or as review articles and to be presented in the class for all. 3. Mobile Dental Clinics for screening patients to fulfill the clinical requirements. 4. Using digital technology and laboratory simulations which may include:    1. Intraoral scanner and its associated OrthoCAD software to conduct tooth measurements and derive Bolton ratios.    2. Digital cephalometric radiographs tracing and measurement by using the Dolphine software.    3. Orthodontics case simulations for diagnosis and treatment planning |

**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 Clinical Orthodontics | 1 | 1 |
| Unfavorable Sequelae of Malocclusion | 1 | 1 |
| Interceptive Orthodontics | 2 | 1 |
| Class I Malocclusion Treatment | 2 | 1 |
| Class II, division 1&2 Malocclusion Treatment | 3 | 1 |
| Class III Malocclusion Treatment | 3 | 1 |
| Extra-Oral Therapy | 4 | 1 |
| Treatment of skeletal problems in preadolescent Children | 4 & 5 | 2 |
| Group Presentations of Assigned Articles | 5 | 1 |
| Orthodontic Treatment of patients in the mixed dentition | 6&7 | 2 |
| Management of unerupted maxillary canine | 7 | 1 |
| Management of crossbite | 8 | 1 |
| Management of openbite | 8 | 1 |
| Comprehensive Orthodontic treatment in the early permanent dentition | 9 | 2 |
| Retention and relapse | 10 | 1 |
| Group Presentations of Assigned Articles | 10 | 1 |
| Adult Orthodontics | 11 | 1 |
| Role of Orthodontist in Orthognathic Surgery | 12 | 2 |
| Orthodontic and Surgical Management of Obstructive Sleep Apnea | 13 | 1 |
| Orthodontic Management of Cleft Lip and Palate Patients | 13 | 1 |
| Revisions | 14 | 2 |

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| **2. Course components (total contact hours per semester):** | | | | |
| Lecture: 28 | Tutorial: 2 | Clinical: 45 | Practical/Field work/Internship: 0 | Other: 0 |

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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).**  30 hours per semester |

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| **4. Development of Learning Outcomes in Domains of Learning:**  For each of the domains of learning shown below indicate:   1. A brief summary of the knowledge or skill the course is intended to develop; 2. A description of the teaching strategies to be used in the course to develop that knowledge or skill; 3. 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  After completing this course the students will be able to:   1. Recognize the principles of imaging techniques, dental radiology and use of equipment. 2. Discuss the principles of growth and development of dental patients with various age groups. 3. Identify local and general causes of malocclusion. |
| (ii) Teaching strategies to be used to develop that knowledge   1. Lectures & large group teaching 2. Tutorials 3. Seminars 4. Self-learning packages 5. Assignments |
| (iii) Methods of assessment of knowledge acquired  Formative and summative assessments:   1. Short-answer questions 2. Multiple choice questions (MCQs) 3. Progress tests |
| **b. Cognitive Skills** |
| (i) Description of cognitive skills to be developed  After completing this course the students will be able to:   1. Evaluate dentoskeletal malocclusions to provide preventive and interceptive care. |
| (ii) Teaching strategies to be used to develop these cognitive skills   1. Lectures 2. Self-learning packages 3. Tutorials and seminars 4. Reading assignment |
| (iii) Methods of assessment of students cognitive skills   1. Short-answer questions 2. Multiple choice questions (MCQs) 3. Matching items |
| **c. Interpersonal Skills and Responsibility** |
| (i) Description of the interpersonal skills and capacity to carry responsibility to be developed   1. Practice in working within teams |
| (ii) Teaching strategies to be used to develop these skills and abilities   1. Lectures 2. Seminars |
| (iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility   1. Group presentations of selected articles |
| **d. Communication, Information Technology and Numerical Skills** |
| (i) Description of the skills to be developed in this domain.   1. Measure and analyse cephalometric radiographs |
| (ii) Teaching strategies to be used to develop these skills   1. Clinical demonstration 2. Seminars |
| (iii) Methods of assessment of students numerical and communication skills   1. Objective structured practical examination (OSPE) |
| **e. Psychomotor Skills (if applicable)** |
| (i) Description of the psychomotor skills to be developed and the level of performance required  After completing this course the students will be able to:   1. Identify and provide preventive and interceptive orthodontic treatment where needed. 2. Practice and design various removable orthodontic appliances for the treatment of simple malocclusions. |
| (ii) Teaching strategies to be used to develop these skills   1. Demonstration 2. Supervised practice 3. Self practice |
| (iii) Methods of assessment of students psychomotor skills   1. Objective structured clinical examination (OSCE) 2. Structured direct observation with checklists for ratings by faculty |

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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 1 | 6th Week | 10% |
| 2 | Quiz 2 | 11th Week | 10% |
| 3 | Clinical requirements | 14th Week | 30% |
| 4 | OSCE | 15th week | 20% |
| 5 | Final Written | 16th week | 20% |
| 6 | Dept. discr. |  | 10% |

**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)   1. Office hours: Monday 10-11, Wednesday 9-10 2. Email: tsaljewair@ud.edu.sa |

##### E. Learning Resources

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| 1. Required Text(s) 2. Orthodontics Current Principles & Practice. T. Graber, 4th Edition, 2000, Saunders 3. An Introduction to Orthodontics, by L. Mitchell, 4th Edition, 2001, Oxford university press. 4. Current therapy in Orthodontics by Nanda & Kapila. , Mosby Elsevier, 2010. |
| 2. Essential References   1. Contemporary Orthodontics. William Profit, Henry Fields and David Sarver, 4th Edition, 2006, Mosby Co. |
| 3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List): None |
| 4-.Electronic Materials, Web Sites etc: None |
| 5- Other learning material such as computer-based programs/CD, professional: None 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.)  Lecture Room (D2001) with 50 seats, with I.Q board, projector and Computer Facility. |
| 2. Computing resources  The computer laboratory in the University City campus |
| 3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)  Pre-Clinical Lab, Cephalometric tracing room. |

**G. Course Evaluation and Improvement Processes**

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| 1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching   1. Course evaluation and Teaching Faculty evaluation forms will be completed by students at end of the course, administered by the Quality Assurance Unit. |
| 2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department   1. Encouraging student to work hard early in the semester, to fulfil their requirement timely by following the clinical session assignment outline. 2. Presentation of the treatment plan to the patient/guardians, prior to starting treatment. |
| 3. Processes for Improvement of Teaching   1. Screening patients outside the college (suburban areas) by using mobile dental clinics to increase the patient flow for student training. 2. Shifting to annual system to providing enough time for adequate training. |
| 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)   1. Inviting external examiners from national and international universities to provide an expert opinion on the course material and teaching methods. |
| 5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.   1. Reviewing the students’ feedback on the course and the teaching methods periodically. 2. Reviewing students’ grades in the written and clinical assessments. 3. Developing a plan for improvement based on the above. |

**Appendix 1**

**UNIVERSITY OF DAMMAM**

**COLLEGE OF DENTISTRY**

**CLINICAL ORTHODONTICS (PDS 621)**

**List of Lectures for Academic Year 1435-36 H (2014-15 G)**

**Lectures schedule:** Sunday 10-11, Monday 1-2 **Clinic schedule:** Wednesday 1-4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Date** | **Week No.** | **Title** | **Instructor** |
| **1.** | 31/08 | 1 | Introduction to clinical orthodontics | **Dr. Al-Jewair** |
| **2.** | 01/09 | 1 | Unfavorable sequelae of malocclusion | **Dr. Nassar** |
| **3.** | 07/09 | 2 | Interceptive orthodontics | **Dr. Nassar** |
| **4.** | 08/09 | 2 | Class I malocclusion treatment | **Dr. Al-Masoud** |
| **5.** | 14/09 | 3 | Class II division 1 and 2 malocclusions treatment | **Dr. Al-Masoud** |
| **6.** | 15/09 | 3 | Class III malocclusion treatment | **Dr. Al-Masoud** |
| **7.** | 21/09 | 4 | Extra-oral therapy | **Dr. Nassar** |
| **8.** | 22/09 | 4 | Treatment of skeletal problems in preadolescent children-I | **Dr. Nassar** |
| **25/09 until 11/10 Hajj Holiday** | | | | |
| **9.** | 12/10 | 5 | Treatment of skeletal problems in preadolescent children-II | **Dr. Nassar** |
| **10.** | **13/10** | **5** | Group presentations of assigned articles | **Course team** |
| **11.** | 19/10 | 6 | Orthodontic treatment of patients in the mixed dentition-I | **Dr. Nassar** |
| **12.** | **20/10** | **6** | **EXAM 1** |  |
| **13.** | 26/10 | 7 | Orthodontic treatment of patients in the mixed dentition-II | **Dr. Nassar** |
| **14.** | 27/10 | 7 | Management of unerupted maxillary canines | **Dr. Al-Masoud** |
| **15.** | 02/11 | 8 | Management of crossbite | **Dr. Al-Masoud** |
| **16.** | 03/11 | 8 | Management of openbite | **Dr. Al-Masoud** |
| **17.** | 09/11 | 9 | Comprehensive Orthodontic treatment in the early permanent dentition -I | **Dr. Al-Masoud** |
| **18.** | 10/11 | 9 | Comprehensive Orthodontic treatment in the early permanent dentition -II | **Dr. Al-Masoud** |
| **19.** | 16/11 | 10 | Stability, Retention and relapse | **Dr. Al-Jewair** |
| **20.** | 17/11 | 10 | Group presentations of assigned articles | **Course team** |
| **21.** | **23/11** | **11** | **EXAM 2** |  |
| **22.** | 24/11 | 11 | Orthodontic treatment in adults | **Dr. Nassar** |
| **23.** | 30/11 | 12 | Role of orthodontist in orthognathic surgery-I | **Dr. Al-Jewair** |
| **24.** | 01/12 | 12 | Role of orthodontist in orthognathic surgery-II | **Dr. Al-Jewair** |
| **25.** | 07/12 | 13 | Orthodontic and surgical management of obstructive sleep apnea | **Dr. Al-Jewair** |
| **26.** | 08/12 | 13 | Orthodontic Management of Cleft Lip and Palate Patients | **Dr. Al-Jewair** |
| **27.** | 14/12 | 14 | Revision | **Dr. Nassar** |
| **28.** | 15/12 | 14 | Revision | **Dr. Al-Jewair** |

**Appendix 2**

**PDS 621**

**Clinical Orthodontics**

**Academic Year 1434-35 H [2014-15]**

**EVALUATION CRITERIA FOR GROUP PRESENTATIONS**

|  |  |  |
| --- | --- | --- |
| **Introduction to the subject** | **(1)** |  |
| **Organization and fluency of information given** | **(4)** |  |
| **Quality of content** | **(4)** |  |
| **Conclusion to the subject** | **(1)** |  |
| **Total** | **(10)** |  |

**Appendix 3**

**Clinical Procedures**

**Academic Year 2014-15 G [1435-36 H]**

**Outline**

|  |  |  |
| --- | --- | --- |
| **Week** | **Procedure** | **Date** |
| 1st | History & Clinical Examination for Case I | 03/09 |
| 2nd | Impression for study casts for Case I | 10/09 |
| 3rd | Radiographic examination and Photographs (Extra-oral & Intra-oral) for Case I | 17/09 |
| 4th | Treatment Planning & Case presentation for Case I | 24/09 |
| **25 Sep – 11 Oct, 2014 Hajj Holiday** | |  |
| 5th | Impression for working casts for Case I | 15/10 |
| 6th | Delivery of removable orthodontic appliance for Case I | 22/10 |
| **7th** | **Case I Submission** | **29/10** |
| 8th | History & Clinical Examination for Case II | 05/11 |
| 9th | Impression for study casts for Case II | 12/11 |
| 10th | Radiographic examination and Photographs (Extra-oral & Intra-oral) for Case II | 19/11 |
| 11th | Treatment Planning & Case presentation for Case II | 26/11 |
| 12th | Impression for working casts for Case II | 03/12 |
| 13th | Delivery of removable orthodontic appliance for Case II | 10/12 |
| **14th** | **Case II submission** | **17/12** |
| **15th** | **Final OSCE** | **24/12** |

**Appendix 4**

**Student’s Clinical Skills Evaluation**

**Student’s Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ I. D.:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Instructor’s Signature :** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- | --- | --- | --- | --- |
| **Week** | **Procedure** | **Date** | **Total**  **Mark**  **(30)** | **Student’s**  **Mark** | **Signature** |
| 1st | History & Clinical Examination for Case I | 03/09 | 2 |  |  |
| 2nd | Impression for study casts for Case I | 10/09 | 2 |  |  |
| 3rd | Radiographic examination and Photographs (Extra-oral & Intra-oral) for Case I | 17/09 | 2 |  |  |
| 4th | Treatment Planning & Case presentation for Case I | 24/09 | 3 |  |  |
| **25 Sep – 11 Oct, 2014 Hajj Holiday** | | | | | |
| 5th | Impression for working casts for Case I | 15/10 | 3 |  |  |
| 6th | Delivery of removable orthodontic appliance for Case I | 22/10 | 3 |  |  |
| **7th** | **Case I Submission** | **29/10** | **15** |  |  |
| 8th | History & Clinical Examination for Case II | 05/11 | 2 |  |  |
| 9th | Impression for study casts for Case II | 12/11 | 2 |  |  |
| 10th | Radiographic examination and Photographs (Extra-oral & Intra-oral) for Case II | 19/11 | 2 |  |  |
| 11th | Treatment Planning & Case presentation for Case II | 26/11 | 3 |  |  |
| 12th | Impression for working casts for Case II | 03/12 | 3 |  |  |
| 13th | Delivery of removable orthodontic appliance for Case II | 10/12 | 3 |  |  |
| 14th | Case II submission | 17/12 | 15 |  |  |