ADULT ORTHODONTICS COURSE

Course Code and Number: POS 556 (Orthodontic Seminar III)
Course Name: Adult Orthodontics
Pre-Requisites: POS 548 (Orthodontic Seminar II)
Course Level: Offered in the 2nd Semester of the 3rd Year to the Graduate Students
Room: #448112 (Orthodontic Seminar Room, 8th Floor, Dental University Hospital)
Time: Sundays, 8:00 – 10:00 am
Dates: January 6 – April 14, 2019

Course Director:
Abdullah M. Aldrees
BDS, DMSc
Office Hours: 12:00–1:00 pm
Office Location: 2A/49A
Telephone: 011 805-1975
E-mail: amaldrees@ksu.edu.sa

COURSE DESCRIPTION
As dental awareness is growing and orthodontic appliances are becoming more socially acceptable, more adult patients are seeking orthodontic treatment. While the approach to treatment in adult patients follows the same process as that for children, the presence of specific issues, which are unique for the adult patient group, makes the orthodontic management of their malocclusions different.

The course includes: problem-based learning cases, a review of the relevant literature that discusses the management of adult orthodontic patients, lectures given at previous AAO annual sessions by distinguished clinicians, in addition to special presentations by selected guest speakers.

COURSE GOAL
The goal of the course is to prepare graduate students in orthodontics, periodontics, and restorative dentistry to care for adult patients with complex orthodontic needs.

COURSE OBJECTIVES
This course aims to qualify the students to:
1. Recognize the characteristics of the adult orthodontic patients that differentiate them from the younger patient population.
2. Determine the appropriate approach (adjunctive vs. comprehensive) to adult orthodontic patient treatment.
3. Write the proper sequence of treatment procedures in the interdisciplinary management of adult orthodontic patients.
4. Describe the appropriate orthodontic management of endodontically involved teeth.
5. Identify the special anchorage problems unique to adult patients.
6. Select the best orthodontic management of patients with periodontal problems.
7. Analyze the esthetic periodontal challenges in adult patients and propose interdisciplinary solutions to produce ideal esthetic results.
8. Explain how certain medical conditions and drugs affect the orthodontic treatment.
9. Propose orthodontic management plans for elderly and medically compromised patients.
10. Recognize the special psychological issues (motivation, expectations, and satisfaction) of the adult orthodontic patient.
12. Recognize the capabilities and the limitations of Lingual Orthodontic Appliances and Clear Aligners.
STUDY PLAN AND REQUIREMENTS
To receive the maximum benefit from this course, the student must attend all seminars. A large emphasis of this course is placed on the careful review and discussion of the selected references. All students must read the articles under discussion, and the student assigned to present the article should prepare and distribute the “Article Summary Sheet” (sample is provided on page 5 of this syllabus). Also, students are expected to complete the assignments and participate actively in the PBL sessions. Satisfactory completion of this course requires:

1. Attendance in classes mandatory. Twenty-five percent (25%) of absence from the class will deprive the student from taking the final examination (University Rules & Regulations). Attendance is checked every week.
2. A minimal passing grade of 70% must be achieved of the combined grades of all the exams and activities.

COURSE EVALUATION
The students will be evaluated by their performance during the course. The total grade is 100%, and it is distributed as follows:

<table>
<thead>
<tr>
<th>CONTINUOUS ASSESSMENT</th>
<th>FINAL EXAMINATION</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Review + PBL Preparation</td>
<td>Written</td>
<td>100</td>
</tr>
<tr>
<td>60</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

The course is a pass/fail course, so achieving the minimal passing grade of 70% will award the student with a (P) grade.

STUDENT EXPECTATION
Out of respect for our lecturers, it is kindly asked that students’ attention is on the lecture being presented and they interact, as much as possible, with the presenter. Students are expected to present professionalism by not focusing attention on other materials. Students are expected to demonstrate punctuality for every class. Students are also expected to demonstrate preparedness for the sessions with respect to completing the assignments.

POLICY ON ATTENDANCE
Due to the interactive and participatory nature of this course, attendance at each class session is required. If you are unable to attend class due to a medical or family emergency, you should contact the course director and submit an excuse in writing (via email). Student will not be allowed to enter the classroom if they are more than 10 minutes late.

STUDENT ACADEMIC INTEGRITY, SCHOLASTIC DISHONESTY, AND PROFESSIONALISM
Scholastic misconduct is broadly defined as "any act that violates the right of another student in academic work or that involves misrepresentation of your own work. Scholastic dishonesty includes, (but is not necessarily limited to), cheating on assignments or examinations; depriving another student of necessary course materials; or interfering with another student’s work." Students are expected to govern their conduct toward their colleagues, faculty, and other professionals with integrity, mutual respect, and honor. Scholastic misconduct will result in failure of the course and the course will be required as a retake during the following year. Professionalism behavior in attendance and active participation will be monitored and recorded in the weekly evaluation.

COMMUNICATION
All individual and full class communication will be through your e-mail accounts. Announcements intended for the whole class will be sent by e-mail. It is a requirement of the course to check your e-mail daily. While in class, please silence your cell phones.
RECOMMENDED TEXTBOOK

- Adult Orthodontics
  Birte Melsen
  ISBN: 978-1405136198

- Chapter 19: Special Considerations in Treatment for Adults in: Contemporary Orthodontics
  William R. Proffit, Henry W. Fields Jr., Brent E. Larson, David M. Sarver
  Hardcover ISBN: 978-0323543873

Additional Reading:

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>CONTENT</th>
<th>METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2019</td>
<td>Introduction: Adult Orthodontic Patients – Who Are They? Chapter 1: Adult Orthodontics + Chapter 15: Contemporary Orthodontics Diagnosis and Treatment Planning Considerations in Treatment for Adults Chapters 2, 4, Adult Orthodontics + Chapter 15: Contemporary Orthodontics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JAN  6</td>
<td></td>
<td>LECTURE</td>
</tr>
</tbody>
</table>
| 3.   | 2019  | A. Lecture: The Orthodontic-Restorative Connection  
B. Problem-Based Learning Case: Braces Later in Life | LECTURE + PBL     |
| 4.   | JAN  27|                                                                          | LECTURE          |
|      |       | A. Problem-Based Learning Case: Braces Later in Life  
| 5.   | FEB  3| Lecture: ‘Perceive it to Treat it’ A Guide to Comprehensive Esthetic Dentistry | GUEST LECTURER: DR. ABDULAZIZ M. ALTAMIMI Prosthodontist |
| 6.   | FEB  10| A. Lecture: Management of Patients with Missing/Abnormally Proportioned Teeth  
B. Recorded Lecture: Dr. Ward M. Smallay, AAO 2014: Enhancing Anchorage during Adult Orthodontics: Restorative/Prosthodontic Implants. | LECTURE + CONFERENCE LECTURE |
B. Recorded Lecture: Dr. Berte Melsen, AAO 2007: Treatment of the Degenerated Dentition: Where is the Limit? | LECTURE + CONFERENCE LECTURE |
| 8.   | FEB  24| Lecture: The Orthodontic-Periodontic Connection PART-I  
A. Pre-Orthodontic Periodontal Therapy  
B. Pre-Orthodontic Perio. Surgery: A. Gingival recession and root coverage – Musculoskeletal problems, inadequate attached gingiva, gingival grafting B. Ossous Surgery – Bone defects/bone grafting C. Impacted/ Malformed Canines D. Corticotomy | GUEST LECTURER: DR. ALIU D. ALIYIU Associate Professors, Periodontics |
| 9.   | MAR  3| Lecture: The Orthodontic-Periodontic Connection PART-II  
| 10.  | MAR  10|                                                                          | GUEST LECTURER: DR. REHAM N. ALIASSER Assistant Professors, Periodontics |
| 11.  | MAR  17| A. Lecture: Psychosocial Issues and Adult Orthodontics  
B. Problem-Based Learning Case: “I always wanted to have my teeth fixed” | LECTURE + PBL |
| 12.  | MAR  24| A. Problem-Based Learning Case: “I always wanted to have my teeth fixed”  
| 13.  | MAR  31| Lingual Orthodontics | GUEST LECTURER: DR. NAIF A. ALMOSA Assistant Professor, Orthodontics |
| 14.  | APR  7| Clear Aligner Therapy | GUEST LECTURER: DR. MARWA R. HALAWNI Orthodontist |
| 15.  | APR  14| Clear Aligner Treatment (Invisalign) | GUEST LECTURER: DR. SULIMAN Y. SHAHIN Orthodontist |

Dr. Abdulaziz M. Altamimi Consultant Prosthodontist and a Faculty Member in Prosthodontics at Prince Abdulrahman Advanced Dental Institute, Riyadh, Saudi Arabia.  
Dr. Marwa R. Halawni Assistant Professor in Orthodontics, Head Orthodontic Division, Princess Noura bint Abdulrahman University, Riyadh, Saudi Arabia.  
Dr. Suliman Y. Shahin Assistant Professor Division of Orthodontics, College of Dentistry, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia.
SAMPLE OF THE ARTICLE SUMMARY SHEET

Student Name: …………………………………………………………….   Date: / /

FUNCTIONAL OCCLUSION FOR THE ORTHODONTIST

Nature of the Article
The article is the first in a four-article series written by the author to explain his diagnosis and treatment philosophy in details. It is an essay that included a brief history of how his philosophy developed, the basic concepts of the functional occlusion, and a step-by-step description of the clinical examination, diagnosis and treatment planning process.

1. History
   - Recently, orthodontists became more interested in functional occlusion, and he was one of them.
   - He wanted to increase the stability, make sure orthodontic treatment does no harm to the patients, and prove that with extractions we can still obtain good functional occlusion.
   - Simple equilibration can’t result in ideal occlusion, and a correct occlusal adjustment is time-consuming.

2. Philosophy and Rationale
   - Tx objectives must include attainment of gnathologically functional occlusion, and longevity of the TMJs.
   - Centric relation position is the most “ideal” or “physiologic” position for the condyles.
   - CR of the mandible is a superior limit position of the condyles in the fossae with the mandible centered and at its most closed position. Many patients have problems because their mandibles are not “in centric”.
   - The fact that someone’s occlusion is not centrically related is not, by itself, an indication for treatment. However, when a case undergoes orthodontic Tx, a goal should be intercuspation in CR.
   - CR is not a strained position, and it should be always defined as the uppermost or superiormost position.
   - Many of our patients are potential problems “just lying in the weeds”, waiting for us to change something.

3. Examination
   1. On initial examination, the clinician should attempt to manipulate the mandible into clinical CR.
   2. If the discrepancy between CR and CO is large, a mounting on a simple articulator is indicated.
   3. If the mandible is difficult to manipulate, splint therapy is required.
   4. TMJ should be palpated for popping or grating sounds, and muscles should be examined for tenderness.
   5. The occlusion should be examined for wear facets.
   6. Check the functional movements of the mandible, and measure the max. opening (normal 45~50 mm). “You can never determine intraorally that a case is free from interferences, but it can be determined intraorally when interferences do exist”.

4. Diagnosis and Treatment Planning
   - Mounting cases that have CR/CO discrepancy reveals the true malocclusion in all three planes of space.
   - Models mounted using true hinge-axis can be equilibrated until the overbite is the same as the CO OB.
   - Cephalometric tomograms are not accurate enough to determine the condylar position.

Comments
   - This article is part of the only published series by Dr. R. H. Roth about his philosophy.
   - The theories and principles of the author were not supported by any citation from scientific literature, although the basis of these concepts was obtained from prosthodontic research.
   - The author’s claim that centric relation position is physiologic and ideal does not correlate with the belief of other practitioners who say that CR is a stable and a repeatable reference.
   - The inherent inaccuracy associated with the bite registration and mounting techniques were not discussed by the author.
   - Dr. Roth should be given the credit for introducing the concept of functional occlusion to the field of orthodontics and his contribution should be appreciated.
## LITERATURE REVIEW/PBL ASSESSMENT OF GRADUATE STUDENT

**Course**  
Adult Orthodontics – POS 556

**Student Name**

**Evaluation Date**

*Please, fill out the appropriate box for each item using the *number* indicated for each column that best describes the postgraduate student:*

<table>
<thead>
<tr>
<th>Assessment Area</th>
<th>Student’s Grade</th>
<th>Grading System</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Punctual, Prompt (attends on time)</td>
<td></td>
<td>Outstanding (A) = 4</td>
</tr>
<tr>
<td>2. Participate Actively in the Discussion</td>
<td></td>
<td>Competent (B) = 3</td>
</tr>
<tr>
<td>3. Has a Good Comprehension of the Material (understanding and analysis of the content)</td>
<td></td>
<td>Developing (C) = 2</td>
</tr>
<tr>
<td>4. Presents the Articles Well (preparation for the discussion, organization of the ideas, delivery)</td>
<td></td>
<td>Poor (D) = 1</td>
</tr>
<tr>
<td>5. Provides Appropriate Critique of the Articles (adequate application of the critique principles)</td>
<td></td>
<td>N/A = Not Applicable</td>
</tr>
</tbody>
</table>

**Additional Comments**

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Name of Faculty:  
Signature:  
Date: