

**Dental Technology – 1<sup>st</sup> semester 1435/1436h**

## **424 DEH/ Evaluation of Dental Materials**

### **Semester Syllabus**

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#### **Instructor Information**

**Instructor:** Saleh M. Alhijji

**Office:** 2205, Building 24

**Office Hours:**

Sun. 9:00am -12:00noon

Mon. 9:30am -12:00noon

Wed. 9:00-12:00noon

**E-mail:** [smalhijji@ksu.edu.sa](mailto:smalhijji@ksu.edu.sa)

**Website:** <http://fac.ksu.edu.sa/smalhijji>

#### **Course time/location**

Tuesday from 1:00pm – 2:00pm

Hall#19

#### **Course Description**

This course covers the fundamental principles of characterizing dental materials and understanding the physical, mechanical, and chemical properties of commonly used dental materials and their clinical implications.

##### **Prerequisite**

- 223DEH & 323DEH.

#### **Textbook & Course Materials**

##### **Recommended Texts & Other Readings**

- [book] WJ O'Brien, **Dental materials and their selection.**
- [book] Von Recum, Andreas, **Handbook of biomaterials evaluation: scientific, technical and clinical testing of implant materials**

#### **Grading**

Quizzes	30%
Research project	10%
Participation	10%
Attendance	10%
Final exam	40%

## Topics outlines

Week#	Date	Topic
1	Sep.2 <sup>nd</sup>	Introduction to the dental material characterizations
2	Sep.9 <sup>th</sup>	Mechanical properties of dental materials-I (tensile, compression, shear)
3	Sep.16 <sup>th</sup>	Mechanical properties of dental materials-II (stress/strain curve)
4	Oct.14 <sup>th</sup>	Mechanical properties of dental materials-III (stress relaxation/creep)
5	Oct.21 <sup>st</sup>	Quiz #1 (30min.) / Assign the special research project in dental materials evaluation (due on 12/16)
6	Oct.28 <sup>th</sup>	Dental ceramics/ metals
7	Nov.4 <sup>th</sup>	Commonly polymers used in dentistry
8	Nov.11 <sup>th</sup>	Physical properties of dental materials
9	Nov.18 <sup>th</sup>	Quiz #2 (30min.) / Adhesion in restorative dentistry
10	Nov.25 <sup>th</sup>	Introduction to surface characterizations and modifications
11	Dec.2 <sup>nd</sup>	Requirements of an impression materials
12	Dec.9 <sup>th</sup>	Quiz #3 (30min.) / Review
13	Dec.16 <sup>th</sup>	Students' special research project presentation - I
14	Dec.23 <sup>rd</sup>	Students' special research project presentation - II