

## Master Syllabus

### DEH 2506 - Dental Materials

**Division:** Health Sciences

**Department:** Dental Health Sciences

**Credit Hour Total:** 2.0      **Lecture Hrs:** 1.0 **Lab Hrs:** 3.0

**Prerequisite(s):** DEH 2403

**Other Prerequisite(s):** AND Restricted to Majors

**Date Revised:** June 2015

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### Course Description:

General knowledge and use of various dental materials commonly used in the dental practice setting. Introduces the physical and chemical properties, structures, uses and manipulation of materials. One classroom, three lab hours per week.

### General Education Outcomes:

- Critical Thinking/Problem Solving Competency
- Oral Communication Competency

### Course Outcomes:

#### Dental Cements and Adhesive Materials

Describe the biologic properties and effects of dental cements and adhesive materials, and explain appropriate clinical techniques for the mixing and handling of these materials.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

70% or higher achieved

#### Dental Sealants

Explain the goal of dental sealants in preventive dentistry, and describe the processes associated with placement of pit and fissure sealants.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

70% or higher achieved

#### Indirect Restorations and Oral Prostheses

Explain the types of alloys, porcelains, and acrylic materials used to make indirect restorations and oral prostheses and explain the chairside and lab processes associated with the fabrication of indirect restorations, dentures, and partial dentures.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

70% or higher achieved

#### Properties of Dental Materials

Differentiate between the general, physical and chemical properties of various dental materials.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

70% or higher achieved

#### Direct Restorations

Compare and contrast the reaction and application of various dental amalgams and composite materials, and describe direct gold restorations.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

70% or higher achieved

#### Tooth Whitening

Define tooth whitening and explain the differences between vital and nonvital tooth whitening, compare and contrast professionally applied and patient applied whitening processes, and describe the procedures for tooth whitening application.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

70% or higher achieved

#### Margination and Debonding

Describe the rationale and analyze the process of margination, amalgam polishing, and debonding.

**Assessment Method:** Locally developed exams  
**Performance Criteria:**

70% or higher achieved

**Oral Appliances**

Identify the different oral appliances used in dentistry and explain the steps involved in the fabrication of athletic mouthguards, bleaching trays, and custom fluoride trays.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% or higher achieved

**Oral Communication**

Use effective verbal and non-verbal skills to deliver oral health procedures effectively.

**Assessment Method:** Behavioral observations

**Performance Criteria:**

80% proficiency using standardized rubric

**Assessment Method:** Simulations

**Performance Criteria:**

80% proficiency using standardized rubric

**Moisture Control and Isolation**

List isolation techniques used to decrease moisture during a dental procedure and analyze the uses of proper isolation techniques and their application in dentistry.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% or higher achieved

**Impression and Gypsum Materials**

Describe the use of impression materials during indirect restorative procedures; identify the composition and setting mechanism of impression materials, compare the physical and chemical structure of gypsum materials and summarize the recommended technique for use of gypsum products.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% or higher achieved

**Outline:**

Properties of Dental Materials

Impression and Gypsum Materials

Dental Cements and Adhesive Materials

Moisture Control and Isolation

Dental Sealants

Direct and Indirect Restorations and Oral Prosthesis

Margination and Debonding

Tooth Whitening

Oral Appliances