

University of Arkansas - Fort Smith
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General Syllabus

DHYG 4463 Dental Materials

Credit Hours: 3

Lecture Hours: 2

Laboratory Hours: 3

Prerequisites: DHYG 3113 Clinic I Theory, DHYG 3212 Periodontology I, DHYG 3213 Dental Hygiene Clinic I, DHYG 3443 Pharmacology, and DHYG 3453 General and Oral Pathology

Corequisites: DHYG 4122 Clinic II Theory, DHYG 4224 Dental Hygiene Clinic II, DHYG 4142 Advanced Dental Hygiene Theory for Special Needs Patients, DHYG 4311 Periodontology II, DHYG 4372 Dental Nutrition, and DHYG 4512 Local Anesthesia and Nitrous Oxide

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Designed to familiarize the student with commonly used materials in dentistry. Content on the theory and manipulation of dental materials including material composition, and physical and chemical properties. The theory and technique of finishing and polishing amalgam and composite restorations is presented.

B. Additional Information-None

II. Student Learning Outcomes

A. Subject Matter

Upon completion of this course, the student will:

1. Identify the properties of matter and materials.
2. Follow the Occupational Safety and Health Administration guidelines for the safe handling of materials.
3. Operate and maintain dental laboratory equipment safely.
4. Discuss the properties, indications, and limitations of selected dental materials.
5. Assess patient needs and select appropriate dental materials for pit and fissure sealants.

6. Prepare and discuss dental waxes, cements, preventive sealants and restorative materials.
7. Construct customized trays.
8. Construct models from alginate impressions.
9. Trim models to laboratory specifications.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills: Students will use analytical/critical thinking skills to assess and justify the patient's need for the placement of dental sealant material.

Communication Skills (written and oral)

Students will communicate with peers by providing a presentation correctly identifying the properties in various dental materials used for patient care.

Ethical Decision Making

Students will recognize and analyze ethical dilemmas.

III. Major Course Topics

- A. Properties of Material
- B. Pit and Fissure Sealants
- C. Impression Materials -- Alginate
- D. Gypsum Products
- E. Bleaching Products
- F. Customized Trays and Mouth guards
- G. Finishing and Polishing Restorations
- H. Direct Esthetic Restorative Materials
- I. Dental Cements, Bases and Liners
- J. Dental Porcelain
- K. Miscellaneous Dental Materials
- L. Dental Implant Material