

DENT 102: DENTAL MATERIALS

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2023
Credits:	3
Total Contact Hours:	98
Lecture Hours :	36
Lab Hours:	62
Hours Arranged:	0
Outside of Class Hours:	72
Prerequisite:	DENT 100 or concurrent enrollment and DENT 122 or concurrent enrollment.
Transferable to CSU:	No
Transferable to UC:	No
Grading Method:	Standard Letter

Catalog Course Description

This course presents the basic physical and technical aspects of dental materials utilized in restorative, and laboratory dental procedures. It is designed to develop the manipulative skills necessary for the application of these materials. 36 lecture hours, 62 lab hours.

Course Objectives

- demonstrate knowledge of the safety precautions, manipulation and care of laboratory equipment
- identify, classify and manipulate the various dental materials found in the dental office
- prepare a diagnostic study model using alginate impression materials while maintaining infection control protocol, on a classmate

Major Course Content

1. Safety Rules
 - a. Equipment hazards
 - b. Body hazards
 - c. Safety rules
2. Introduction to Dental Materials
 - a. Types
 - b. Structure property
 - c. Mechanical and physical properties
 - d. California Dental Materials Fact Sheet
3. Restorative Materials
 - a. Amalgam
 - b. Composite resins
 - c. Dental metals
4. Preventive Materials
 - a. Fluoride
 - b. Pit and fissure sealants
 - c. Mouth protectors
5. Dental Cements

- a. Liners
 - b. Bases
 - c. Temporary cements
 - d. Restorative cements
 - e. Final cements
6. Gypsum Products
 - a. Types
 - b. Uses
 - c. Manipulation
 - d. Model trimming
 7. Impression Materials
 - a. Irreversible hydrocolloid (alginate)
 - b. Reversible hydrocolloid
 - c. Elastomeric
 8. Dental Waxes
 - a. Types
 - b. Uses
 - c. Procedures
 9. Plastics in Prosthetics
 - a. Properties
 - b. Polymerization
 - c. Acrylic plastics as denture base
 - d. Other plastics in dentistry
 10. Dental Casting
 - a. Purpose of lost wax technique
 - b. Casting sequence
 11. Tooth Whitening Procedure
 - a. Types
 - b. Armamentarium
 - c. Procedure
 - d. Patient education

Lab Content

1. Perform lab procedures safely
2. Select proper materials for manipulation
3. Select and assemble armamentarium as required
4. Prepare, mix, and manipulate various dental materials according to specific instructions: dental cements, alginate impression material for taking impressions, elastomeric impression materials for taking an impression, Hydrocolloid impression material for taking an impression, amalgam for insertion into a cavity prep, yellow stone and improved stone to be poured into an impression.
5. Project: take alginate impressions on typodont and produce a plaster study model
6. Project: take alginate impression on patient and produce a plaster study model
7. Tooth Whitening Procedure

Suggested Reading Other Than Required Textbook

Required reading assignments

Examples of Required Writing Assignments

Skill evaluation is a more effective way to evaluate students in this class.

Examples of Outside Assignments

Your dentist has prepared a deciduous tooth for a crown on a 5 year-old child. Select and mix the material to lute this crown. Explain what kind of crown would be placed and why this procedure is done.

The dentist needs to place an insulating material into a cavity preparation. List the materials that can be selected for this procedure and explain why this procedure is necessary. Then select one of the cements and mix it to the proper consistency and select the instruments that will be used to place the material into the cavity preparation.

Instruction Type(s)

Lab, Lecture, Online Education Lab, Online Education Lecture