

SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
DENTAL ASSISTING
Revision Date: 11/2023

I. CATALOG DESCRIPTION

Course Number: DENT 1109
Course Title: Dental Materials
Prerequisite(s): Admission to the program

Catalog Description: This course is an introduction to physical properties, principles of manipulation and storage of a variety of dental materials. Course includes laboratory projects pertaining to mixing a variety of cements, diagnostic impressions and casts, and manipulation of specific types of dental materials on both manikins and human patients. Fabrication of provisional crowns and bridges, thermoplastics and other laboratory projects.

Credit Hours: 2.5
Class Hours: 23
Lab Hours: 45
Total Contact Hours: 68

II. COURSE OBJECTIVES: *Course will:*

1. Introduce materials and dental lab infection control practices.
2. Introduce laboratory tasks commonly required of the dental assistant.
3. Identify structure and properties of dental materials.
4. Discuss a variety of dental cements, liners and bases
5. Discuss provisional and final impressions to include digital non-radiographic scanning and dental waxes.
6. Discuss direct and indirect restorative materials and uses.
7. Discuss thermoplastic resin materials and uses.

Note: Unit objectives are located in the learning management system within each unit of study.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *The student will be able to:*

1. Rationalize and practice sound infection control standards for dental laboratory materials and equipment.
2. Introduce lab safety and skills required in a dental lab setting for the dental assistant.
3. Identify and relate the significant properties of dental materials to the predictable performance of dental materials.
4. Identify and manipulate various types of dental cements, liners and bases.
5. Return demonstrate ability to correctly select and properly manipulate preliminary impression materials and supplies.
6. Return demonstrate ability to correctly select and properly manipulate gypsum products on various types of impressions.
7. Identify and fabricate various types of provisional coverage treatments on a cast.
8. Classify and take various types of final impressions on dentiform.

9. Identify components of the materials for the indirect and direct restorations including: amalgam, glass ionomer, composite resins, and crown prep (dental waxes).
10. Return demonstrate ability to correctly select and properly manipulate thermoplastic resin materials for dental lab procedures.

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO 3: Critical Thinking and Problem Solving

Outcomes: Collect, identify, interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

A. Lecture topics

1. Introduction to dental materials and dental lab infection control standards
2. Structure and properties of dental materials
3. Dental liners, bases and cements
4. Preliminary impression materials and trays
5. Gypsum materials
6. Final impression materials and trays (including digital)
7. Provisional Coverage (single or multi tooth)
8. Indirect Restorations – (crown and bridge)
9. Direct Restoration – (amalgam, composite and glass ionomer components)
10. Thermoplastic Resin materials (including whitening materials)

B. Lab projects

1. Gypsum pour up of edentulous rubber models
2. Alginate impressions
3. Diagnostic alginate impressions
4. Polish a repaired denture
5. Cement pack
6. Final impression pour-up
7. Fabrication of provisional bridge and crown
8. Articulated model using a three way (triple) tray
9. Non-radiographic digital scan on a Class II prep
10. Fabricate and cement provisional aluminum crown, filled with acrylic on cast
11. Fabricate a bleaching tray with spacer "block out"
12. Fabricate a mouthguard

V. INSTRUCTIONAL MATERIALS REQUIRED

A. Required Text(s):

Bird and Torres. *Modern Dental Assisting* (current edition). Saunders. (textbook)

Miller. *Infection Control and Management of Hazardous Materials for the Dental Team* (current edition). Mosby

Bartdomucci, B. *Dental Instrument Pocket Guide* (current edition). Saunders.

Stuhr. *Modern Dental Terminology Online* (current edition) Saunders (online-text).

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Demonstration
3. Handout Materials

4. Class Participation/Presentations
5. Case Studies and Group Work
6. Power Point slides and videos
7. Activity worksheets
8. Engaged learning activities

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of assignments, quizzes, exam, projects, skill checkoffs, etc. For grading expectations, please see the course information document.

SCC STANDARD GRADING SCALE POLICY:

A+	95-100	C+	75-79
A	90-94	C	70-74
B+	85-89	D+	65-69
B	80-84	D	60-64
		F	Below 60

VIII. SPECIFIC COURSE REQUIREMENTS

1. ATTENDANCE

Attendance is crucial to the success of this course. Any class missed could mean valuable missed information, which is difficult to obtain. Please notify the instructor of any pending absences or if you will be late prior scheduled time. See program handbook for all program policies.

Please see course information document for course policies related to grading, expectations, assignments, assessments, and participation.