

# D A 66: DENTAL ASSISTING APPRENTICESHIP CLINICAL SKILLS II

## Foothill College Course Outline of Record

Heading	Value
Effective Term:	Fall 2021
Units:	2
Hours:	1 lecture, 4 laboratory per week (60 total per quarter)
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

## Student Learning Outcomes

- 100% of the students will be able to successfully take an alginate impression
- 100% of the students will be able to set up a composite tray set up.

## Description

Overview of common dental procedures, such as composite, amalgam, partials, dentures, root canals, dental implants, crown and bridge appointments; manipulation of dental materials commonly prepared or used by the dental assistant, including impression materials, cement bases and liners, composites, and amalgams. Intended for students in the Dental Assisting Apprenticeship Program; enrollment is limited to students accepted in the program.

## Course Objectives

The student will be able to:

1. Prepare on an adult patient without assistance an acceptable alginate and scanned impressions of the upper and lower arches, including all teeth, retromolar and vestibular areas
2. Select, collect the materials and armamentarium, and prepare, mix and pour a dental cast with no large irregularities or faults
3. Trim a plaster/stone model for bleaching splints or nightguard
4. Describe composite, amalgam, partials, dentures, root canals, dental implants, crown and bridge dental procedures
5. Prepare tray set-ups for composite, amalgam, and crown and bridge dental procedures
6. Describe the common dental cements and restorative materials and describe their uses and limitations
7. Prepare and mix without assistance at a satisfactory level any of the commonly used dental cements or materials, as allowed and specified by legally defined duties
8. Select, collect the materials and armamentarium, and prepare and/or mix without assistance final impression materials so that a satisfactory impression could be obtained

## Course Content

1. Prepare on an adult patient without assistance an acceptable alginate and scanned impressions of the upper and lower arches, including all teeth, retromolar and vestibular areas
    - a. Types of preliminary impressions
      - i. Alginate
        1. Indications
        2. Composition
        3. Appropriate handling
        4. Infection control considerations
        5. Types of impression trays
          - a. Selection and fitting of impression tray
        6. Safety precautions
          - a. Risk of aspiration or swallowing
          - b. Avoiding injury to the patient
        7. Procedure
          - a. Armamentarium
          - b. Dispensing and mixing
          - c. Loading tray and insertion of tray
          - d. Removal of tray
          - e. Evaluation of impression
    8. Alginate alternatives
      - a. Composition
      - b. Armamentarium
        - i. Dispensing gun, cartridge, and mixing tip
  9. Scanning
    - a. Types of scanners
    - b. Technology considerations
    - c. Procedure
      - i. Armamentarium
      - ii. Scanning of maxillary and mandibular arches
      - iii. Evaluation and manipulation of image
2. Select the materials and armamentarium, and prepare, mix and pour a dental cast with no large irregularities or faults
  - a. Types of dental plaster and stone
  - b. Appropriate handling of material
  - c. Armamentarium and disposable products for pouring study models
  - d. Infection control considerations
  - e. Safety precautions
  - f. Dispensing and mixing material
  - g. Loading tray with plaster or stone
  - h. Removal of study model from tray
  - i. Evaluation of study model
3. Trim a plaster/stone
  - a. Preparation of model
  - b. Safety precautions
  - c. Trimming procedure
4. Describe composite, amalgam, partials, dentures, root canals, dental implants, crown and bridge dental procedures
  - a. Amalgam procedures
  - b. Composite procedures
  - c. Crown and bridge procedures

- i. Prep appointment
  - ii. Cementation appointment
  - iii. Implant crown and bridge
- d. Endodontics
- e. Partial and dentures
5. Prepare tray set-ups for composite, amalgam, and crown and bridge dental procedures
  - a. Amalgam
    - i. Armamentarium and disposable products
  - b. Composite procedures
    - i. Armamentarium and disposable products
  - c. Crown and bridge procedures
    - i. Prep appointment
      1. Armamentarium and disposable products
    - ii. Cementation appointment
      1. Armamentarium and disposable products
    - iii. Implant crown and bridge
      1. Armamentarium and disposable products
6. Describe the common dental cements and restorative materials and describe their uses and limitations
  - a. Types
  - b. Indications
  - c. Contraindications
7. Prepare and mix without assistance at a satisfactory level any of the commonly used dental cements or materials, as allowed and specified by legally defined duties. These procedures include but are not restricted to:
  - a. Cement bases and liners
    - i. Armamentarium and disposable products
    - ii. Procedure
  - b. Temporary and permanent cements
    - i. Armamentarium and disposable products
    - ii. Procedure
  - c. Restorative materials for insertion
    - i. Armamentarium and disposable products
    - ii. Procedure
8. Select and collect the materials and armamentarium, and prepare and/or mix without assistance final impression materials so that a satisfactory impression could be obtained
  - a. Dental cements and restorative materials
    - i. Liners
      1. Calcium hydroxide
      2. Glass ionomer
    - ii. Temporary cements
      1. Zinc oxide and eugenol
      2. TempBond
    - iii. Permanent cements
      1. Zinc phosphate
      2. Glass ionomer
      3. Resin cements
    - iv. Crown and bridge impression materials
      1. Polyether
      2. Polysulfide
      3. Vinylpolysiloxane
  - b. Bite registration material
    - i. Wax
    - ii. Polyvinylsiloxane cartridge and gun dispenser
  4. Composite
- b. Dental cements and material
  - i. Temporary dressings
    1. Zinc oxide eugenol temporary restoration
  - ii. Bases and liners
    1. Mixing procedure
  - iii. Restorative materials
    1. Mixing procedure
- c. Final impression
  - i. Polyvinylsiloxane
    1. Putty-wash technique
    2. 2-gun technique
  - ii. Pentamix
    1. Armamentarium
    2. Procedure
  - iii. Mixing study model materials
    1. Plaster
      - a. Water and powder ratio
      - b. Mixing
    2. Stone
      - a. Water and powder ratio
      - b. Mixing
    3. Alginate impressions
      - a. Types of impression trays
      - b. Armamentarium
      - c. Mixing process
      - d. Impression procedure
    4. Matrix band selection
      - a. Types
      - b. Placement
      - c. Wedges
9. Infection control and hazardous waste management
  - a. Dental unit waterlines
    - i. Plaque biofilms
    - ii. Flushing waterlines
  - b. Perform set-up and breakdown of the dental unit
    - i. Appropriate PPE
    - ii. Barrier placement
    - iii. Flushing waterlines and evacuation system
  - c. Personal protective equipment
    - i. Gloves
      1. Types
      2. Uses
    - ii. Masks
      1. Types
      2. Uses
    - iii. Protective attire
      1. Types
      2. Uses
  - d. Cross contamination
    - i. Types
    - ii. Prevention
  - e. Instrument processing

- i. Decontamination
  - ii. Disinfection
  - iii. Sterilization
- f. Sharps and hazardous waste
  - i. Sharps container
    - 1. Uses
  - ii. Hazardous waste
    - 1. Regulated waste
    - 2. Unregulated waste
- 10. Ethical and legal principles
  - a. Patient records
    - i. Documentation protocols
    - ii. Medical/dental history
    - iii. Treatment record
    - iv. Confidentiality
  - b. Professional behavior and appearance
    - i. Policy and procedures
    - ii. Ethical code of conduct

## Lab Content

1. Lab orientation
2. Sizing of alginate trays
3. Instrument assignments
4. Clinic equipment identification
5. Handwashing and PPE
6. Infection control video
7. Infection control set-up in clinic
8. Oral evacuation
9. Patient/operator positioning in clinic
10. Basic tray set-up
11. Local anesthesia syringe set-up
12. Instrument transfer in clinic
13. Rubber dam on typodont
14. Rubber dam in clinic
15. Matrix band and wedge(s)
16. Alginate impressions
17. Study models

## Special Facilities and/or Equipment

1. Dental clinic
2. Patient dental chair
3. Operator and assistant stool
4. Sinks
5. Steam autoclave
6. Miele dishwasher/disinfector
7. Dental vibrator
8. Oral evacuation equipment
9. Air compressor

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

- Exams
- Lab competencies

Lab quizzes  
Alginate impressions  
Study models

## Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture  
Discussion  
Cooperative learning exercises  
Laboratory  
Demonstration  
Internship/preceptorship

## Representative Text(s) and Other Materials

Bird, DL, and DS Robinson. Modern Dental Assisting. 2021.

## Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

This course requires reading of textbook chapters and completing short answers for worksheets related to the required reading.

## Discipline(s)

Dental Technology