

D A 51A: INTRODUCTION TO CHAIRSIDE DENTAL ASSISTING

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2023
Units:	10.5
Hours:	6.5 lecture, 13 laboratory per week (234 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 assemble a Tofflemire retainer with a matrix band.
- 100% of the students will be able to set up a composite, amalgam, crown prep, or crown cementation tray.

Description

Introduction to chairside assisting; use and care of dental equipment, patient management, instrument identification; overview of common dental procedures, such as composite, amalgam, partials, dentures, root canals, crown and bridge appointments; manipulation of dental materials commonly prepared or used by the dental assistant, including temporary dressings, impression materials, cement bases and liners, topical agents, composites, resins and amalgams. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

Course Objectives

The student will be able to:

- Dental Assisting Theory and Practice Competency: dental assisting students must be competent in applying the theory and practice of dental assisting for persons of all ages and abilities
 - Identify all parts and functions of a standard dental treatment room
 - Identify potential complications, including allergies, medications, acute or chronic conditions, and behavioral complications from medical and dental histories
 - Accurately take and record an adult patient's vital signs without assistance
 - Obtain additional pertinent information about a patient's medical history through an oral interview
 - Recognize the need for a medical consult and/or prophylactic antibiotic premedication prior to dental treatment
 - Describe the correct dosage and medication for antibiotic prophylactic premedication
 - Describe and chart G.V. Black's classification for cavities and restorations
- Infection Control and Hazardous Waste Management Competency: dental assistants must possess the knowledge and abilities to prevent the transmission of infectious diseases
 - Identify, chart, and describe common dental restorations which are placed in the oral cavity
 - Describe and chart common periodontal assessments which are performed by the dental hygienist or dentist
 - Demonstrate proper positioning of the patient, the operator, and the assistant
 - Identify, from a departmental collection, dental instruments, and specifying uses for each; describe the physical principle involved in the function of the various types of instruments; and indicate the working surface of each type
 - Describe common dental procedures and prepare a complete tray set-up from departmental instrument and supply inventories for:
 - Restorative procedures
 - Endodontic procedures
 - Dental prophylaxis
 - Describe the treatment sequence for prosthodontic appointment
 - Transfer instruments to an operator using a variety of tray set-ups and procedural situations
 - Apply and remove a rubber dam, in any specified region
 - Perform high volume evacuation on a manikin and patient-partner to effectively remove oral fluids during dental procedures
 - Describe the use of topical agents and identify the common areas where topical ointment/gel is applied for block injections
 - List the common local anesthetic nerve block injections and describe the oral tissues which are anesthetized by the specific injection
 - List the common dental cements and restorative materials and describe their uses, limitations and manipulation
 - 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:
 - Temporary dressings
 - Cement bases and liners
 - Restorative materials for insertion
 - 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
 - Select and collect the materials and armamentarium and prepare, mix, and pour a dental cast with no large irregularities or faults using at least one of the following materials:
 - Dental plaster
 - Dental stone
 - Prepare, on an adult patient without assistance, acceptable alginate impressions and bite registration of the upper and lower arches, including all teeth, retromolar, and vestibular areas
 - On prepared teeth on a dental manikin, select a matrix band of appropriate size, type, and configuration
 - Place the matrix band on the tooth and place necessary wedges to assure confinement of the filling material and adaptation to marginal areas
 - Observe and/or assist at chairside in a general practice dental office

- i. Perform or describe the proper flushing of dental unit water lines
 - ii. Perform set-up and breakdown of the dental unit using recommended infection control standards
 - iii. Wear appropriate personal protective equipment when performing dental assisting duties
 - iv. Perform or describe how to avoid cross contamination when performing dental assisting duties
 - v. Observe, assist, and demonstrate competency in instrument processing and sterilization procedures, including biological monitoring
 - vi. Dispose sharps and hazardous waste into the appropriate sharps container
- c. Ethical and Legal Principles Competency: dental assisting students must be competent in understanding ethical/legal principles as applied to the dental office
- i. Prepare and/or evaluate complete and accurate patient procedure records
 - ii. Demonstrate professional behavior and appearance in clinical and laboratory situations
 - iii. Demonstrate teamwork with assigned student-partner in classroom, laboratory and clinical situations

Course Content

- a. Dental Assisting Theory and Practice Competency
 - i. Identify all parts and functions of a standard dental treatment room
 - 1. Dental equipment and maintenance
 - 2. Operation and identification of equipment
 - ii. Infection control procedures
 - 1. Medical history review
 - a. Medical history
 - b. Social/personal history
 - c. Dental history
 - iii. Vital signs
 - 1. Types of vital signs
 - 2. Armamentarium
 - 3. Temperature
 - a. Types of thermometers
 - b. Procedure
 - 4. Pulse
 - a. Procedure
 - 5. Respiration
 - a. Procedure
 - 6. Blood pressure
 - a. Procedure
 - iv. Dialogue interview
 - 1. Screening for undiagnosed conditions
 - 2. Supplemental questions
 - v. Medical consultation
 - 1. Conditions warranting medical consult
 - a. Medical conditions
 - b. Abnormal vital
 - vi. Antibiotic premedication
 - 1. Total joint replacement and bacterial endocarditis
 - a. Medication
 - b. Dosage
 - c. Timing
- vii. Cavity classification
 - 1. Types
 - 2. Line angles and point angles
- viii. Dental charting
 - 1. Dental restorations
 - 2. Charting
- ix. Periodontal charting
 - 1. Periodontal conditions
 - 2. Charting
- x. Patient, operator, and assistant positioning
 - 1. Ergonomics
 - 2. Right and left handed operators
 - 3. Transfer zone
- xi. Dental instruments
 - 1. Types
 - 2. Function
- xii. Tray set-up
 - 1. Restorative
 - a. Armamentarium
 - b. Disposable products
 - c. Equipment
 - 2. Endodontics
 - a. Armamentarium
 - b. Disposable products
 - c. Equipment
 - 3. Dental prophylaxis
 - a. Armamentarium
 - b. Disposable products
 - c. Equipment
- xiii. Prosthodontic procedures
 - 1. Removable prosthodontics
 - 2. Fixed prosthodontics
- xiv. 4-handed procedures/instrument transfer
 - 1. Exam/emergency
 - 2. Prophylaxis
 - 3. Amalgam
- xv. Rubber dam
 - 1. Armamentarium
 - 2. Types
 - 3. Procedure
- xvi. High volume evacuation
 - 1. Types
 - 2. Procedure
- xvii. Topical anesthetic
 - 1. Types
 - 2. Indications
 - 3. Contraindications
 - 4. Procedures
- xviii. Local anesthetic
 - 1. Trigeminal nerve
 - a. Maxillary and mandibular divisions

2. Nerve blocks
3. Infiltration
4. Injection sites
- xix. Dental cements and restorative materials
 1. Liners
 - a. Calcium hydroxide
 - b. Glass ionomer
 2. Temporary cements
 - a. Zinc oxide and eugenol
 - b. Temp-bond
 3. Permanent cements
 - a. Zinc phosphate
 - b. Glass ionomer
 - c. Resin cements
 4. Crown and bridge impression materials
 - a. Polyether
 - b. Polysulfide
 - c. Vinylpolysiloxane
 - d. Bite registration material
 - i. Wax bite
 - ii. Polyvinylsiloxane cartridge and gun dispenser
 - e. Composite
- xx. Dental cements and material
 1. Temporary dressings
 - a. Zinc oxide eugenol temporary restoration
 2. Bases and liners
 - a. Mixing procedure
 3. Restorative materials
 - a. Mixing procedure
- xxi. Final impression
 1. Polyvinylsiloxane
 - a. Putty-wash technique
 - b. 2 gun technique
 2. Pentamix
 - a. Armamentarium
 - b. Procedure
- xxii. Mixing study model materials
 1. Plaster
 - a. Water and powder ratio
 - b. Mixing
 2. Stone
 - a. Water and powder
 - b. Mixing
- xxiii. Alginate impressions
 1. Types of impression trays
 2. Armamentarium
 3. Mixing process
 4. Impression taking
- xxiv. Matrix band selection
 1. Types
- xxv. Matrix band placement
 1. Placement
 2. Wedges
- xxvi. Observe or assist at chairside
 1. UCSF Dental School rotation
- b. Infection Control and Hazardous Waste Management Competency
 - i. Dental unit water lines
 1. Plaque biofilms
 2. Flushing waterlines
 - ii. Perform set-up and breakdown of the dental unit
 1. Appropriate PPE
 2. Barrier placement
 3. Flushing waterlines and evacuation system
 - iii. Personal protective equipment
 1. Gloves
 - a. Types
 - b. Uses
 2. Masks
 - a. Types
 - b. Uses
 3. Protective attire
 - a. Types
 - b. Uses
 - iv. Cross contamination
 1. Types
 2. Prevention
 - v. Instrument processing
 1. Decontamination
 2. Disinfection
 3. Sterilization
 - vi. Sharps and hazardous waste
 1. Sharps container
 - a. Uses
 2. Hazardous waste
 - a. Regulated waste
 - b. Unregulated waste
- c. Ethical and Legal Principles Competency
 - i. Patient records
 1. Documentation protocols
 2. Medical/dental history
 3. Treatment record
 4. Confidentiality
 - ii. Professional behavior and appearance
 1. Policy and procedures
 2. Ethical code of conduct

Lab Content

- a. Lab orientation
- b. Sizing of alginate trays
- c. Instrument assignments
- d. Clinic equipment identification
- e. Handwashing and PPE
- f. Infection control video
- g. Infection control set-up in clinic
- h. Oral evacuation
 - i. Patient/operator positioning in clinic
- j. Basic tray set-up
- k. Local anesthesia syringe set-up
- l. Instrument transfer in clinic

- m. Rubber dam on typodont
- n. Rubber dam in clinic
- o. Introduction to amalgam procedure
- p. Mixing liners/lining cements, bases, and amalgam
- q. Matrix band and wedge(s)
- r. Alginate impressions
- s. Bite registrations
- t. Amalgam fill, carve, and polishing
- u. Instrument transfer for an amalgam procedure in clinic
- v. Crown and bridge preparation and temporization
- w. Mixing temporary cements and final impression materials
- x. Instrument transfer for a crown and bridge prep appointment in clinic
- y. Crown and bridge cementation procedure
- z. Mixing permanent cements
- aa. Instrument transfer for a crown and bridge cementation appointment in clinic
- bb. Prep study models for trimming
- cc. Composite procedure
- dd. Instrument transfer for a composite procedure in clinic
- ee. Lab final review
 - ff. Placing topical anesthetic
- gg. Lab clean up

Special Facilities and/or Equipment

1. Personal protective equipment and appropriate uniform.
2. Dental operatory demonstration and practice units, laboratory facilities with individual student work areas with air and suction available at each station.
3. Dental instrumentation comparable to that present in private dental offices.
4. Clinical supplies to support demonstration and student practice activities.
5. When taught via Foothill Global Access, on-going access to computer with email software and hardware; email address.

Method(s) of Evaluation

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

- Exams (4): multiple choice, short answer, spelling, instrument identification
- Lab competencies
1. Lab quizzes
 2. Lab skills check-off
- Assignments/projects
1. Study models
 2. Medical history assignment
 3. Workbook assignments
- End of quarter OSCE exam

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, D.L., and D.S. Robinson. *Modern Dental Assisting, 13th ed.*. 2020.

Miyasaki, Cara. *D A 51A Lecture Manual*. 2022.

Kornegay, Catherine, and Renee Herold. *D A 51A Lab Manual*. 2022.

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

- a. Chapter readings on restorative, prophylaxis, and endodontic procedures from textbook
- b. Reading and reviewing course lecture/lab manual
- c. Documentation of patient treatment in treatment record, to include vital signs, local anesthetic administration, dental procedures, and patient responses
- d. Log entries of clinic procedures in internship folder

Discipline(s)

Dental Technology