

# D A 71: INFECTION CONTROL & HAZARDOUS WASTE MANAGEMENT

## Foothill College Course Outline of Record

Heading	Value
Effective Term:	Fall 2020
Units:	1.5
Hours:	1.5 lecture, 1 laboratory per week (30 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

- The student will be able to select the appropriate personal protective equipment (PPE) for different dental procedures depending on the amount of exposure to potentially infectious blood and body fluids.
- The student will be able to select the appropriate sterilization equipment depending on the type of instrument(s) and the dental office conditions.

## Description

Introduction to infectious diseases important to dentistry. Lecture, lab and clinical instruction on disinfection, instrument decontamination, sterilization procedures and tray set-up preparation. Regulatory compliance agencies such as OSHA, CDC and ADA recommendations. Hazardous materials management and waste management. Protocols and emergency procedures for hazardous and biohazardous waste or materials. 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:

- select diseases or infectious conditions from a departmental list of common pathologies and associate each with the microorganism causing this condition.
- describe, explain and demonstrate methods and procedures for maintaining proper sterile and aseptic conditions in the dental office.
- select and demonstrate the appropriate methods for cleaning, sanitizing or sterilizing the various instruments and equipment.
- operate properly each of the various sterilization or sanitizing units.
- describe the compliance requirement for hazard communication management.
- describe the Occupational Safety and Health Administration requirements, the Centers for Disease Control Recommendations and the American Dental Association Recommendations for infection control in dental offices.
- associate breaches in ethical behavior and dental law related to infection control and hazardous waste management.

## Course Content

A. Infectious diseases of importance to dentistry (Lec)

- Hepatitis
  - Types of hepatitis
  - Modes of transmission
  - Prevention
- HIV/AIDS
  - Modes of transmission
  - Prevention
- Herpetoviruses
  - Modes of transmission
  - Prevention
- Tuberculosis
  - Modes of transmission
  - Prevention
- Legionnaires disease
  - Modes of transmission
  - Prevention
- COVID-19
  - Modes of transmission
  - Prevention
- Sterile and aseptic conditions
  - Personal protective equipment (Lec and lab)
    - Gloves
      - Hand hygiene
        - Handwashing
        - Hand sanitizer
      - Types
      - Placement and removal
    - Masks and respirators
      - Types
      - Placement and removal
    - Protective eyewear
      - Types
      - Placement and removal
      - Decontamination and disinfection process
    - Protective clothing
      - Types
      - Placement and removal
      - Laundering
  - Disinfection (Lec and lab)
    - Disinfecting agents
    - Appropriate use of disinfectants
    - Choosing an appropriate disinfectant
      - Principles and techniques
    - Surface barriers (Lec and lab)
      - Principles and techniques
    - Droplet and aerosol management
      - Droplet management and equipment
      - Aerosol management and equipment
    - Dental unit waterlines (Lec and lab)
      - Principles and protocols of waterline maintenance
        - Purging protocols
        - Water tests
          - Shocking dental unit waterlines
    - Instrument processing (Lec and lab)
      - Instrument processing area
        - Transportation of instruments to instrument processing area
        - Appropriate techniques and equipment
        - Principles and protocols associated with sharps management
          - Needlestick or sharp object injury protocol

- 1) Postexposure requirements
- D. Sterilization (Lec and lab)
  - 1. Methods of sterilization
  - 2. Types of sterilization
  - 3. Appropriate sterilization techniques
    - a. Loading and unloading procedures
    - b. Storage of sterilized items
  - 4. Spore tests and process monitors
- E. Dental laboratory area (Lec and lab)
  - 1. General protocols
  - 2. Decontamination, cleaning and disinfection of impressions, bite registrations and prosthetic appliances
- F. Dental radiology area (Lec)
  - 1. Monitoring system
- G. Hazardous communication (Lec and lab)
  - 1. Principles and protocols of regulated and nonregulated waste management
  - 2. Storage and disposal of hazardous waste
  - 3. MSDS
  - 4. Documentation of hazardous waste disposal
- H. OSHA, CDC and ADA recommendations (Lec)
  - 1. OSHA and Cal-DOSH
    - a. Bloodborne pathogen standard
    - b. Employee training
    - c. Record keeping
    - d. Exposure control plan
    - e. N95 respirator training
  - 2. CDC
    - a. Infection control recommendations for dentistry
  - 3. ADA
    - a. Infection control recommendations for dental offices
- I. Ethics and dental law (Lec)
  - 1. Ethical dilemmas with infection control
  - 2. Legal aspects of infection control

## Lab Content

- A. Placement and removal of personal protective equipment
- B. Decontamination and disinfection process of dental treatment room
- C. Transportation of instruments to instrument processing area
- D. Performing appropriate sterilization techniques
- E. Performing decontamination, cleaning and disinfection of impressions, bite registrations and prosthetic appliances

## Special Facilities and/or Equipment

When taught via Foothill Global Access, on-going access to computer with email software and hardware; email address.

## Method(s) of Evaluation

- A. Multiple choice weekly quizzes
- B. Skills evaluations/competencies
- C. Multiple choice and short answer midterm and final exam

## Method(s) of Instruction

- A. Lecture
- B. Lab/preclinical instruction and competencies
- C. Clinical competencies

## Representative Text(s) and Other Materials

Bird, DL, Robinson, DS, Modern Dental Assisting, 11th ed. St, Louis, MO, WB Saunders, 2015.

Bird, DL, Robinson, DS, Student Workbook to Accompany Modern Dental Assisting, 11th ed. St Louis, MO, WB Saunders, 2015.

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

A. Chapters 18-71 readings from required textbook.

B. Cross-contamination assignment: identifying instances of cross-contamination and breaches of infection control protocol in dental clinic settings and other environments, outside of class.

## Discipline(s)

Dental Technology