

**DE 51 Course Outline as of Fall 2019****CATALOG INFORMATION**

Dept and Nbr: DE 51 Title: OCCUP HEALTH AND SAFETY  
 Full Title: Occupational Health and Safety  
 Last Reviewed: 9/10/2018

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	2.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 105.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

The science and principles of current infection control protocol, dental office safety and accident prevention. Focus is on the Centers for Disease Control (CDC) Guidelines for Infection Control in Dentistry and the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard.

**Prerequisites/Corequisites:**

Concurrent Enrollment in DE 55A

**Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:**

Acceptance to the Allied Dental Programs

**Schedule of Classes Information:**

Description: The science and principles of current infection control protocol, dental office safety and accident prevention. Focus is on the Centers for Disease Control (CDC) Guidelines for Infection Control in Dentistry and the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard. (Grade Only)

Prerequisites/Corequisites: Concurrent Enrollment in DE 55A

Recommended: Eligibility for ENGL 100 or ESL 100  
Limits on Enrollment: Acceptance to the Allied Dental Programs  
Transfer Credit: CSU;  
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Fall 1997	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Apply evidence-based infection control and safety policies in the dental practice.
2. Initiate and assume responsibility for a safety program that includes management of hazardous waste, chemical waste and biomedical waste, and is in compliance with regulatory agencies.

### **Objectives:**

At the conclusion of this course, the student should be able to:

1. Explain the Centers for Disease Control (CDC) Guidelines for management of blood borne pathogens, hazardous waste, and biomedical waste.
2. Integrate into practice the components of the California Dental Board's Infection Control Regulations.
3. Describe the principles of infection control in relation to the "Chain of Infection."
4. Develop a written Personnel Health Program.
5. Identify the blood borne pathogens and recommend strategies of preventing the transmission of blood borne diseases.
6. Develop a flowchart for the management of occupational exposures to blood borne pathogens.
7. Compare and contrast various types of personal protective equipment.
8. Examine the issues associated with the use of latex products in dentistry.
9. Analyze the various methods of heat sterilization and compare the advantages and disadvantages of each method.
10. Analyze the various types of surface disinfectants and compare the advantages and disadvantages of each method.
11. Describe the methods of handling both regulated and non-regulated dental waste.
12. Identify the categories of environmental surfaces and describe the appropriate method for managing contamination.
13. Evaluate the types of dental unit waterline control devices and explain the pros and cons of

each.

14. Describe the appropriate infection control measures associated with dental radiography.
15. Explain the differences between the infection control protocols for surgical vs. nonsurgical dental procedures.
16. Develop a written chemical management plan, that includes methods of labeling and Safety Data Sheets (SDSs).
17. Develop a medical waste management plan.

## **Topics and Scope:**

- I. Overview of Roles & Responsibilities of Agencies
  - A. Occupational Safety & Health Administration (OSHA)
  - B. Center for Disease Control & Prevention (CDCP)
  - C. Environmental Protection Agency (EPA)
  - D. Office Safety & Asepsis Procedures Research (OSAP)
  - E. Dental Board of California (DBC)
  - F. Recommendations and Regulations
- II. Rationale for Infection Control in Dentistry
  - A. Stages in Disease Development
  - B. Sources of Microorganisms
  - C. Stages of an Infectious Disease
  - D. The Asymptomatic Carrier
  - E. Spread of Microbes to Another Person
    1. Direct contact
    2. Indirect contact
    3. Droplet/aerosol
  - F. Standard Precautions
  - G. Personal Protective Equipment
- III. Microorganisms, Bloodborne Pathogens and Infectious Diseases
  - A. Microorganisms - Bacteria, Virus, Fungus
  - B. Methods of Transmission
  - C. Bloodborne Pathogens
    1. Hepatitis B, C, D
    2. HIV
  - D. Risk Assessment
  - E. Prevention - Immunization
- IV. Personal Protection in Dentistry
  - A. Employer Responsibilities
  - B. Protective Equipment / Types / Advantages & Disadvantages / Cost
  - C. Hand Hygiene
- V. Treatment Room Preparation
  - A. Classification of Surfaces
  - B. Pre and Post Procedure Protocols
  - C. Disinfecting Agents
  - D. Barriers
  - E. Aseptic Technique
- VI. Instrument Recirculation/Sterilization
  - A. Requirements of Disinfection vs. Sterilization
  - B. Rationale and procedures for pre-cleaning
  - C. Packaging and sterilization monitoring
  - D. Compare and contrast various types of heat sterilizers.
  - E. Identify the types of monitoring for sterilizers

## VII. OSHA Exposure Control Plan

- A. Requirements
- B. Written Program
- C. Chemical Inventory/containment/labeling/disposal
- D. Employee Training
- E. Safety Data Sheets (SDS)
- F. Hazard Prevention
- G. Sharps Management

## VIII. Waste Management

- A. Medical Waste
- B. Hazardous Waste
- C. Toxic Waste
- D. Regulations for handling / labeling/ disposal

## IX. Dental Unit Waterline Contamination

- A. The issues pertaining to waterline contamination
- B. Biofilm Formation / Components
- C. Potential Dangers / Patients / Employees
- D. Treatments Advantages & Disadvantages
  - 1. Self-contained water system
  - 2. Micro-filters
  - 3. Air purge systems
  - 4. Chemicals
- E. Board of Dentistry / CDCP Recommendations

## X. Ergonomics

- A. Ergonomic Hazards
  - 1. Musculoskeletal & Nerve Disorders
  - 2. Cumulative Trauma Disorders (Repetitive Injuries)
  - 3. Carpal Tunnel Syndrome (Nerve Impairments)
- B. Contributing Risk Factors & Prevention
  - 1. Body Positions / Balance
  - 2. Mechanical Stress Force/Vibration
  - 3. Posture in the dental environment
- C. Design & Utilization
  - 1. Instruments
  - 2. Equipment
- D. OSHA Ergonomic Standard

## Assignment:

1. Reading assignments, not graded (10- 30 pages per week)
2. Quizzes (4-6)
3. Readiness Assessment Evaluations (4-7)
4. Exams (Midterm and Final)
5. Safety Data Sheet (SDS) Research and Analysis
6. Safety Coordinator Research and Presentation

## Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written Safety Data Sheets, Inclusive of Research and Analysis; Safety Coordinator, Research and Presentation; Readiness Assessment Evaluations

Writing  
50 - 60%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving  
0 - 0%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations  
0 - 0%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes, midterm, and final examination

Exams  
40 - 50%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

None

Other Category  
0 - 0%

### **Representative Textbooks and Materials:**

Modern Dental Assisting. 12th ed. Bird, Doni and Robinson, Debbie. Elsevier. 2018

Infection Control and Management of Hazardous Materials for the Dental Team. 6th ed. Miller, Chris. Elsevier. 2018

Instructor prepared materials