

# DA A150: BIOMEDICAL SCIENCES

- 14. Categorize methods of drug administration commonly used in dentistry and differentiate between local and general anesthetic.

Item	Value
Curriculum Committee Approval Date	03/13/2019
Top Code	124010 - Dental Assistant
Units	2 Total Units
Hours	36 Total Hours (Lecture Hours 36)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

## Course Description

Specialized Practice in chairside dental assisting, including microbiology of the oral cavity, oral pathology, and the State Dental Practice Act and regulations. COREQUISITE: DA A125 and DA A165. Transfer Credit: CSU.

## Course Level Student Learning Outcome(s)

1. Describe the affects of oral disease on major body systems.
2. Recognize potential dental emergency situations and appropriate treatment outcomes.
3. Recognize the warning signs and symptoms of oral diseases by differentiating normal from abnormal tissue.

## Course Objectives

- 1. Categorize and differentiate the microbiology of common types of oral bacteria and viruses.
- 2. Identify major diseases of the oral cavity by distinguishing between normal and abnormal
- 3. Recognize intrinsic and extrinsic factors responsible for developmental disturbances of the face, tongue and teeth.
- 4. Describe pathological conditions of common oral lesions.
- 5. Recognize and list cells, tissues and organs associated with major body systems and relation to the oral cavity.
- 6. Recognize systemic diseases associated with oral bacteria.
- 7. Recognize medical emergency prevention in relation to commonly prescribed pharmaceuticals in a dental office.
- 8. Demonstrate the completion of an accurate health history questionnaire and relate significant findings to proposed dental treatment.
- 9. Describe common signs and symptoms of dental medical emergencies.
- 10. Demonstrate treatment protocol in assisting and preventing common dental medical emergencies.
- 11. Describe the Blood-Borne Pathogens (BBP) standard of care.
- 12. List antibiotic pre-medication standards practiced in dentistry and describe the concept of antibiotic resistance.
- 13. Demonstrate PDR use including online access to medication interactions and possible contraindications to dental treatment.

## Lecture Content

Microbiology Introduction to Microbiology Types of Microorganisms Pathogenic and non pathogenic Aerobic and anaerobic Classification of Microbes bacteria virus protozoa fungi Antibiotic Resistance BBP Standards Pharmacology Drug requirements, agencies, and regulations Drug prescriptions Drug actions, side effects, indications and contraindications Common drugs used in dentistry Drugs and agents used to treat dental related infection Oral Pathology Classification, Causes and Mechanism of Diseases Intrinsic factors Extrinsic factors Reaction to Infection Disease of hard tissue Resorption Ankylosis Disease of pulp Hyperemia Pulpitis Pulpalgea Disease of soft tissue Periodontal disease Gingivitis Periodontal pocket A Nug Leukoplakia Candidiasis Herpes Simplex Type I Type II Disorder of Tongue Developmental Disturbances of Oral Cavity Disturbances of face Cleft Fissural defects Disturbances of tongue Disturbances of teeth Neoplasm of Oral Cavity General Characteristics Benign Malignant Classification Epithelial origin Mesenchymal origin Mixed tissue Oral Manifestation of Hormonal Disturbance Oral Manifestation of blood Dyscrasia Plasma alteration Blood cell alteration n Red blood cells White blood cells IV. Dental Emergency care and prevention A. Syncope B. Hyperventilation C. Cardiac Emergencies 1. Angina 2. Myocardial Infarction a. CPR review b. Automated External Defibrillator review D. Choking c. Heimlich maneuver review E. Diabetes Mellitus 1. Hypoglycemic Reaction 2. Hyperglycemic Reaction F. Postural Hypotension 1. The Pregnant patient G. Allergic Reaction 1. Localized 2. Anaphylaxis H. Cerebrovascular Accident I. Epileptic Seizure

## Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)

## Instructional Techniques

Lecture Video and DVD presentations Guest speaker In class group project

## Reading Assignments

Assigned textbook chapter readings

## Writing Assignments

Assigned worksheets and student workbook chapters

## Out-of-class Assignments

Students will complete an oral presentation and written assignment on a given oral pathology topic.

## Demonstration of Critical Thinking

1. Knowledge of biodental sciences will be evaluated by periodic quizzes. A composite total score of 75 percent accuracy or better is necessary to pass the course. 2. Testing will include multiple choice questions, written short answers and a research paper. All of these require the student to demonstrate: a. Memory: Both total recall and recognition of information necessary b. Interpretation: Student must be able to assess information and prepare for appropriate

procedure for future application of information during patient Grading Procedures will be evaluated using the following skill level: A mastery level 75% of theory must be achieved in order to pass course with minimum grade of C.

### **Required Writing, Problem Solving, Skills Demonstration**

Students will be assigned a oral pathology project to present to class.

### **Eligible Disciplines**

Dental technology (dental assisting, dental hygiene): Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

### **Textbooks Resources**

1. Required Bird, Doni and Robinson, Debbie. . Modern Dental Assisting , latest ed. Missouri: Elsevier Saunders, 2015 2. Required Bird, Doni and Robinson, Debbie . Modern Dental Assisting Student Workbook, latest ed. Missouri: Elsevier Saunders, 2015

### **Other Resources**

1. 1. Dental Assisting 150 Student Handbook, OCC Reprographics.