D A 62B: DENTAL SCIENCES II

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	2
Hours:	2 lecture per week (24 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 must be able to identify tooth abnormalities caused by an interruption in the tooth development process.
- The student will correctly identify three requirements for the process of dental decay.

Description

An overview of the embryologic development of the structures and tissues of the head, neck, teeth and oral cavity, histology of the hard and soft tissues of the oral cavity. Developmental and structural defects involving the oral cavity and the teeth. Periodontal diseases, caries process and oral pathology. 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:
A. Dental Assisting Theory and Practice
1. identify the stages of embryologic and fetal development of the head and oral cavity
2. from a list of the tissues of the head and oral cavity, associate each with the germ layer from which it arises
3. identify anomalies of the oral structures with failures of development of specific embryologic structures
4. describe the appearance of, or recognize, specific types of facial and oral developmental anomalies
5. list and describe common developmental defects involving the teeth
6. list, in order, the stages of tooth development and describe the characteristic activities of each stage
7. describe general pathology terms
8. describe different types of pathology found in the oral cavity
9. list and describe the tools available to identify the presence or absence of oral pathology and the information obtained by the use of each
10. describe the caries process
11. describe the AAP types of periodontal diseases and how periodontal disease develops
12. briefly describe and define the process of inflammation, regeneration, repair and healing
13. list the most common dental infections and describe their course, treatment, and resolution
B. Dental Assisting Program Competencies
1. Dental Assisting Theory and Practice: dental assisting students must be competent in applying the theory and practice of dental assisting for persons of all ages and abilities
2. Infection Control and Hazardous Waste Management: dental assistants must possess the knowledge and abilities to prevent the transmission of infectious diseases
3. Ethical and Legal Principles: dental assisting students must be competent in understanding ethical/legal principles as applied to the dental office

Course Content

A. Stages of embryologic and fetal development of the head and oral cavity
1. Prenatal development
a. Preimplantation period
b. Embryonic period
c. Fetal period
B. From a list of the tissues of the head and oral cavity, associate each with the germ layer from which it arises
1. Primary embryonic layers
a. Ectoderm
b. Mesoderm
c. Endoderm
3. Branchial arches
4. Facial development
C. Anomalies of the oral structures due to development
1. Cleft lip
2. Cleft palate
D. Factors associated with facial and oral developmental anomalies
1. Environmental
2. Genetic
E. Common developmental defects
1. Dens in dente
2. Gemination/fusion/concrescence
3. Congenitally missing teeth
4. Amelogenesis imperfecta
5. Dentinogenesis imperfecta
6. Enamel pearl
7. Supernumerary teeth
8. Anodontia/macrodontia/microdontia
9. Hutchinson's incisor
10. Hypoplasia
F. Stages of tooth development
1. Initiation
2. Bud stage
3. Cap stage
4. Bell stage
5. Apposition stage
6. Maturation stage
G. General pathology terms
1. Developmental disturbances and genetic diseases
2. Inflammatory and infective disease
3. Neoplastic growths
H. Types of pathology
1. Developmental defects in oral structures and teeth
2. Oral and dental infections
3. Caries process
4. Periodontal disease
5. Oral cysts, benign and malignant tumors
6. Oral manifestation of systemic disease
I. Identifying oral pathology

1. Health history and oral inspection
2. Radiographs
3. Oral cytology and biopsy
J. Caries process
1. Process of bacterial colonization
2. Soft and hard deposits
3. Demineralization
K. Periodontal diseases
1. Gingivitis
2. Periodontitis
a. AAP type
3. Process
4. Prevention
L. Process of healing
1. Inflammation
2. Regeneration
3. Repair
M. Common dental infections and their course, treatment, and resolution
1. Candidiasis
2. Herpes simplex
3. Periapical or periodontal abscesses

Lab Content

Not applicable.

Special Facilities and/or Equipment

None.

Method(s) of Evaluation

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

Quizzes
Midterm
Final
Assignments

Method(s) of Instruction

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

Lecture
Discussion
Demonstration

Representative Text(s) and Other Materials

Bird, DL, and DS Robinson. Modern Dental Assisting, 12th ed.. 2018.

Bird, DL, and DS Robinson. Student Workbook to Accompany Modern Dental Assisting, 12th ed.. 2018.

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

A. Reading four chapters in the textbook.
B. Draw tooth development assignment.
C. Take practice tests in class.

Discipline(s)

Dental Technology