

College of San Mateo
Official Course Outline

1. **COURSE ID:** DENT 701 **TITLE:** Dental Science I
Units: 3.0 units **Hours/Semester:** 48.0-54.0 Lecture hours; and 96.0-108.0 Homework hours
Method of Grading: Letter Grade Only
Recommended Preparation:
 BIOL 130, and Eligibility for ENGL 100

2. **COURSE DESIGNATION:**
Degree Credit
Transfer credit: none

3. **COURSE DESCRIPTIONS:**
Catalog Description:

An introduction to the basics of dentistry. Covers subjects of importance to current or potential dental assisting students, including tooth numbering systems, oral anatomy, tooth morphology, tooth structures, oral embryology, oral histology, dental caries, periodontal diseases, oral pathology, disease prevention techniques and nutrition as it affects the oral cavity. (Fall only.)

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**

Upon successful completion of this course, a student will meet the following outcomes:

1. Define & label the landmarks of the face and oral cavity.
2. Describe the processes of Oral Embryology & Oral Histology.
3. Identify the causes of dental caries and the caries process.
4. Identify the importance of, causes of, and conditions of oral pathology.

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**

Upon successful completion of this course, a student will be able to:

1. Define & label the landmarks of the face and oral cavity.
2. Describe the processes of Oral Embryology & Oral Histology.
3. Identify the causes of dental caries and the caries process.
4. Identify the importance of, causes of, and conditions of oral pathology.

6. **COURSE CONTENT:**

Lecture Content:

1. Landmarks of the Face and Oral Cavity
 - A. Regions and features of the face
 - B. Identification & landmarks of & within the oral cavity
 - C. Dentitions
 - a. Permanent/Adult
 - b. Deciduous/Baby
 - D. Names, sizes, surfaces, locations, and types of teeth
 - E. Tooth numbering systems
 - a. Adult = numbers
 - b. Children = letters
 - c. Three systems: Universal, Palmer, & ISO
 - F. Anatomic Features of the teeth
 - a. Embrasures
 - b. Contacts
 - c. Angles and Divisions of the teeth
 - d. Occlusion and Malocclusions
2. Oral Embryology and Oral Histology
 - A. Prenatal development of the teeth
 - B. Embryonic development of the face and oral cavity
 - C. Structures formed by specialized cells at specific weeks of development
 - D. Genetic factors vs. environmental factors
 - E. Growth periods of a tooth
 - F. Eruption cycle of teeth, permanent and primary

- G. Layers of a tooth
 - a. Enamel
 - b. Dentin
 - c. Cementum
 - d. Pulp
 - e. Root
 - f. Crown
 - i. Clinical crown
 - ii. Anatomical crown
- H. Periodontium
 - a. Periodontal ligaments
 - b. Alveolar bone
 - c. Cementum
 - d. Attachment apparatus
 - e. Gingival unit
- 3. Dental Caries
 - A. Caries process
 - B. Progress of decay
 - C. Causes
 - D. Treatments
 - E. Tooth brushing and flossing techniques
 - F. Oral Hygiene instructions
 - G. Prevalence in children
 - H. Prevalence in adults
 - I. Access to care
- 4. Periodontal Disease
 - A. Identification of this disease
 - B. Causes
 - C. Progression of periodontal disease
 - a. Type I: Gingivitis
 - b. Type II: Early Perio Disease
 - c. Type III: Mod Perio Disease
 - d. Type IV: Advanced Perio Disease
 - e. Type V: Refractory Perio Disease
 - D. Non-surgical treatments
 - E. Surgical treatments
 - F. Increased oral hygiene techniques at home
 - G. More frequent cleanings at the dental office
 - H. Referral to periodontist
- 5. Nutrition
 - A. Food Guide Pyramid
 - B. Carbohydrates
 - C. Fats
 - D. Proteins
 - E. Recommended Dietary Allowances (RDA's)
 - F. Water
 - G. Vitamins
 - H. Minerals
 - I. Diet Modification
 - J. Reading food labels
 - K. Eating disorders
 - L. Healthy habits
- 6. Oral Pathology
 - A. Oral Lesions
 - a. Extending above the surface
 - b. Extending below the surface
 - c. Even with the surface
 - d. Raised or flat lesions
 - B. Diseases of the oral soft tissues
 - a. Lichen Planus

- b. Candidiasis
- c. Aphthous Ulcers
- d. Cellulitis
- C. Oral Cancer
 - a. Appearance
 - b. Biopsy
 - c. Warning signs
 - d. Dental implications of chemotherapy
 - e. Treatment of oral cancer
- D. HIV in relation to Oral pathological conditions in the mouth

7. REPRESENTATIVE METHODS OF INSTRUCTION:

Typical methods of instruction may include:

- A. Lecture
- B. Other (Specify): Worksheets that complement the lectures, power point presentations with accompanying handouts, videos, labeling assignments, color coding assignments, group work, and workbook assignments. Students will be assigned chapter readings from the textbook which correlate with the subject being discussed.

8. REPRESENTATIVE ASSIGNMENTS

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

Workbook assignments and worksheets are assigned that relate to the topic being discussed.

Reading Assignments:

Students will be assigned chapter readings from the textbook which correlate with the subject being discussed.

9. REPRESENTATIVE METHODS OF EVALUATION

Representative methods of evaluation may include:

- A. Class Participation
- B. Exams/Tests
- C. completion and scoring on written homework assignments, lecture review quizzes, participation in group work and group assignments

10. REPRESENTATIVE TEXT(S):

Possible textbooks include:

- A. Bird, D. and Robinson, D.. *Modern Dental Assisting Textbook and workbook*, 13th ed. Elsevier, 2021

Origination Date: November 2021

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Effective Term: Fall 2022

Course Originator: Beth LaRochelle