

**DA 65 Course Outline as of Fall 2017****CATALOG INFORMATION**

Dept and Nbr: DA 65

Title: DENTAL SCIENCE

Full Title: Dental Science

Last Reviewed: 11/22/2021

| Units   |      | Course Hours per Week |      | Nbr of Weeks | Course Hours Total |       |
|---------|------|-----------------------|------|--------------|--------------------|-------|
| Maximum | 3.00 | Lecture Scheduled     | 2.00 | 17.5         | Lecture Scheduled  | 35.00 |
| Minimum | 3.00 | Lab Scheduled         | 3.00 | 17.5         | Lab Scheduled      | 52.50 |
|         |      | Contact DHR           | 0    |              | Contact DHR        | 0     |
|         |      | Contact Total         | 5.00 |              | Contact Total      | 87.50 |
|         |      | Non-contact DHR       | 0    |              | Non-contact DHR    | 0     |

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

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: DNA 64

**Catalog Description:**

This course focuses on the etiology, recognition and prevention of dental disease. Topics include pharmacology, oral pathology, periodontology, and community oral health. Students will gain knowledge in the science and manipulation of alginate, gypsum, fluoride, sealants and teeth whitening products. The didactic and clinical components meet the requirements for a California State approved course in both coronal polish and pit and fissure sealants certificates.

**Prerequisites/Corequisites:**

Course Completion of DA 60

**Recommended Preparation:****Limits on Enrollment:**

Acceptance to Allied Dental Program

**Schedule of Classes Information:**

Description: This course focuses on the etiology, recognition and prevention of dental disease. Topics include pharmacology, oral pathology, periodontology, and community oral health. Students will gain knowledge in the science and manipulation of alginate, gypsum, fluoride, sealants and teeth whitening products. The didactic and clinical components meet the

requirements for a California State approved course in both coronal polish and pit and fissure sealants certificates. (Grade Only)

Prerequisites/Corequisites: Course Completion of DA 60

Recommended:

Limits on Enrollment: Acceptance to Allied Dental Program

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 1981 | Inactive: |
| <b>UC Transfer:</b>  |                      | Effective:           | Inactive: |

**CID:**

**Certificate/Major Applicable:**

Certificate Applicable Course

## **COURSE CONTENT**

### **Student Learning Outcomes:**

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

1. Assess and manage patient care to a diverse dental population based on evidence-based decision-making within the scope of practice of the Registered Dental Assistant (RDA).
2. Differentiate between health and disease that utilize concepts from caries risk assessment, oral pathology, pharmacology and periodontology.
3. Customize patient instruction, provide rationale for treatment, and evaluate patient responses.

### **Objectives:**

Upon completion of this course, students will be able to:

1. Demonstrate the technique utilizing the appropriate materials for performing coronal polishing.
2. Explain the indications and contraindications for coronal polish and discuss the rationale for selective polishing.
3. Describe the components of plaque, calculus and stains, and their formation and pattern of accumulation on the teeth.
4. Identify the key components in preventive dentistry and discuss the role of systemic and topical fluoride, sealants, diet, risk assessment and patient education.
5. Develop an individualized plaque control program utilizing appropriate patient education techniques, toothbrushing methods, interproximal cleaning aids, diet counseling, plaque indices and risk assessment.
6. Describe the purpose, types, and indications and contraindications of dental sealants.
7. Demonstrate for technique for fluoride varnish placement.
8. Demonstrate the technique for dental sealant placement utilizing proper safety measures and

- infection control procedures.
9. Discuss the etiology, prevention and transmission of dental caries.
  10. List the risk factors for early childhood caries.
  11. Demonstrate the use of a laser caries detection device.
  12. Identify and describe the properties and uses of hydrocolloid impression materials and gypsum products.
  13. Demonstrate the technique for taking alginate impression and bite registrations.
  14. Demonstrate the technique for pouring and trimming study models.
  15. Identify the purpose of a facebow transfer and describe the auxiliary's role in a facebow transfer technique.
  16. Identify types of digital impression systems and describe the auxiliary's role in taking digital impressions.
  17. Describe the etiology, clinical features, and treatment for developmental disturbances; diseases of the teeth and soft tissues; eating disorders and malignant and benign neoplasms.
  18. Identify a target group within the community and develop and present a disease prevention program.
  19. Differentiate between normal and abnormal intraoral findings.
  20. Identify and describe the actions and dental implications of commonly prescribed and over-the-counter (OTC) medications, utilizing drug reference material.
  21. Discuss the dental implications of illegal drug use.
  22. Identify the etiology of periodontal disease and its relationship to systemic health.
  23. Describe the components of a periodontal exam and the role of the dental assistant in performing a comprehensive periodontal exam.
  24. List the products, indications and contraindications for teeth-whitening.
  25. Demonstrate the technique for making a custom whitening tray.
  26. Describe the special needs dental patient with physical or mental limitations and the techniques used in providing dental treatment for these patients.
  27. Describe the auxiliary's role in intraoral and extraoral photography.
  28. Perform intraoral and extraoral photography using correct patient and operator positioning, camera settings and retractor and mirror placement.

## **Topics and Scope:**

- I. Coronal Polish\*
  - A. Technique\*
  - B. Plaque, calculus and stains
  - C. Rationale for selective polishing
- II. Fluoride\*
  - A. Technique\*
  - B. Systemic and topical fluoride
- III. Sealants\*
  - A. Technique\*
  - B. Types
  - C. Indications and contraindications
- IV. Caries and Risk Assessment
  - A. Etiology, prevention and transmission
  - B. Early childhood caries
  - C. Role of risk assessment
  - D. Caries detection devices\*
- V. Patient Education and Plaque Control\*
  - A. Key components in preventive dentistry
  - B. Patient education techniques\*

- C. Plaque indices\*
- D. Toothbrushing methods\*
- E. Interproximal cleaning methods\*
- F. Risk assessment
- VI. Nutrition and Eating Disorders
  - A. Role of nutrition in preventive dentistry
  - B. Oral implications of eating disorders
- VII. Impressions and models
  - A. Components and properties of alginate and gypsum products
  - B. Techniques\*
  - C. Bite registration\*
  - D. Facebow transfer\*
  - E. Digital impressions
- VIII. Community Health
  - A. Evaluation of need
  - B. Presentation
- IX. Oral Pathology
  - A. Oral pathological conditions of hard and soft tissues.
  - B. Risk factors contributing to oral pathology
- X. Pharmacology
  - A. Action and dental implications of common over-the-counter (OTC) and prescription medications
  - B. Drug reference material project
  - C. Dental implications of illegal drugs use
- XI. Periodontology
  - A. Periodontal examination
  - B. Etiology
  - C. Relationship to systemic health
- XII. Teeth-Whitening\*
  - A. Products, indications and contraindications
  - B. Technique\*
- XIII. Special Needs Patient
  - A. Recognition
  - B. Dental needs
  - C. Treatment Techniques
- XIV. Intraoral and Extraoral Photography\*
  - A. Types of poses, camera settings, distances
  - B. Retraction and mirrors
- XV. Laboratory Competencies
  - A. Coronal polish
  - B. Dental sealants
  - C. Alginate impression
  - D. Gypsum models
  - E. Oral hygiene instruction
  - F. Caries detection
  - G. Extraoral and intraoral photography
  - H. Bleaching trays
  - I. Facebow

\*These items are introduced in lecture, and the related skill is performed in the lab.

### **Assignment:**

## Lecture

1. Reading assignments (20-40) pages a week.
2. 10-12 quizzes, midterm and final (written) examination.
3. Community health project.
4. Drug reference information assignment.
5. Risk assessment assignment.

## Laboratory

1. Alginate impressions - 2-4 competencies.
2. Study models - 2-4 competencies.
3. Sealant placement - 3-5 competencies.
4. Coronal polish - 3-5 competencies.
5. Fluoride application - 2 -4 competencies.
6. Patient oral hygiene instruction - 2-4 competencies.
7. Bleaching trays - 2-4 competencies.
8. Facebow competency.
9. Intraoral and extraoral photography - 2-4 competencies.

## 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.

Community Health project - written analysis

Writing  
10 - 15%

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

Homework assignments: risk assessment assignment; community health project - lesson plan and drug reference information assignment.

Problem solving  
15 - 30%

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

Lab competencies

Skill Demonstrations  
30 - 40%

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

Quizzes, midterm and final (written) examination.

Exams  
30 - 45%

**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. 11th Ed. Doni and Robinson, Debbie, Elsevier, 2015.

Dental Materials - Clinical Applications for Dental Assistants and Dental Hygienists. 3rd Ed.

Hatrick, Carol and Eakle, Steve. Elsevier. 2016

Instructor prepared materials