

# DH R025: PERIODONTICS FOR DENTAL HYGIENE I

**Originator**

aderdiarian

**Co-Contributor(s)**
**Name(s)**

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**College**

Oxnard College

**Discipline (CB01A)**

DH - Dental Hygiene

**Course Number (CB01B)**

R025

**Course Title (CB02)**

Periodontics for Dental Hygiene I

**Banner/Short Title**

Periodontics for DH I

**Credit Type**

Credit

**Start Term**

Spring 2021

**Catalog Course Description**

This course in periodontics provides identification of the normal periodontium and recognition of deviations from norm. The etiology and principles of periodontal diseases, examination procedures, treatment and preventive measures are also examined. Limitation on Enrollment: Physical/clinical examination (within the last year); negative Tuberculosis Mantoux test or chest x-ray; Hepatitis B vaccine and titer; Tetanus vaccine; titers showing immunity to Rubella, Rubeola and Varicella; CPR certification.

**Taxonomy of Programs (TOP) Code (CB03)**

1240.20 - \*Dental Hygienist

**Course Credit Status (CB04)**

D (Credit - Degree Applicable)

**Course Transfer Status (CB05) (select one only)**

C (Not transferable)

**Course Basic Skills Status (CB08)**

N - The Course is Not a Basic Skills Course

**SAM Priority Code (CB09)**

C - Clearly Occupational

**Course Cooperative Work Experience Education Status (CB10)**

N - Is Not Part of a Cooperative Work Experience Education Program

**Course Classification Status (CB11)**

Y - Credit Course

**Educational Assistance Class Instruction (Approved Special Class) (CB13)**

N - The Course is Not an Approved Special Class

**Course Prior to Transfer Level (CB21)**

Y - Not Applicable

**Course Noncredit Category (CB22)**

Y - Credit Course

**Funding Agency Category (CB23)**

Y - Not Applicable (Funding Not Used)

**Course Program Status (CB24)**

1 - Program Applicable

**General Education Status (CB25)**

Y - Not Applicable

**Support Course Status (CB26)**

N - Course is not a support course

**Field trips**

May be required

**Grading method**

Letter Graded

**Does this course require an instructional materials fee?**

No

**Repeatable for Credit**

No

**Is this course part of a family?**

No

**Units and Hours**

**Carnegie Unit Override**

No

**In-Class**

**Lecture**

**Minimum Contact/In-Class Lecture Hours**

35

**Maximum Contact/In-Class Lecture Hours**

35

**Activity**

**Laboratory**

**Total in-Class**

**Total in-Class**

**Total Minimum Contact/In-Class Hours**

35

**Total Maximum Contact/In-Class Hours**

35

## Outside-of-Class

### Internship/Cooperative Work Experience

Paid

Unpaid

### Total Outside-of-Class

#### Total Outside-of-Class

#### Minimum Outside-of-Class Hours

70

#### Maximum Outside-of-Class Hours

70

### Total Student Learning

#### Total Student Learning

#### Total Minimum Student Learning Hours

105

#### Total Maximum Student Learning Hours

105

### Minimum Units (CB07)

2

### Maximum Units (CB06)

2

### Prerequisites

DH R010 and DH R011 and DH R012 and DH R013 and DH R014 and DH R015

### Corequisites

DH R020 and DH R021 and DH R022 and DH R023 and DH R024

### Limitations on Enrollment

Current CPR certification for health care provider (American Heart Association) or professional rescuer (American Red Cross)

Proof of freedom from and immunity to communicable diseases

No acrylic or long nails in clinical settings

Current negative TB test or chest x-ray

Physical examination demonstrating general good health

No visible tattoos or visible body piercings except single studs in earlobes

## Entrance Skills

### Entrance Skills

Students require a general understanding of human anatomy, human physiology, dental anatomy, and microbiology in order to understand the causes and risk factors associated with periodontal disease. Students also need the clinical and radiographic skills necessary to conduct or interpret patient assessment data to identify signs of periodontal disease.

### Prerequisite Course Objectives

DH R010-Describe the four basic tissue types along with their structure and function

DH R010-Explain the embryology and histology of the orofacial complex to include the first signs of tooth development, enamel, dentin, and pulp creation, root formation and attachment apparatus, oral mucous membrane and formation of the tongue and salivary glands

DH R010-Recognize normal oral structures

DH R010-Compare the physiological and structural functions of teeth and supporting tissues

DH R010-Define the terms used in dental anatomy nomenclature

DH R010-Describe the arrangement of the teeth as defined in arches, quadrants, and sextants

DH R010-Recognize dental anomalies

DH R010-Recognize and describe the components of the oral cavity

DH R010-Explain oral anatomy relative to proper dental hygiene procedures

DH R010-Name and number individual teeth using the Universal System, the Palmer Notation System, and the FDI System  
 DH R011-Identify anatomical landmarks, anomalies, restorations, caries, periapical lesions, and other possible pathological defects in a formal written critique of each full mouth survey of radiographs  
 DH R012-Describe and locate various parts and landmarks of both the maxilla and mandible  
 DH R012-Define the terms, nose, nasal cavity, nasal epithelium, and paranasal sinuses and understand the anatomy of those structures  
 DH R012-Describe the functions of the nasal cavity, nasal epithelium, and paranasal sinuses  
 DH R012-Identify blood supply and venous drainage to all areas of the oral cavity including all the teeth  
 DH R012-Name the specific branches of the trigeminal nerve and which areas of the face, teeth and oral cavity each supplies  
 DH R012-Describe the major groups of lymph nodes that drain the teeth and oral cavity  
 DH R013-Prepare personalized chairside aids  
 DH R013-Describe how to plan, implement, and evaluate individualized oral hygiene care  
 DH R013-Define the of concept preventive dentistry  
 DH R013-Explain toothbrush uses and tooth-brushing techniques  
 DH R013-Explain the use of auxiliary aids to maintain good oral hygiene  
 DH R013-Describe plaque and its relationship to periodontal disease and caries  
 DH R013-Analyze human behavior and motivation  
 DH R013-Define the objectives of patient of patient health education  
 DH R013-Describe plaque control methods adjusted for different types of patients  
 DH R013-Adapt proper tooth brushing procedures to specific patients  
 DH R013-Identify and explain the use of all auxiliary aids during patient education  
 DH R013-Describe the etiology of periodontal disease and caries  
 DH R014-Explain the theory of disease transmission and the necessity for asepsis in dentistry  
 DH R014-Identify precautionary measures that must be taken by dental personnel to prevent disease transfer from patient to patient, patient to clinician, and clinician to patient  
 DH R014-List the components of a comprehensive health history and explain the relevance of each  
 DH R014-Identify specific conditions and/or responses that indicate the need for antibiotic premedication, sedation, change in medication, special appointment planning, additional laboratory studies and special precautions to prevent disease transmission and allergic reactions  
 DH R014-Identify responses that necessitate consultation with the dentist and/or physician  
 DH R014-List history update question to be asked at recall appointments  
 DH R014-State the purposes and advantages of performing a complete general and oral examination for each patient  
 DH R014-Identify the characteristics to observe in assessing a patient's general appearance and state why they may be significant to treatment  
 DH R014-Discuss the role dentistry plays in identifying and monitoring hypertension  
 DH R014-Describe extraoral and intraoral examinations  
 DH R014-Identify the importance of accurate oral inspection  
 DH R014-Define importance of detection of periodontal pockets  
 DH R014-Define the objectives of using scaling instruments in the removal of tooth deposits  
 DH R015-Describe and take comprehensive medical, dental, and personal histories  
 DH R015-Perform oral examination procedures utilizing a prescribed sequence  
 DH R015-Identify plaque and calculus  
 DH R015-Chart plaque and gingival indices

**Requisite Justification**

**Requisite Type**

Prerequisite

**Requisite**

DH R010

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

**Requisite Type**

Prerequisite

**Requisite**

DH R011

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Requisite Type**

Prerequisite

**Requisite**

DH R012

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Requisite Type**

Prerequisite

**Requisite**

DH R013

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Requisite Type**

Prerequisite

**Requisite**

DH R015

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Requisite Type**

Corequisite

**Requisite**

DH R020

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Requisite Type**

Corequisite

**Requisite**

DH R021

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Requisite Type**

Corequisite

**Requisite**

DH R022

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Requisite Type**

Corequisite

**Requisite**

DH R023

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Requisite Type**

Corequisite

**Requisite**

DH R025

**Requisite Description**

Course in a sequence

**Level of Scrutiny/Justification**

Content review

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**Student Learning Outcomes (CSLOs)**

**Upon satisfactory completion of the course, students will be able to:**

- |   |   |
|---|---|
| 1 | Students will be able to explain to a patient in his or her own words the relationships between periodontal disease and various systemic conditions and/or local factors. |
| 2 | Properly list and describe the most common non-pathological variants from normal found in and around the mouth.   |
| 3 | Recognize the types and phases of the periodontal disease process.  |
| 4 | Describe the microbiology and immunology of the dental plaque.  |

**Course Objectives**

**Upon satisfactory completion of the course, students will be able to:**

- |   |   |
|---|---|
| 1 | Describe sequentially the embryonic and histologic development of the periodontium  |
| 2 | List and recognize the clinical, histologic and radiographic features of periodontal health and the varying classifications of gingivitis and periodontitis |

- |    |   |
|----|---|
| 3  | Describe the functions of the periodontium, including the gingiva (attached and unattached), cementum, crevicular fluid, junctional epithelium, periodontal ligament and alveolar bone.   |
| 4  | List, describe and differentiate various periodontal diseases in a classification system as established by the American Academy of Periodontology.  |
| 5  | Identify periodontal risk factors that affect onset, progression and severity of periodontal diseases   |
| 6  | Identify periodontal risk factors that are acquired, environment and genetic.   |
| 7  | Evaluate potential periodontal interrelationships to include: stroke, coronary heart disease, respiratory disease, diabetes, preterm low birth weight deliveries and other conditions associated with progression of periodontal disease. |
| 8  | Explain the interplay between periodontal pathogens and the host tissues.   |
| 9  | Describe the stages of development bacterial colonization and composition of human supragingival and subgingival biofilm.   |
| 10 | Explain microbiologic and immunologic interactions of the host in periodontal disease.  |
| 11 | Describe the sequential development of inflammatory periodontal disease.  |
| 12 | Define and describe various evaluative methods (probing, clinical attachment levels, bleeding and exudate, mobility, etc.) needed to measure variations from periodontal health.  |
| 13 | Recognize the rationale, objectives and therapies involved in the various levels of dental hygiene care (preventive oral prophylaxis, therapeutic root debridement and professional periodontal maintenance).                             |
| 14 | Explain the role of the re-evaluation appointment in determining the next phase of periodontal treatment.   |
| 15 | Describe the components of the re-evaluation appointment.   |

## Course Content

### Lecture/Course Content

1. The Periodontium in health
  - a. Periodontium: the tooth supporting structures
    - i. tissues of the periodontium
    - ii. nerve, blood, and lymphatic supply
  - b. Microscopic anatomy
    - i. histology of the gingiva, cementum, and alveolar bone
2. Diseases affecting the periodontium
  - a. Overview of diseases
    - i. pathogenesis of bone destruction
    - ii. periodontal pockets
    - iii. theories of disease progression
  - b. Classification of periodontal diseases and conditions
    - i. 2017 Classification of Periodontal and Peri-Implant Diseases and Conditions
  - c. Clinical features of the gingiva
  - d. Periodontal health, gingival diseases and conditions
    - i. dental plaque-induced and non-plaque-induced gingival diseases
  - e. Other conditions affecting the periodontium
    - i. necrotizing diseases
    - ii. mucogingival deformities and conditions
3. Risk factors for periodontal diseases
  - a. Etiologic factors: risk for periodontal disease
    - i. balance between health and disease
    - ii. periodontal risk assessment
  - b. Oral biofilms
    - i. structure and colonization of oral biofilms
  - c. Immunity, inflammation, and the host immune response to plaque biofilm
    - i. leukocytes, chemotaxis, and phagocytosis
    - ii. inflammatory process
  - d. Systemic and local risk factors that amplify susceptibility to periodontal disease
    - i. systemic conditions
    - ii. systemic medications
    - iii. local factors
  - e. Nutrition and periodontal disease

- i. obesity
  - ii. micronutrients, macronutrients, antioxidants
- f. Tobacco, vaping, and cannabis and periodontal disease
- 4. Assessment and planning for patients with periodontal disease
  - a. Clinical periodontal assessment
    - i. the comprehensive periodontal assessment versus the Periodontal Screening Examination
  - b. Nonsurgical periodontal therapy
- 5. Other aspects of the management of patients with periodontal diseases
  - a. Documentation of care
  - b. Legal issues

### Laboratory or Activity Content

None

### Methods of Evaluation

**Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):**

Problem solving exercises  
Written expression

**Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):**

Essay exams  
Essays  
Group projects  
Individual projects  
Objective exams  
Oral presentations  
Other (specify)  
Problem-Solving Assignments  
Problem-solving exams  
Quizzes  
Role playing  
Reports/papers  
Research papers  
Treatment plans

### Other

None

### Instructional Methodology

**Specify the methods of instruction that may be employed in this course**

Audio-visual presentations  
Computer-aided presentations  
Collaborative group work  
Class activities  
Class discussions  
Case studies  
Distance Education  
Demonstrations  
Group discussions  
Guest speakers  
Instructor-guided interpretation and analysis  
Internet research  
Lecture  
Small group activities

**Describe specific examples of the methods the instructor will use:**

PowerPoint presentations and short videos on various topics in periodontics such as "oral biofilms" and "host immune response to plaque biofilm", case studies from textbook such as patients with varying degrees of periodontal disease, group discussions regarding patient case studies involving diagnosis and treatment planning, in-class trivia games to test knowledge of various topics, class



discussions regarding relevant journal articles relating to periodontics, in-class research regarding topics such as the oral microbiome and the risk of lung infection, role-playing clinician-patient.

## Representative Course Assignments

### Writing Assignments

Writing assignments include essay exams on periodontics topics, such as “Discuss the risk of periodontal disease in patients who smoke,” covered in lecture and assigned reading

Students will also complete written assignments on the following topics: patient periodontal disease risk assessment, the oral microbiome and the risk of lung infection, the link between periodontal disease and various periodontal disease risk factors (diabetes, HIV, leukemia, pregnancy, menopause, Down Syndrome, drug-induced gingival enlargement, dry-mouth inducing medications, malnutrition, tobacco, cardiovascular disease), reflections on observing a senior student perform non-surgical periodontal therapy on one patient.

### Critical Thinking Assignments

Assignments may be assigned which require the student to explain the associations between periodontal disease and various systemic conditions and local factors as well as periodontal patient case studies requiring students to evaluate assessment data and formulate appropriate treatment plans.

The following assignments also require critical thinking: patient periodontal disease risk assessment, the oral microbiome and the risk of lung infection, the link between periodontal disease and various periodontal disease risk factors (diabetes, HIV, leukemia, pregnancy, menopause, Down Syndrome, drug-induced gingival enlargement, dry-mouth inducing medications, malnutrition, tobacco, cardiovascular disease), reflections on observing a senior student perform non-surgical periodontal therapy on one patient.

### Reading Assignments

The students in this class will spend a minimum of 4 hours per week outside of the regular class time doing independent reading, study, and research using the assigned textbook and journal articles. Assignments related to the reading include: completing questions at the end of the chapter, writing a one-page summary on the chapter, creating test questions from the chapter, and in-class discussions of the material.

### Skills Demonstrations

Skills only involve critical thinking skills, which students will demonstrate through the following:

Assignments may be assigned which require the student to explain the associations between periodontal disease and various systemic conditions and local factors as well as periodontal patient case studies requiring students to evaluate assessment data and formulate appropriate treatment plans.

The following assignments also require critical thinking: patient periodontal disease risk assessment, the oral microbiome and the risk of lung infection, the link between periodontal disease and various periodontal disease risk factors (diabetes, HIV, leukemia, pregnancy, menopause, Down Syndrome, drug-induced gingival enlargement, dry-mouth inducing medications, malnutrition, tobacco, cardiovascular disease), reflections on observing a senior student perform non-surgical periodontal therapy on one patient.

### Other assignments (if applicable)

Clinical observations involving a senior student perform non-surgical periodontal therapy on one patient and an accompanying assignment involving critical thinking and reflection questions.

## Outside Assignments

### Representative Outside Assignments

The students in this class will spend a minimum of 4 hours per week outside of the regular class time doing independent reading, study, and research.

Students will complete written assignments, critical thinking assignments, and observational assignments

## **District General Education**

**A. Natural Sciences**

**B. Social and Behavioral Sciences**

**C. Humanities**

**D. Language and Rationality**

**E. Health and Physical Education/Kinesiology**

**F. Ethnic Studies/Gender Studies**

## **CSU GE-Breadth**

**Area A: English Language Communication and Critical Thinking**

**Area B: Scientific Inquiry and Quantitative Reasoning**

**Area C: Arts and Humanities**

**Area D: Social Sciences**

**Area E: Lifelong Learning and Self-Development**

**Area F: Ethnic Studies**

**CSU Graduation Requirement in U.S. History, Constitution and American Ideals:**

## **IGETC**

**Area 1: English Communication**

**Area 2A: Mathematical Concepts & Quantitative Reasoning**

**Area 3: Arts and Humanities**

**Area 4: Social and Behavioral Sciences**

**Area 5: Physical and Biological Sciences**

**Area 6: Languages Other than English (LOTE)**

## **Textbooks and Lab Manuals**

### **Resource Type**

Textbook

### **Classic Textbook**

Yes

### **Description**

Gehrig, J. S., Shin, D. E., & Willmann, D. E.. (2019). *Foundations of Periodontics for the Dental Hygienist* (5th Edition). Wolters Kluwer.

## **Library Resources**

### **Assignments requiring library resources**

None

**Sufficient Library Resources exist**

Yes

**Example of Assignments Requiring Library Resources**

None

**Distance Education Addendum****Definitions****Distance Education Modalities**

Hybrid (51%–99% online)

Hybrid (1%–50% online)

**Faculty Certifications**

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

**Regular Effective/Substantive Contact****Hybrid (1%–50% online) Modality:**

Method of Instruction	Document typical activities or assignments for each method of instruction
E-mail	Email submission of assignments
Other DE (e.g., recorded lectures)	Online quizzes or exams

**Hybrid (51%–99% online) Modality:**

Method of Instruction	Document typical activities or assignments for each method of instruction
E-mail	Email submission of assignments
Asynchronous Dialog (e.g., discussion board)	Discussion board relating to various topics on periodontics
Other DE (e.g., recorded lectures)	Online quizzes or exams Recorded lectures
Video Conferencing	Video conference lectures

**Examinations****Hybrid (1%–50% online) Modality**

Online

On campus

**Hybrid (51%–99% online) Modality**

Online

On campus

**Primary Minimum Qualification**

DENTAL TECHNOLOGY

**Additional local certifications required**

Dental Hygiene faculty members must comply with the requirements set by the Commission on Dental Accreditation (CODA). CODA requires that program faculty member providing didactic instruction must have earned at least a baccalaureate degree in a discipline related field. All dental hygiene faculty members must have current knowledge of the specific subjects they are teaching and documented background in educational methodology consistent with their teaching assignments. Dentists and dental hygienists who supervise students' clinical procedures should have qualifications which comply with the state dental or dental hygiene act. Individuals who teach and supervise dental hygiene students in clinical enrichment experiences should have qualifications comparable to faculty who teach in the dental hygiene clinic and are familiar with the program's objectives, content, instructional methods and evaluation procedures.

**Review and Approval Dates****Department Chair**

04/23/2020

**Dean**

04/23/2020

**Technical Review**

05/13/2020

**Curriculum Committee**

05/13/2020

**Curriculum Committee**

12/09/2020

**CCCCO**

MM/DD/YYYY

**Control Number**

CCC000341672

**DOE/accreditation approval date**

MM/DD/YYYY