Course Information Form (CIF)

Course Code: DHG 210

Course Title: Periodontology

Department: Allied Health
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 51.0602
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 2-0-2
Credit Hour Distribution:

Lecture: 2	Lab: 0	Clinical: 0	**Total: 2**

General Course Information

Catalog Description

Histopathology, etiology, clinical features, and treatment of periodontal infections; emphasizes diagnosis, treatment planning, and management of periodontal patients. Incorporates periodontal case study project to foster the clinical application of course materials.

General Course Objectives

1. Review the basic histology of tissues of the periodontium.
2. Know the histopathology and immunology related to periodontal diseases.
3. Differentiate between periodontal health and periodontal disease.
4. Differentiate between acute periodontal diseases and chronic periodontal diseases.
5. Recognize the difference between occlusal traumatism and periodontal disease.
6. Know the techniques and limitations of various types of surgical and non-surgical periodontal treatment.
7. Know the phases of periodontal maintenance.

Minimum Placement Levels

English	Reading	Math
Placement out of ENG 099	Placement out of CCS 099	None

Prerequisites

Credit in DHG 212, DHG 215, and DHG 216
Admission into the Dental Hygiene program

Methods of Evaluation

13-16 objective assignments, 1-3 multiple choice exams, 13-16 multiple choice quizzes, 1 final exam, 1 board preparation project, and 2-3 case study assignments.

Instructional Materials and Additional Supplies

Foundations of Periodontics for the Dental Hygienist, Nield-Gehrig, J.S. and Willmann, D.E. Jones and Bartlett Learning. 978-1284209266

Course Content

General Learning Outcomes (GLOs)

- Communication: Students will demonstrate the ability to read, write, listen, and speak effectively.
- Global Awareness and Cultural Reasoning: Students will demonstrate their understanding of global issues, gender and sexual orientation, and multicultural perspectives.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Overview of Disease of the Periodontium/Periodontal Health and Gingival Diseases/Conditions	1. Define the term disease progression. 2. Define the term periodontal disease and contrast it with the term periodontitis. 3. Describe and contrast the 1) position of the junctional epithelium, 2) characteristics of the epithelial-connective tissue junction, and 3) position of the crest of the alveolar bone in health, gingivitis, and periodontitis. 4. Explain why there is a band of intact transseptal fibers even in severe bone loss. 5. Describe the progressive destruction of alveolar bone loss that occurs in periodontitis. 6. Describe the pathway of inflammation that occurs in horizontal bone loss and contrast it with the pathway of inflammation in vertical bone loss. 7. Contrast the characteristics of gingiva and periodontal pockets. 8. Identify the visible signs of periodontal health and periodontal disease. 9. Define periodontal health and describe the clinical features consistent with signs of periodontal health. 10. List the two major subdivisions of gingival disease established by the American Academy of Periodontology and the European Federation of Periodontology. 11. Compare and contrast the etiologic factors associated with dental biofilm-induced gingivitis and non-plaque-induced gingival diseases. 12. List the conditions that are classified under the category of non-plaque-induced gingival disease. 13. Describe the differences between an intact periodontium and a reduced periodontium. 14. Differentiate papillary gingivitis, marginal gingivitis, and diffuse gingivitis. 15. Describe how systemic factors can modify the host response to plaque biofilm and lead to gingival inflammation.	2	0	0
Classification of Periodontal and Peri-Implant Diseases and Conditions/Periodontitis	1. Explain the importance of a classification system for periodontal disease. 2. Name the three major categories of periodontal diseases and conditions. 3. Explain why clinicians need to be familiar with terminology from the 1999 disease classification, such as chronic periodontitis and aggressive periodontitis. 4. Discuss some differences between the 2017 and 1999 classification systems. 5. Name the four subcategories of the peri-implant disease and conditions category. 6. Describe the clinical signs and symptoms that are pathognomonic (indicative) of periodontitis. 7. Define the term clinical attachment loss and explain its significance in stage and grading. 8. In the clinical setting, be able to explain to the patient the warning signs of periodontal disease and why these signs should not be ignored. 9. Describe the radiographic hallmarks of periodontitis. 10. Explain how disease severity and management complexity play a role in determining periodontitis staging. 11. Explain the differences in criteria of direct evidence of disease progression versus indirect evidence of disease progression. 12. Describe the roles that direct and indirect evidence play in the grade of periodontitis. 13. List the grade modifiers used to determine the grade of periodontitis. 14. Define the meaning of the descriptors recurrent and refractory as they pertain to periodontitis.	2	0	0

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Mucogingival Defects/Acute Periodontal Diseases	1. Define the terms mucogingival, normal mucogingival condition, and mucogingival deformity and condition. 2. Explain the significance of periodontal biotype and be able to describe the distinguishing features of thin-scalloped biotype, thick-scalloped biotype, and thick-flat biotype. 3. Define the term gingival recession and explain what factors must be considered to determine if treatment is indicated. 4. Explain the Miller and Cairo classification systems used to classify gingival recession. 5. Define the term acute periodontal disease and list the conditions under this category. 6. Describe the general characteristics of each of the acute periodontal diseases. 7. Describe each of the three types of abscesses of the periodontium. 8. Compare the differences and similarities between a periodontal and pulpal abscess. 9. Describe the typical treatment steps for a gingival abscess and periodontal abscess. 10. Describe the possible outcomes of an untreated pericoronal abscess. 11. Describe the pathogenesis of endodontic-periodontal lesions. 12. List the different categories of endodontic-periodontal lesions based on the signs and symptoms. 13. Describe the characteristics of necrotizing gingivitis, necrotizing periodontitis, and necrotizing stomatitis. 14. Describe the treatment steps for necrotizing gingivitis. 15. Compare the tissue destruction in necrotizing gingivitis and necrotizing periodontitis. 16. Compare the tissue destruction in periodontitis versus necrotizing periodontitis. 17. Describe the symptoms of primary herpetic gingivostomatitis.	2	0	0
Oral Biofilms/Risk Factors/Local Contributing Factors	1. Define and give examples of the term "risk factors". 2. Define etiologic factors and distinguish etiologic factors from risk factors. 3. Define the term biologic equilibrium and discuss factors that can disrupt the balance between health and disease in the periodontium. 4. Define the term biologic equilibrium and discuss factors that can disrupt the balance between health and disease in the periodontium. 5. Explain the differences between modifiable and nonmodifiable risk factors. 6. Discuss the importance of a periodontal risk assessment in periodontal treatment planning. 7. Define coaggregation and explain its significance in bacterial colonization of the tooth. 8. Define quorum sensing and explain its significance in bacterial colonization of the tooth surface. 9. Explain why systemic antibiotics and antimicrobial agents are ineffective in eliminating dental plaque biofilms. 10. State the most effective ways to control dental plaque biofilms. 11. Name several reasons why newer microbe detection methods have questioned Socransky's microbial complexes and the specific plaque hypothesis model. 12. Discuss the evolution of hypotheses to explain the role of bacteria in periodontal disease and how current hypotheses are distinct from the nonspecific plaque hypothesis and the specific plaque hypothesis. 13. Discuss the hypothesis that plaque biofilm is necessary but insufficient to destroy the tissues of the periodontium and the implications for treating individuals with periodontitis. 14. Describe local factors that contribute to the retention and accumulation of plaque biofilm. 15. Explain what distinguishes a local contributing factor from a systemic contributing factor. 16. Identify and differentiate the location, composition, modes of attachment, mechanisms of mineralization, and pathologic potential of supra- and subgingival calculus deposits. 17. Describe local contributing factors that can lead to direct damage to the periodontium. 18. Explain the role of trauma from occlusion as a possible contributing factor in periodontal disease.	3	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Immunity and Inflammation/Host Response	1. Define the term immune system and describe its function. 2. Describe innate immunity and adaptive immunity. 3. Describe the role of polymorphonuclear leukocytes, macrophages, B-lymphocytes, and T-lymphocytes in the immune system. 4. Describe the term macrophage and monocyte. 5. List the five classes of antibodies (immunoglobulins) and describe the functions of each. 6. Describe the three ways that antibodies participate in the host defense. 7. Describe the steps in phagocytosis. 8. Define inflammatory mediator and provide examples. 9. Describe how inflammatory mediators are essential in periodontitis. 10. Define the term host response and explain its primary function. 11. Describe the host immunoinflammatory response's role in the pathogenesis of periodontal disease. 12. Define the term biochemical mediator and name the three types of mediators. 13. Describe the role of cytokine in the pathogenesis of periodontitis. 14. Describe the role of prostaglandins in the pathogenesis of periodontitis. 15. Describe the effect of matrix metalloproteinases (MMP's) on periodontal tissues. 16. Explain the phases of the bone remodeling cycle. 17. Explain the significance of a balanced OPG to RANKL ratio. 18. Describe the link between periodontitis and RANKL-mediated bone resorption. 19. For each of the histologic stages of gingivitis and periodontitis listed below, name one change in the host immune response likely to be encountered: bacterial accumulation, early gingivitis, established gingivitis, and periodontitis.	2	0	0
Impact of Systemic Conditions on Periodontal Health/Impact of Periodontal Inflammation on Systemic Health	1. Name several systemic diseases/conditions that may modify the host response to periodontal pathogens. 2. Identify the importance of educating patients about the relationship between oral health and systemic disease, states, or conditions, such as the link between diabetes mellitus and periodontitis. 3. Discuss the potential implications of these systemic conditions on the periodontium: uncontrolled diabetes, leukemia, and acquired immunodeficiency syndrome. 4. Describe the significance of the AGE-RAGE interactions and their role in amplifying periodontal inflammation. 5. Discuss how hormone alterations may affect the periodontium. 6. Define osteoporosis and discuss the link between skeletal osteoporosis and alveolar bone loss in the jaw. 7. Discuss the implication of Down syndrome on the periodontium. 8. Name three medications that can cause gingival enlargement. 9. Define the terms "association" and "causation" between a given factor (A) and a systemic disease (B). 10. Educate patients at risk for cardiovascular disease about the possible impact of periodontal infection on cardiovascular health and encourage oral disease prevention and treatment services. 11. Educate pregnant women and those planning pregnancies regarding the possible impact of periodontal infection on pregnancy outcomes and encourage preventive oral care and treatment services. 12. Educate patients with diabetes about the probable bidirectional association between periodontal disease and diabetes and encourage oral disease prevention and treatment services. 13. Educate family members and caregivers about the association between periodontal disease and pneumonia in health-compromised individuals in hospitals and long-term care facilities.	2	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Periodontal Assessment/Radiograph Analysis/Shared Decision-making	1. List the components of a comprehensive periodontal assessment. 2. Describe how to evaluate each component of a comprehensive periodontal assessment. 3. Explain how to calculate the width of the attached gingiva. 4. Explain how to calculate clinical attachment level given several different clinical scenarios. 5. Define a periodontal screening examination and a comprehensive periodontal assessment. 6. Given a scenario, calculate and document the clinical attachment level for a patient with periodontitis. 7. Describe dental radiographic characteristics of the health periodontium. 8. Describe early dental radiograph evidence of periodontal disease. 9. Name some techniques that can be employed with periodontal patients to obtain good-quality dental radiographs. 10. Explain the basic principles of the vertical bitewing technique. 11. Describe the limitations of dental radiographs that all clinicians should keep in mind when viewing radiographs. 12. Given a selection of sample dental radiographs, apply the information from this chapter when analyzing those radiographs. 13. Define shared decision-making. 14. Explain key steps for engaging in shared decision-making. 15. Describe how patient decision aids facilitate shared decision-making. 16. Describe the importance of informed consent to successful periodontal care. 17. List guidelines for obtaining informed consent.	2	0	0
Nonsurgical Therapy/Patient's Role	1. Explain the term and name for goals for nonsurgical periodontal therapy. 2. Explain the role of interdisciplinary collaborative care in nonsurgical periodontal therapy. 3. Describe the type of healing to be expected following instrumentation of root surfaces. 4. Explain strategies for managing dental hypersensitivity during nonsurgical therapy. 5. Explain why re-evaluation is an important step during nonsurgical therapy. 6. List steps in an appointment for re-evaluation of the results of nonsurgical therapy. 7. Describe the rationale and list the indications for referring a patient to the periodontist. 8. Explain the criteria for the selection of toothbrushes and interdental aids. 9. Explain why interdental care is of particular importance for a patient with periodontitis. 10. Explain how the presence of exposed root concavities in a dentition would influence the selection of effective aids. 11. State the rationale for tongue cleaning. 12. Discuss the oral health benefits of a water flosser for a patient with periodontal disease. 13. Identify the depth of the delivery between the water flosser, toothbrush, floss, and other interdental aids. 14. Name the types of agents that can be used in a water flosser. 15. Summarize research findings on using professional irrigation to deliver chemicals to a periodontal pocket.	3	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Supragingival and Subgingival Irrigation/ Chemotherapeutics in Periodontal Care/Host Modulation Therapy	1. Discuss the oral health benefits of a water flosser for a patient with periodontal disease. 2. Identify the depth of the delivery between the water flosser, toothbrush, floss, and other interdental aids. 3. Name the types of agents that can be used in a water flosser. 4. Define chemotherapy and explain its use in treating and managing periodontal disease. 5. Identify systemic delivery and topical delivery of chemical agents. 6. Define the term systemic antibiotics. 7. Explain why systemic antibiotics are not routinely used to treat plaque-induced gingivitis and periodontitis. 8. Describe three examples of mouth rinse ingredients that can help reduce the severity of gingivitis. 9. List three antimicrobial agents that can be delivered using controlled-release delivery devices. 10. Explain why toothpastes are nearly ideal delivery mechanisms for chemical agents. 11. List two toothpaste ingredients that can reduce the severity of gingivitis. 12. Explain the current scientific evidence behind charcoal-based dental products and oil pulling. 13. Define the term host modulation therapy. 14. Discuss the potential importance of host modulation therapy. 15. Name some anti-inflammatory mediators. 16. Name some pro-inflammatory mediators. 17. List three types of drugs that have been studied for use as possible host-modulating agents. 18. Explain why low-dose doxycycline is helpful as a host-modulating agent. 19. Explain the term sub-antibacterial dose.	2	0	0
Maintenance for the Periodontal Patient/Future Directions for Management of Periodontal Patients	1. List three objectives of periodontal maintenance. 2. Describe how periodontal maintenance relates to other phases of periodontal treatment. 3. List the typical steps performed during an appointment for periodontal maintenance. 4. Explain the term baseline data. 5. Describe guidelines for determining whether the general practice or periodontal office should provide periodontal maintenance. 6. Define the term, signs, and reasons for recurrence of periodontitis. 7. Define the term compliance. 8. Explain the role compliance plays in maintaining periodontal health and stability. 9. List reasons for noncompliance with periodontal maintenance recommendations. 10. Explain some strategies that can be used to improve patient compliance. 11. Explain the term root caries and list recommendations for the use of fluorides in the prevention of root caries. 12. Describe some strategies for managing patients with periodontal diseases that are likely to evolve in the future.	3	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Surgical Concepts	1. List the objectives of periodontal surgery. 2. Define the terms relative contraindications and absolute contraindications for periodontal surgery. 3. Define the terms repair, reattachment, new attachment, and regeneration. 4. Explain the difference between healing by primary intention and healing by secondary intention. 5. Explain the rationale, indications, and advantages of elevating a periodontal flap. 6. Explain two methods for classifying periodontal flaps. 7. Describe two types of incisions used during periodontal flaps. 8. Describe healing following a flap for access and open flap debridement. 9. Describe the typical outcomes for apically positioned flaps with osseous surgery. 10. Define the terms osteotomy and osteoplasty. 11. Define the terms osteogenesis, osteoinductive, and osteoconductive. 12. Define the terms autograft, allograft, xenograft, and alloplast. 13. Name two types of materials available for bone replacement grafts. 14. Explain why a barrier membrane is used during guided tissue regeneration. 15. Define the term periodontal plastic surgery. 16. List two types of crown lengthening surgeries. 17. List some disadvantages of gingivectomy. 18. Explain what biological enhancement of periodontal surgical outcomes means. 19. Name two broad categories of materials used for suturing periodontal wounds. 20. Describe the interrupted interdental suture technique. 21. List the general steps for suture removal. 22. Describe the method for periodontal dressing placement. 23. List general guidelines for periodontal dressing management. 24. Explain the important topics that should be covered in postsurgical instructions. 25. List steps in a typical postsurgical visit.	4	0	0
Peri-Implant Health and Diseases	1. Describe the components of conventional dental implants and restorations. 2. Define the difference between a natural tooth's periodontium with peri-implant tissues surrounding a dental implant. 3. Define the key differences between peri-implant tissues that surround a dental implant. 4. Define the key differences between peri-implant health, peri-implant mucositis, and peri-implantitis. 5. Define the terms osseointegration and biomechanical forces as they apply to dental implants. 6. Describe an appropriate maintenance interval for a patient with dental implants. 7. Select appropriate self-care aids for a patient with dental implants.	3	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	0	0