Prerequisite

BIOL 2401 and BIOL 2402

Course Description

A study of normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics in a contemporary private setting. (3 sem hrs; 3 lec)

Learning Outcomes

Contrast normal and abnormal periodontium; discuss the etiology and pathology of periodontal diseases including treatment modalities used for therapy and prevention; interpret periodontal assessment data and develop a dental hygiene treatment plan.

Course Meeting Days and Times

Lecture Tuesday 2:00 -5:00 pm
West Campus
Allied Health Building
Room 170

Course Director

Donna Cleere, R.D.H., M.Ed.
Professor/Program Director
Office: AH Room 120
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Web address: http://www.actx.edu/~cleere_dk/index.html

Office Hours

As posted on Office Door
Required Course Textbooks


Core Content: Didactic

The didactic portion of the dental hygiene student’s educational experience should include information in the following areas:

A. Periodontal Health
   1. Development, anatomy, histology, and physiology of the periodontium
   2. Maintenance of periodontal health

B. Periodontal Risk Assessment
   1. Modifiable risk factors
   2. Non-modifiable risk factors
   3. Clinical application of risk assessment
   4. Links to periodontitis and systemic disease

C. Periodontal Disease
   1. History of the disease
   2. Classification and epidemiology
   3. Clinical features and histopathology
   4. Etiology and pathogenesis
   5. Terminology

D. Periodontal Therapy
   1. Medical, dental, and pharmacologic history
   2. Examination to include intraoral and extraoral examination and periodontal charting, radiographic interpretation
   3. Patient assessment, periodontal diagnosis and prognosis
   4. Care planning to include treatment objectives
   5. Therapy
      a. General principles
      b. Non-surgical
      c. Surgical
      d. Patient self-care education
      e. Pharmacotherapeutic agents
      f. Periodontal maintenance
Course Objectives

Objectives are coordinated with the materials presented in lecture, handouts, reading assignments and exams. Upon completion of this course of study, the dental hygiene student should be able to do the following:

1. Illustrate and discuss the clinical anatomy of the periodontium.
2. Illustrate and describe the microscopic anatomy of the periodontium.
3. List and describe the functions of the periodontium.
4. Discuss the importance of the dentogingival unit.
5. Describe the lymphatic, blood, and nerve supply to the gingiva and the attachment apparatus.
7. Discuss the changes in the classification system for periodontal diseases.
8. List and describe the different periodontal diseases.
10. Explain the significance of epidemiologic data to future treatment.
11. Describe the role of indices in private practice and population surveys.
12. Describe the prevalence and incidence of periodontal diseases.
13. Discuss future periodontal treatment needs and future trends that may have an impact on dental hygiene practice.
14. Describe dental plaque formation as well as its composition in the supra- and subgingival environment.
15. Describe the features of subgingival biofilms.
16. Describe the bacteria associated with periodontal diseases.
17. Describe the relationship between mechanisms of bacterial action and host responses in the initiation and progression of periodontal diseases.
18. List and explain contributing local risk factors.
19. Describe the clinical significance of dental calculus.
20. Discuss the specific role of dental calculus as a contributory risk factor for the periodontal diseases.
21. List and discuss possible systemic risk factors for periodontal diseases.
22. Discuss periodontal diseases as a risk factor for specific disease entities such as diabetes mellitus, cardiovascular disease, and preterm low-birth weight babies.
23. Describe the role of diabetes mellitus as a primary risk factor for periodontal diseases.
24. Discuss the importance of smoking as a risk factor for periodontal diseases.
25. Discuss the association of hormones and periodontal diseases.
27. Describe the progression of gingivitis into periodontitis.
28. Discuss bacterial components that stimulate the initiation of the inflammatory and immune systems.
29. Describe the different levels of oral defense mechanisms.
30. Describe the inflammatory/immune host responses to plaque-induced periodontal diseases.
31. Describe the process of phagocytosis.
32. Compare and contrast humoral immunity and cellular immunity.
33. Describe the histopathogenesis of periodontal diseases.
34. List and describe the different stages in the histopathogenesis of periodontal diseases.
35. Discuss the clinical and histological relationship of the inflammatory and immune host responses to inflammatory periodontal diseases.
36. Describe the course of the progression of periodontal diseases.
37. List and compare the plaque-induced gingival diseases and non-plaque-induced gingival diseases.
38. Explain the host response to the presence of microorganisms within dental plaque.
39. Explain the relationship of hormones and medications with periodontal diseases.
40. Describe the clinical and histologic features of gingival inflammation.
41. Explain the changes in the 1999 classification of periodontitis.
42. Define the course of the progression of periodontitis.
43. Explain the different features of the various types of periodontitis.
44. Explain the pathogenesis of periodontitis.
45. Explain the 1999 classification of ulcerative periodontal diseases.
46. Discuss periodontal disease associated with HIV-positive patients.
47. Describe the features of periodontal ulcerative gingivitis.
48. Explain the features of periodontal ulcerative periodontitis.
49. List the classification of malocclusion.
50. Identify and distinguish between the two types of occlusal trauma.
51. Identify and describe the clinical and radiographic signs of occlusal trauma.
52. Define the interrelationship between occlusal trauma and periodontitis.
53. List the classification of abscesses of the periodontium.
54. Identify and describe the clinical and radiographic findings of three types of abscesses of the periodontium.
55. List and explain five phases of the dental hygiene process for periodontal patient care.
56. Explain the importance of stating the goals for periodontal patient care.
57. Compare the differences between a dental diagnosis and a dental hygiene diagnosis.
58. Explain the importance of data collection.
59. Illustrate the importance of total health assessment in providing periodontal services.
60. Describe the rationale for performing a gingival assessment as part of the patient evaluation.
61. Describe the clinical features of the gingiva in health and disease.
62. Evaluate the procedures used in performing a gingival assessment.
63. Differentiate bleeding at the gingival margin from bleeding on probing.
64. Recognize and discuss factors found in gingival assessment procedures that may be predictors of future disease activity.
65. Describe the components of a periodontal assessment.
66. Explain the clinical significance of each component of a periodontal assessment.
67. Differentiate the significance of measuring clinical attachment loss from probing depths.
68. List several factors that can affect the accuracy of probe readings.
69. Identify and discuss the periodontal structures seen on a radiograph.
70. Discuss the rationale for radiographs in periodontics.
71. Evaluate the role of using adjunctive diagnostic aids as a predictor for periodontal breakdown.
72. Explain the advantages and disadvantages of the various adjunctive diagnostic methods for detecting periodontal disease activity.
73. Distinguish the type of patient that may benefit from adjunctive diagnostic testing.
74. Describe the problem-based approached to treatment planning.
75. Formulate a problem list for each patient.
76. Formulate an action plan for each problem listed.
77. Describe treatment guidelines for periodontal patients.
78. Explain when more aggressive forms of therapy are needed and thus appropriate times for a referral to a periodontist.
79. Describe periodontal prognostic signs.
80. Describe measures taken to prevent and control the progression of periodontal diseases.
81. Discuss preventive care as it relates to private practice.
82. Discuss the various toothbrushing methods used to maintain gingival health.
83. Compare the effectiveness of a powered toothbrush versus a manual toothbrush.
84. Describe measures, using chemical agents, taken to prevent and control the progression of periodontal diseases.
85. List the different oral rinses available for the periodontal patient.
86. Discuss the rationale for the use of antimicrobials in the treatment of the inflammatory periodontal diseases.
87. List and discuss the various types of drug delivery systems.
88. Describe the newest types of controlled-release devices.
89. Discuss enzyme suppression therapy.
90. Discuss the rationale for periodontal debridement.
91. Explain the clinical outcomes of periodontal debridement.
92. Discuss the effects of nonsurgical treatment on the subgingival microbiota.
93. Describe the effects of combined oral hygiene self-care with subgingival periodontal debridement on clinical attachment loss.
94. Describe the healing response in gingivitis and periodontitis after periodontal debridement.
95. Discuss the rationale for periodontal surgical therapy.
96. Describe the indications and contraindications for periodontal surgical therapy.
97. Compare and contrast the currently accepted surgical treatment modalities.
98. Demonstrate postoperative care following periodontal surgery.
99. Identify and explain the management of postoperative complications.
100. Discuss surgical wound healing and how soon after surgery a reevaluation can be performed.
101. Describe the process of periodontal regeneration, including the type and origin of cells involved in the regenerative process.
102. Describe the different bone grafts and bone substitutes that are used in periodontal regeneration.
103. Discuss the role of enamel matrix protein derivatives and growth factors in regeneration of bony defects.
104. Compare and contrast the different clinical procedures used to attain periodontal regeneration.
105. Define the role of the dental hygienist in the management of patients with dental implants.
106. Explain the various types of dental implants currently in use.
107. Discuss the general sequence of implant placement, uncovering, and restoration.
108. Compare the tissues around natural teeth and dental implants.
109. Discuss the steps in evaluating tissue conditions around dental implants.
110. Define the role of the dental hygienist in the treatment of abscesses.
111. Define the role of the dental hygienist in the treatment of necrotizing ulcerative gingivitis.
112. Define the role of the dental hygienist in the treatment of primary herpetic gingivostomatitis.
113. Define the role of the dental hygienist in the treatment of pericoronitis.
114. List the different categories of medically compromised patients.
115. Identify medically compromised patients.
116. Describe various dental care considerations for medically compromised patients.
117. Discuss the management of a patient requiring prophylactic antibiotics.
118. List the objectives of periodontal maintenance.
119. Describe the components of periodontal maintenance.
120. Describe the role of the dental hygienist in periodontal maintenance visits.
121. Define the role of the dental hygienist in smoking cessation.
122. Identify when retreatment is necessary.
123. Explain the factors involved in patient compliance.
124. Evaluate one web site related to Periodontology. Criteria for Evaluation of Web Sites include: authority/credibility, objectivity, accuracy, timeliness/currency, ease of use, and relevance for the topic or project. Utilize the “Evaluating Web Site” critique form utilized during the student training sessions with the AC librarian.

The student will know that these goals have been successfully completed if he or she earns a final course grade of “C” or higher as evaluated by the instructor.

The standards for the objectives may be one or any combination of the following:

- As given in lecture
- As demonstrated, discussed in the clinical experience
- As given in handouts and class assignments
- As stated in course texts

Course SCANS Competencies

Reading: The student will complete all reading assignments, and be able to understand and interpret the information necessary for the study of dental hygiene.

Writing: The student will submit answers to questions given by the instructor on major examinations and assignments. The student will also be able to document information in a patient’s chart using correct spelling and professional terminology.

Speaking: The student will participate verbally in class discussions and will answer oral questions to the best of his/her ability. The student will also learn to direct conversation in a professional manner when interacting with patients and other dental professionals.

Listening: The student will listen attentively to lecture and audio/visual presentations in order to take good notes and to assimilate enough information to ask questions when necessary. The student will listen attentively to any guest speakers in the classroom and in professional dental meetings in order to ask salient questions at the conclusion of the speaker’s presentation.

Critical Thinking: The student will utilize the information presented in this class, as well as in other courses in this program and assimilate the
information in order to correctly answer the various types of questions presented on examinations. The questions presented on the examination require the student to be able to reason, problem solve, make logical decisions based on information given, and/or describe further steps or actions necessary to derive reasonable conclusions. Students will assimilate information in case histories to problem solve, treatment plan a difficult case and answer questions related to case histories.

**Personal Qualities:** The student is expected to complete all assignments and examinations independently unless assigned to work in a group. The student is expected to work independently or in a collaborative fashion with a professional attitude and in cooperation with instructors and classmates. The student is encouraged to have the honesty and integrity to perform assignments as expected.

**Workplace:** The student will be able to identify, organize, and plan the utilization of time, work, materials, facilities, and human resources as they relate to the practice of dental hygiene.

**Computer Usage:** The student will utilize the computer to research information that is applicable to dental hygiene care of the patient and complete all computer assignments given in class.

**Students with Disabilities**

Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact Accessibility Services (SSC 125, Phone 371-5436) as soon as possible.

The Amarillo College Catalog can be viewed at [www.actx.edu/catalog/index/htm](http://www.actx.edu/catalog/index/htm).

**Attendance Policy**

The Amarillo College Student’s Rights and Responsibilities Publication can be viewed at [www.actx.edu/student/index/htm](http://www.actx.edu/student/index/htm).

Regular attendance is necessary for satisfactory achievement. Therefore, it is the responsibility of the student to attend class. Due to the tremendous amount of information contained in this course, the student who plans to succeed should also plan to attend all course sessions regularly and promptly. Without question, the instructor expects each student to be present at each session. Unfortunately, no one has ever developed a short cut, which will replace hours of actual experience needed to master a new skill; therefore, each student must be present to acquire the specific knowledge in this subject. **A student may have no more than 1 absence in this course without affecting your final grade.** Beginning with the 2nd absence, 1 point will be deducted from your final grade for each absence. **A student will receive 2 bonus points added to the final course grade for perfect attendance.**
Required Examinations and Projects

The course will consist of weekly quizzes, major examinations, and a comprehensive final. Major examinations will be announced approximately one week in advance. Refer to the course calendar for the schedule of materials to be covered in each class and the examination dates. Also, please note the provisions of the Make-up Policy in this syllabus for missed examinations. Major Examinations and the Comprehensive Final will be objective and subjective in nature. Each Major Examination will cover material from the previous exam(s).

Make-up Policy

If a student is absent on the day when a major examination is given, the student may make-up the missed work as follows:

1. It is the responsibility of the student to make arrangements with the instructor within 24 hours of returning from the absence to reschedule the examination.
2. The missed work must be made up within TWO Amarillo College school days where the day ends at 4:00 p.m.
3. The make-up work may earn a maximum of 80% of the original point value.

It is the expectation of the instructor, for students to come to class prepared to participate in discussion and activities. In order to gain an understanding of how theory translates into the clinical experience, students will need a baseline knowledge, obtained through reading assignments in this course as well as familiarity with content of courses taken up to this point.

Students with questions regarding examination results may review examinations, under the supervision of the course director, at any time. Students who feel that a question

1. The exam question and the reason for requesting an instructor review of the score.
2. The page and paragraph number, in the student's course textbook or lecture notes, that verify that the student's answer is correct.

The request must be submitted within 1 calendar week after the instructor notifies the student of the grade. The student will be notified within 1 calendar week if the points have/have not been awarded.

Grading Criteria

The final course grade will be computed as follows:

Weekly Quizzes 30%
Major Exams 40%
Comprehensive Final 30%
(Note: Your lowest quiz grade will be dropped. Weekly quizzes cannot be made up at a later time.)

The following grade scale applies throughout this course:

A = 93 – 100%
B = 83 – 92%
C = 75 – 82 %
F = below 75%

Note: A grade of "D" is not possible in this course.

Course Ethics

Amarillo College also has standards that must be upheld. At Amarillo College, there are grave academic penalties for unethical conduct. The policy and penalty for such conduct is provided in the General Catalog as follows:

A high standard of conduct is expected of all students. It is assumed that obedience to the law, respect for properly constituted authority, personal honor, integrity and common sense will guide the actions of each member of the college community both in and out of the classroom. The student code of conduct is published in the Students Rights and Responsibilities Publication. Any student who fails to perform according to expected standards may be disciplined.

It can be concluded from this statement that cheating and other forms of unethical course conduct are absolutely forbidden by Amarillo College policy. To be more specific, in this course, ANY unethical conduct may be cause for a final grade of "F" regardless of other grades earned to-date in the course.

In summary, a student should not risk his or her final grade in this course and any future enrollment privileges at Amarillo College as the result of unethical conduct. This policy will be strictly enforced.

All students are considered mature enough to seek faculty assistance and to monitor their own progress in meeting course requirements. The following professionalism standards apply to this course:

1. Student is prompt to class.
2. Student is prepared for class sessions.
3. Student assumes responsibility for his/her own learning.
4. Student is concerned with excellence in learning rather than just meeting minimal criteria.
5. Student applies lecture material in the clinical setting.
6. Student maintains his/her composure, dealing with conflict in a constructive way.
7. Student exhibits an attitude of respect for classmates, faculty, and staff.
8. Students will not be disruptive or talk to each other during lecture, slide presentations, guest lectures, etc. Should this occur, the student will be asked to leave the classroom immediately.

**Electronic and Recording Devices**

Cellular telephones and pagers are disruptive during class. All electronic devices such as cell phones or beepers/pagers are prohibited in this course. No tape recordings of the lecture during classroom or lab instruction will be allowed. Reading the assigned chapters prior to class and taking notes during lecture will assure proper coverage of the chapters for examinations.

**Emergency Contacts**

Phone numbers that family members may use to reach a student only in case of an emergency are as follows:

- Clinic Office: 354-6050
- Amarillo College Police: 371-5163
- Allied Health Division Secretary: 354-6055

**Academic Grievances**

A student, who has a grievance concerning a course in which he or she is enrolled or a grade, should make an appeal in the following order to the:

1. Instructor
2. Department chair
3. Division chair
4. Vice President/Dean of Instruction
5. College President
DHYG 1311
Periodontology
Fall

Verification of Course Policies

I, __________________________, verify that faculty has reviewed the Dental Hygiene
Please Print Name

DHYG 1311 Course Syllabus with me and have also demonstrated to me how to access
the course syllabi online at the following web address: www.actx.edu/~dental_hyg/.
I also understand that I may download and print the course syllabus if I choose to do so.
I understand the course and department policies contained in the syllabus as they have
been explained to me. I agree to abide by the policies and course requirements
documented in the syllabus.

________________________________
Student Signature

______________________________________
Date

I also agree that I have read and understand the entire content of the Student's Rights
and Responsibilities Publication. The Amarillo College Student’s Right and
Responsibilities Publication can be viewed at www.actx.edu/student/index/htm.

________________________________
Student Signature

______________________________________
Date

Received and filed in student file

________________________________
Instructor Signature

______________________________________
Date
## Periodontology Schedule

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<tr>
<th>Week</th>
<th>Textbook</th>
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<tbody>
<tr>
<td><strong>Section I</strong></td>
<td>Periodontal Diseases: Introduction and Background</td>
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<tr>
<td><strong>Section II</strong></td>
<td>Periodontal Diseases: The Assessment Phase</td>
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<tr>
<td><strong>Section III</strong></td>
<td>Periodontal Diseases: The Prevention and Treatment Phase</td>
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| **Week One**  | Review Course Syllabus  
Chapter One  
Anatomy of the Periodontal Structures: The Healthy State                                                                                   |
| **Week Two**  | Quiz  
Chapter Two  
Classification of the Periodontal Diseases  
Chapter Three  
Epidemiology of the Periodontal Diseases                                                                                                   |
| **Week Three** | Chapter Four  
Dental Biofilms: Microbiology of the Periodontal Diseases  
Chapter Five  
Local Contributory Risk Factors for the Periodontal Diseases  
**Major Exam One**  
(Last 2 hours of Class)                                                                                                                     |
| **Week Four** | Quiz  
Chapter Six  
Periodontal Medicine  
Chapter Seven  
Bacteria-Host Response: Inflammatory and Immunology Fundamentals                                                                 |
| **Week Five** | Quiz  
Chapter 8  
Histopathogenesis of the Periodontal Diseases  
Chapter 9  
The Gingival Lesion                                                                                                                       |
| **Week Six**  | Chapter 10  
The Periodontitis Lesion  
Chapter 11  
Necrotizing Periodontal Diseases  
**Major Exam Two**  
(Last 2 hours of class)                                                                                                                     |
| **Week Seven** | Quiz  
Chapter 12  
The Occlusal Lesion  
Chapter 13  
Abscesses of the Periodontium                                                                                                                 |
| **Week Eight** | Quiz  
Chapter 14  
Dental Hygiene Process of Care for the Periodontal Patient                                                                                 |
<table>
<thead>
<tr>
<th>Week</th>
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| Week Nine   | Chapter 17  
Clinical Examination: Gingival Assessment  
Chapter 18  
Clinical Examination: Periodontal Assessment  
**Major Exam Three**  
**(Last 2 hours of class)** |
| Week Ten    | Quiz  
Chapter 19  
Radiographic Assessment  
Chapter 20  
Advances in Detecting and Monitoring the Periodontal Diseases |
| Week Eleven | Quiz  
Chapter 21  
Problem/Evidence-based Treatment Planning  
Chapter 22  
Oral Hygiene Self-Care |
| Week Twelve | Chapter 23  
Topical Drug Delivery Systems: Oral Rinses and Irrigation  
Chapter 24  
Systemic and Local Drug Delivery Systems: Systemic Antibiotics, Local Drug Devices, and Enzyme Suppression Therapy  
**Major Exam 4**  
**(Last 2 hours of class)** |
| Week Thirteen | Chapter 25  
Healing after Nonsurgical Periodontal Therapy  
Chapter 26  
Principles of Periodontal Surgery: Gingivectomy, Osseous Resection, and Periodontal Plastic Surgery |
| Week Fourteen | Quiz  
Chapter 27  
Principles of Periodontal Surgery: Periodontal Regeneration  
Chapter 28  
Implantology |
| Week Fifteen | Chapter 29  
Periodontal Emergencies  
Chapter 30  
Periodontal Management of Medically Compromised Patients  
Chapter 31  
Periodontal Maintenance Therapy  
**Major Exam 5**  
**(Last 2 hours of class)** |
| Week Sixteen | **Comprehensive Final** |