El Paso Community College Syllabus
Part II
Official Course Description

SUBJECT AREA	**Dental Hygiene**			
COURSE RUBRIC AND NUMBER	**DHYG 1211**			
COURSE TITLE	**Periodontology**			
COURSE CREDIT HOURS	**2**	**2**	**:**	**1**
	Credits	**Lec**		**Lab**

I. Catalog Description

Studies normal and diseased periodontium including the structural, functional, and environmental factors. Emphasizes etiology, pathology, treatment modalities, and therapeutic and preventive periodontics. A grade of "C" or better is required in this course to take the next course. **Prerequisites: DHYG 1103 and DHYG 1201 and DHYG 1219 and DHYG 1239 and DHYG 1304 and DHYG 1431. Corequisites: BIOL 2420 or BIOL 2421 and DHYG 1235 and DHYG 1261 and DHYG 2201. (2:1). Lab fee.** *Dental Hygiene Discipline.*

II. Course Objectives

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

A. Unit I. Tissues of the Periodontium

1. Name and describe the anatomy and clinical characteristics of the tissues of the periodontium.
2. Differentiate among the three types of oral epithelium: keratinized, parakeratinized and nonkeratinized.
3. Describe and identify clinically normal gingiva in terms of color, size, contour, texture and consistency.
4. Describe sulcular fluid and its role in the normal oral cavity.
5. List the functions of the periodontal ligament.
6. List the types and functions of the cementum.
7. Describe the alveolar process and its many functions.
8. Describe the effects of aging on the periodontium.

B. Unit II. Gingival Diseases

1. Define the types of gingivitis.
2. Relate the events in the pathogenesis of gingivitis to clinical signs and symptoms.
3. Identify the medications that can cause gingival hyperplasia in patients.
4. List the similarities and differences in the clinical presentations of chronic gingivitis and other gingival conditions.
5. Describe the histologic changes that are occurring in the gingival tissues during the initiation and progression of gingivitis and correlate each of the changes with color, contour, consistency, surface texture, and bleeding tendencies of the gingival tissue.
6. Describe gingivitis by location in the gingiva and/or location in the mouth.
7. Compare and contrast the terms: recession, clinical attachment level, epithelial attachment and periodontal pocket depth (probing depth) and discuss the significance of each.
8. Compare and contrast the clinical features, microscopic appearance, and etiology for ANUG, acute herpetic gingivostomatitis, lichen planus, medication induced gingival hyperplasia, hormonal gingivitis and desquamative gingivitis.

9. Compare and contrast the healthy and diseased gingival of a child, adolescent, and an adult.
10. Describe the appearance of the gingival of a child in each of the following conditions: chronic marginal gingivitis, gingivitis associated with tooth eruption, localized gingival recession and the effects of loose, carious, or malposed teeth.
11. Name the two most common acute gingival infections that occur in children.
12. Describe the signs and symptoms juvenile periodontitis as it relates to epidemiology, appearance, and discuss the treatment**.**
13. Identify the role that heredity, bacteria, and the immune process play in the initiation, progression, treatment, and prognosis of juvenile periodontitis.
14. Compare and contrast the generalized and localized form of prepubertal periodontitis.

C. Unit III: Periodontal Diseases

1. Define the terms periodontal disease, periodontal pocket and periodontitis.
2. Describe the characteristics of the various classes of periodontitis: Adult periodontitis, early onset periodontitis (four types) rapidly progressive periodontitis and refractory periodontitis.
3. Describe the pathogenesis periodontal disease activity and list the factors that affect disease progression**.**
4. List the signs and symptoms of a periodontal pocket.
5. Classify the types of periodontal pockets.
6. Describe the histopathology of the soft tissue wall of the periodontal pocket.
7. Describe the microtopography of the soft tissue wall of the periodontal pocket.
8. Identify the contents of the periodontal pocket.
9. Describe the histologic changes that occur to the root surface cementum during the development of a periodontal.
10. Compare and contrast root caries with caries of the crown of the tooth.
11. Name the cytotoxic changes that occur in the cementum and root dentin in a periodontal pocket.
12. By location and content, describe the various deposits that occur in the periodontal.
13. Describe the pulp changes that sometimes occur in periodontal disease.
14. Describe the relationship between gingival recession, pocket depth, and bone loss.
15. Describe the various paths inflammation follows when it extends from the gingival tissues into the bone, cementum, and periodontal ligament.
16. Compare and contrast the relationship between bone formation resorption in healthy and diseased periodontal tissues.
17. Describe the various destructive patterns and the resultant bony defect that occurs during and as a result of periodontal disease.
18. Describe the clinical manifestations of inflammation in the periodontal ligament.
19. Define and classify furcation involvement.
20. Classify periodontal abscesses and differentiate between acute and chronic conditions.
21. Describe the radiographic appearance of periodontal diseases.

D. Unit IV: Microbiology of Periodontal Disease

1. Name the main etiologic factors responsible for initiation and progression of periodontal disease.
2. Describe the role and mechanism of action that microorganisms play in the initiation and progression of periodontal.
3. Describe the supragingival plaque as to, structure, organization, bacterial count, organic and inorganic matrix and effects of diet on plaque formation.

4. Compare bacterial activity and flora in a healthy subgingival crevice with that in a periodontal pocket.
5. Review the bacteria responsible for the initial supragingival plaque formation and bacterial changes that occur as the plaque matures and migrates apically down the root.
6. Describe the structure, organization and bacterial content of subgingival plaque in the following areas: adjacent to the tooth, adjacent to the sulcular epithelium, free plaque in the depths of the sulcus, and bacteria in the connective tissue.
7. Describe the mechanism of bacterially mediated destruction of the peridontium.
8. Associate the appearance of gram negative bacteria with the later stages of gingivitis.
9. Identify the bacteria normally associated with chronic adult periodontitis, rapidly progressive periodontitis, and refractory periodontitis.
10. Name the types of bacteria associated with localized juvenile periodontitis.
11. Discuss the host immune response to periodontal disease.
12. Discuss the three antibody-mediated response and hypersensitivity reactions that play a role in the progression of periodontal disease.
13. Discuss the significance of IgA, IgG, and IgE.

E. Unit V. Calculus and Other Factors

1. Describe what dental calculus is and review the process of calculus formation.
2. Describe the role calculus plays in the initiation and progression of periodontal disease.
3. Identify the composition of supra and sub-gingival calculus.
4. Review the various mechanisms for the attachment of calculus to the tooth surface.
5. Review the role microorganisms play in the mineralization of plaque to form calculus.
6. Describe how material alba, food debris, faulty dentistry, dental procedures, orthodontic treatment, missing teeth, malocclusions, mouth breathing, oral habits, tobacco use, improper tooth brushing, chemical irritation, and radiation therapy contribute to the initiation and progression of periodontal disease.

F. Unit VI. Occlusion and Temporomandibular Disorders

1. Differentiate between centric relation and centric occlusion.
2. Define occlusion, malocclusion and premature contacts.
3. Give the signs and symptoms of occlusal trauma in the periodontium as can be detected utilizing the clinical examination and intraoral radiographs.
4. Compare and contrast the appearance of the normal periodontal ligament to the periodontal ligament of a tooth out of function or erupted.
5. Describe bruxism and list the clinical signs and symptoms of bruxism.
6. Compare the effects on the periodontium of occlusal trauma alone and occlusal trauma plus inflammation.
7. Differentiate between function and parafunctional occlusion, orthofunction, mandibular excursive movements normal and abnormal wear facets.
8. Differentiate between primary and secondary occlusal trauma and describe the clinical significance of these differences when determining the course of treatment.
9. Differentiate between trimus, arthralgia, myalgia, clicking and crepitation.
10. Discuss the categories of temporomanbibular disorders (TMD) TMD screening, and methods of assessing for temporomanbibular disorders.

G. Unit VII: Clinical Assessment

1. Explain the effect that variations in proximal contacts or lack of contacts have on periodontal tissues.
2. List four causes of pathologic tooth mobility.
3. List four causes of pathologic tooth migration.
4. Describe the clinical significance of the biologic or histologic pocket depth as compared with probing depth.
5. Describe the clinical significance of the attachment level verses the probing depth level.
6. Describe how to clinically determine the width of the attached gingival.
7. Describe how to evaluate alveolar bone level and describe the clinical significance of the bone level of the alveolus.
8. Review how to clinically evaluate and classify the signs and symptoms of occlusal trauma.
9. Review the various patterns of bone loss as they might appear on radiographs.
10. Review the criteria for and classification of possible furcation involvement.
11. Determine how to evaluate and arrive at a prognosis.
12. Determine the treatment plan.
13. Describe the rational for treatment.

H. Unit VIII: Systemic Factors Influencing Periodontal Disease

1. Describe, in general, how systemic factors alter the prognosis and treatment of periodontal disease.
2. Describe the effect that nutrition deficiency and different food consistencies have on the periodontium and treatment of periodontal disease.
3. Identify common hormonal conditions that affect the periodontium and discuss their clinical changes.
4. Identify hematological disorders that affect the periodontium and discuss their clinical changes.
5. Discuss the possible periodontal changes that occur with patients taking certain immuno-suppressant medications.
6. Discuss the medically compromised patient.

I. Unit IX: Nonsurgical Periodontal Surgery (Phase I)

1. Describe nonsurgical periodontal surgery and give the rationale for Phase I therapy in controlling or eliminating inflammation of the periodontal tissues.
2. Describe how treatment may affect pocket depth and aid in the surgical management of periodontal diseases and any other goals of phases I therapy.
3. Describe the importance of plaque control in the treatment of periodontal disease.
4. Describe how local factors such as alignment of teeth, carious lesions, defective restorations, calculus and instructions to the patient affect the success or failure of plaque control.
5. List in a logical sequence how uncomplicated gingivitis should be treated.
6. Evaluate a case where the tissue did not respond favorably to treatment and give possible reasons for the treatment failure.
7. List some of the antimicrobial agents used as an adjunct in the treatment of periodontal disease.
8. Describe the indications and techniques used in the application of antimicrobial agents.
9. Describe how juvenile periodontitis is treated.
10. Define pre-surgical periodontal treatment and describe how it is utilized in the treatment of periodontal disease.

J. Unit X Periodontal Surgery

1. Define periodontal disease and describe the rationale of periodontal surgery and expected changes that occur in the periodontal tissues during the following treatment.
2. Discuss the general conditions for periodontal surgery.
3. Discuss the different types of periodontal surgery and describe the rationale and indications for the different types of periodontal surgery.
4. Define and discuss regeneration, healing, new attachment, reattachment, long junctional epithelial attachment, and recession as they apply to the treatment of periodontal disease.
5. Discuss the types of anesthesia, hemostasis, and periodontal dressing that might be used for periodontal surgery.
6. Describe the pre and post-operative procedures a patient should follow after periodontal surgery.
7. Discuss several changes that will occur in the periodontal tissue during and after successful treatment.
8. Explain the importance of patient education in the successful treatment of periodontal disease.
9. Describe the indications and techniques used in the application of antimicrobial agents to include systemic local and at site.
10. Describe how juvenile periodontitis is treated.
11. Identify the instruments frequently used in periodontal surgery.

K. Unit XI: Periodontal Emergencies

1. Describe the signs, symptoms and treatment regimen for ANUG, primary and secondary herpetic gingivostomatitis, aphthous ulcers, periodontal abscesses, pericoronitis and local osteitis.
2. Discuss the types and treatment of office emergencies that may occur from periodontal treatment and describe methods used to prevent such emergencies from occurring.

L. Unit XII Supportive Periodontal Therapy

1. Discuss the rationale for supportive periodontal therapy.
2. Explain the maintenance program.

M. Unit XIII Dental Implants

1. Describe the types of implants.
2. Describe the surgical phases in the placement of implants.
3. Review the maintenance for dental implants.
4. Describe the appropriate instruments used for maintenance.
5. Review the patient's home care of dental implants.

N. Unit XIV Review of current Periodontal Literature

1. Discuss recent published articles in the periodontal literature focusing on significance, and application of theory learned during previous units.

O. Unit XV: Clinical Instruction

1. Explain and demonstrate the principles of suture removal to laboratory competency.
2. Explain and demonstrate on a patient the proper placement of periodontal dressing.
3. Explain and demonstrate on a patient the proper use of sulcular irrigation devices.
4. Explain and demonstrate on a patient the proper application of the topical anesthetic patch.
5. Explain and demonstrate on a patient the proper application and placement of Actisite (local fiber antimicrobial delivery system).
6. Explain and demonstrate on a patient the proper technique taking alginate impressions.
7. Explain and demonstrate on a patient the proper way to polish Amalgam restorations and place temporary restorative material.

8. Also, many current materials and techniques will be discussed and demonstrated such as various implants, regenerative membranes, and bone grafting methods.
9. Describe the rationale and procedure for a brush biopsy.

III. THECB Learning Outcomes (WECM)

1. Contrast normal and abnormal periodontium.
2. Analyze the etiology and pathology of periodontal diseases.
3. Differentiate treatment modalities used for therapy and prevention.
4. Interpret periodontal assessment data to develop a dental hygiene care plan.

IV. Evaluation

A. Examinations

1. There may be unannounced quizzes given at the beginning of each lecture period. The questions may come from previous lecture material. The point total of these quizzes will be added to the overall total points of the course.
2. There will be three scheduled, fifty-minute examinations each covering a portion of the learning units plus any previous units. Each of these examinations will be worth 1/5th of the final grade.
3. There will be a comprehensive final examination, given during the scheduled final examination period. This examination will be worth 2/5th of the final grade
4. If a student must miss an examination for a reason permitted by school policy, he/she must notify the instructor prior to the class period and, at that time, make arrangements for a make-up examination. Students who miss an examination for an unacceptable reason may be given a zero (0) for the missed examination.

B. Grading Scale

A = 100 - 93

B = 92 - 83

C = 82 - 75

D = 74 – 70

F = 69 and below

* *The minimum acceptable numerical number is a 75% as determined by the program's promotion and graduation policies.*

If the final numerical number for the course is .5 or higher the number will be rounded up to the next number.

C. Reading Assignments

This course is designed to challenge the student. Reading of assigned articles, chapters of the class text and instructor handouts combine with class lectures is necessary to pass this course. Not all material the student is required to know is covered in the class lecture. The lecture will not always follow the text or handouts.

D. Clinical

It is imperative for any health care professional to be able to apply theory with clinical patient treatment. Therefore, a significant amount of this course is clinically oriented. Actual clinical observations by the instructor often determine areas that need coverage or emphasis throughout the semester. These clinical areas may be covered by additional lectures, reading assignments or assigned class projects.

V. Disability Statement (Americans with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024*)*

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information

VII. Dental Hygiene Entry-Level Competencies

C.4 Use evidence-based decision making to evaluate emerging technology and treatment modalities to integrate into patient dental hygiene care plans to achieve high-quality, cost-effective care.

C.5 Assume responsibility for professional actions and care based on accepted scientific theories, research, and the accepted standard of care.

C.7 Integrate accepted scientific theories and research into educational, preventive, and therapeutic oral health services