



Dental Hygiene Department

Student Course Document

COURSE CODE & TITLE: DEN 2311 ORAL PATHOLOGY

TERM: FALL

INSTRUCTOR: GWEN COHEN BROWN, DDS, FAAOMP

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OFFICE HOURS: To be determined

CLASS HOURS: 2 PER WEEK

LABORATORY HOURS: 0 PER WEEK

CREDITS: 2

PREREQUISITE: DEN 1200, DEN 1217, DEN 1218, BIO 3302

COREQUISITES: DEN 2300; DEN 2318

SUGGESTED TEXTBOOK: "ORAL AND MAXILLOFACIAL PATHOLOGY, 3rd EDITION",
Brad Neville, DDS; Douglas D. Damm, DDS; Carl M. Allen, DDS, MSD; and Jerry Bouquot,
DDS, MSD

Pub. Date: January 2009

Format: Textbook Hardcover, 864pp

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The Dental Hygiene Oral Pathology Course: Course Description:

Basic principles of pathology, with special reference to diseases of the oral cavity and contiguous structures and their clinical considerations in dental hygiene treatment.

The Dental Hygiene Oral Pathology course integrates the basic-science curriculum and applies this unified foundation knowledge to the clinical evaluation of oral and maxillofacial diseases.

Correlation will be made between the etiology and pathology of cells and tissues with the atypical physiologic behavior created by their presence.

Understanding the process of disease (pathogenesis) will be achieved actively by comparing and contrasting abnormal cellular morphology and normal histology on both light microscopic and electron microscopic levels. Clinical oral pathology will be correlated to diagnostic tests, biopsy, cytologic smear, viral culture, empiric diagnosis and therapeutic diagnosis.

Students will understand and apply the diagnostic criteria used in the staging of disease and upon completion of the Dental Hygiene Oral Pathology course, students will understand the progression of disease and its relevance to clinical and radiographic changes. Students will understand the etiology of various oral lesions and the relevance of specific treatments.

Evaluation Procedures

Assessment Methods & Grading Policies:

Grades given in the Oral Pathology DEN 2311 course are based upon the following: weekly quizzes, a midterm exam, a final exam and a research or case-based paper. The course is cumulative as are the weekly quizzes, midterm and final exams. The midterm (50 questions multiple choice) and cumulative final exam (50 questions multiple choice) are each worth 30% of the final grade. The weekly quizzes (5 questions each, multiple choice) are averaged (cumulative) and are also worth 30% of the final grade. Papers are worth 10% of the final grade. Paper topics will be assigned or chosen from a clinical experience.

To pass the class students must maintain a 70 or higher average on the weekly quizzes, midterm and final exam. If a grade of 70 or higher is not achieved when averaging the weekly quizzes, midterm and final exam the student will not pass DEN 2311. Passing the DEN 2311 course is provisional upon the student maintaining a 70 or higher average on the weekly quizzes, midterm and final exams (90% of the final grade).

As students are allowed to have two absences students who attend all classes will have the two lowest quiz grades dropped, students who miss one class will have the lowest quiz grade dropped, students who miss two classes will not have any quiz grades dropped.

Violating the academic integrity policy, participating in unprofessional behavior or unethical behavior, may result in a reduction of up to 10 points of the student's final course grade.

All students are:

1. Expected to take all examinations at their scheduled times
2. In event of an unforeseen emergency, the student is to e-mail the instructor and upon returning to school provide medical or legal documentation to support the absence from the examination. Students who provide documentation deemed acceptable by the course instructor will be schedule to take a “make-up” examination whose format maybe different(essay, short answer).
3. Students who arrive late to examinations, will not be given extended time and will be expected to complete the exam in the remaining scheduled exam time. They will not be able to start the exam if any student has already completed the exam and left the room.
4. Students who miss and do not provide acceptable documentation will have a score of Zero entered for that examination.
5. Cheating: Penalty for a student observed cheating on a Den 2300 exam will be a zero grade for that test **plus** 10 points off the final grade for professionalism. Again if this results in a failing grade for the DEN 2300 course then **the student will not be allowed to progress & will follow the DH course repeat policy in the student manual.**

Make-up Tests and Quizzes

Make-up tests will be given under proven (documented) extenuating circumstances i.e. religious holidays, illness or emergency situation, and at the convenience of the instructor.

Policy on Retesting

Effective as of October 1, 1989, no student in a Dental Hygiene course will be retested in any examination for any reason. A failing grade in a quiz/test/examination will remain and be averaged with all other course grades.

Grading Scale

The final letter grades are assigned according to the following standard as published in the NYCCT Student Handbook – page 30: Grade Numerical Grade Ranges Quality Points.

Please note that a course grade below a “C” will require repeating the course.

93 - 100 = A

90 - 92.9 = A-

83 - 86.9 = B

80 - 82.9 = B-

77 - 79.9 = C+

70 - 76.9 = C

60 - 69.9 = D

Below 59.9 = F

Attendance Policy for the Course:

Students are expected to attend class and attendance will be taken. As per college policy a student may be absent during the semester without penalty for 10% of the class meeting sessions. For DEN 2311 this is 2 absences. Please refer to the student manual for department policies concerning attendance, punctuality and professional behavior. Two lateness's equals one absence.

Academic Integrity Policy

New York City College of Technology Policy on Academic Integrity

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

Learning Experience: This course will utilize several approaches to teaching including but not limited to BlackBoard, PowerPoint, group discussions, lecture and community outreach activities in order to accomplish the stated objectives.

DEN 2311 Course Objectives

DEN 2311 Student Learning Objectives

By the completion of this course the student will be able to:

1. Integrate and correlate oral histopathology with the basic and clinical science disciplines with emphasis on the hard and soft tissues of the oral cavity.
 - a. Discipline Knowledge
 - b. Gen Ed
 - i. Breadth of Knowledge
 - ii. Communication Skills
 1. Written - Technical Reading
 2. Oral - Listening
 - iii. Integration
 1. Integrate learning
2. Identify and understand the basic concepts and principles of oral histopathology with emphasis on tissues of the oral cavity, the teeth and contiguous structures.
 - a. Discipline Knowledge
 - b. Gen Ed
 - i. Communication Skills
 1. Written - Technical Reading
 2. Oral - Listening
 3. Visual - Graphic representation
 - ii. Process Skills
 1. Memorization
 2. Computer - PowerPoint
3. Identify and understand the basic concepts of histopathology by integrating microscopy in the teaching of diagnosis for clinically relevant oral and maxillofacial pathology.
 - a. Discipline Knowledge
 - b. Gen Ed
 - i. Communication Skills
 1. Written - Technical Reading
 2. Oral - Listening
 3. Visual - Graphic representation
 - ii. Process Skills
 1. Memorization
 - iii. Computer Skills
 1. PowerPoint
 - iv. Integration
 1. Integrate learning

4. Identify and understand treatment planning for clinically relevant oral and maxillofacial pathology within the context of Dental Hygiene.
 - a. Discipline Knowledge
 - b. Gen Ed
 - i. Communication Skills
 1. Written - Technical Reading
 2. Oral – Listening
 - ii. Process Skills
 1. Memorization
 - iii. Computer Skills
 1. PowerPoint
 - iv. Integration
 1. Integrate learning
5. Identify and understand the terminology applied to oral pathologic lesions.
 - a. Discipline Knowledge
 - b. Gen Ed
 - i. Communication Skills
 1. Written – Technical Reading/Writing
 2. Oral - Listening
 - ii. Process Skills
 1. Memorization
 - iii. Computer Skills
 1. PowerPoint
 2. Word (Documentation)
6. Identify and discuss clinical oral pathology related to social, ethical and legal concepts.
 - a. Discipline Knowledge
 - b. Gen Ed
 - i. Global Knowledge
 1. Respect for cultural norms and diversity
 - ii. Ethical Values
 1. Intellectual integrity, professional ethics

Gen Ed Student Learning Outcomes:

Level of Mastery: Intermediate

Reinforced: 2300L, and 2400L, 2700

Upon completion of the course, the student will have acquired the following general education principles:

- A. Knowledge – Discipline
 - i. Breadth of Knowledge
- B. Skills - Communication
 - i. Written - Technical Reading
 - ii. Oral – Listening
 - iii. Visual - Graphic representation

- iv. Process Skills - Memorization
- v. Computer Skills
 - 1. PowerPoint
 - 2. Word
- C. Integration
 - i. Integrate learning Values, Ethics, and Relationships Global Knowledge
 - 3. Respect for cultural norms and diversity
 - vi. Ethical Values, Intellectual integrity, professional ethics

Dental Hygiene Oral Pathology DEN 2311

Week 1: Introduction to Oral Pathology and Mucous Membrane Diseases I

Week 2: Mucous Membrane Diseases II

Week 3: Mucous Membrane Diseases III

Lecture Goals:

Students will develop an understanding of the pathology, light microscopy, clinical appearance, systemic significance, treatment and prognosis of mucous membrane diseases.

Lecture Objectives: The student will be able to:

1. Describe the histopathology of the mucous membrane lesions presented and understand how the pathology dictates the clinical appearance.
2. Understand when the patient's age, sex, and race are important factors in developing a differential diagnosis. (i.e. Pemphigus vulgaris is generally seen in older women)
3. Understand the functional relationship between histologic diagnosis and treatment and apply this to the resulting prognosis.
4. Understand when a specific test should be done (biopsy, cytologic smear, culture, and immunofluorescence) as well as understanding the rationale for choosing which test is applicable to the situation.
5. Present a reasonable, pragmatic, and differential for the diagnosis of mucous membrane diseases.

Lesions will be presented in the following manner:

1. Etiology
2. Clinical appearance
3. Sex
4. Age
5. Race (when applicable)
6. Laboratory tests
7. Histopathology
8. Radiographs

9. Treatment
10. Prognosis

Week 3: Odontogenic Cysts and Non-Odontogenic Cysts I

Week 4: Odontogenic Cysts and Non-Odontogenic Cysts II

Lecture Goals: This lecture will present a differential diagnosis for both common and uncommon cysts of the dental hard and soft tissues. Emphasis will be placed upon interpretation of radiographs in conjunction with clinical setting to arrive at a working differential diagnosis. Histopathology will be evaluated with the understanding that the histologic diagnosis interpreted within the clinical setting will determine appropriate therapy.

Lecture Objectives: The student will be able to:

1. Evaluate radiographs and include cystic lesions in the development of a differential diagnosis when presented with both unilocular and multilocular radiolucencies.
2. Understand that histopathology is only relevant to the diagnosis of cystic lesions with respect to their clinical setting.
3. Understand and apply appropriate treatment modalities to different cystic lesions.
4. Understand when cysts are a part of a genetic syndrome, refer for genetic counseling.

Week 5: Benign and Malignant Bone Tumors

Lecture Goals: The goal of this lecture is to reevaluate bony lesions in the greater context of the patient as a whole. Many of these tumors are lesions more commonly found in the long bones, emphasis will be placed on recognizing the differences in the age, clinical appearance and treatment/prognosis of these lesions when they occur in the jawbones as opposed to the long bones. Additional focus will be on including radiographic changes associated with bone tumors into realizing a differential diagnosis for multilocular radiolucencies of the mandible. The systemic involvement of many of the bone tumors requires a systemic evaluation and in some cases immediate medical consult, these lesions will be addressed with stress placed on the appropriate evaluation of the oral lesions with integration of the patient's medical condition.

Lecture Objectives: The student will be able to:

1. Recognize and identify oral bone tumors and their diagnostic characteristics, and apply this knowledge when developing differential diagnosis of radiopaque and radiolucent lesions.
2. Understand the ramifications of early diagnosis for those lesions with a systemic component and apply this knowledge in the appropriate referral to genetic counselors, rheumatologists or endocrinologists.
3. Examine the histopathology of the lesions, combine it with the clinical presentation and be able to generate treatment/prognosis outcomes.

Week 6: Bone Diseases

Lecture Goals: The goal of this lecture is to understand that many bony lesions present with an identical histology, and that it is integral to proper therapy to understand the different clinical manifestations and dissimilar prognosis. Many of these lesions are associated with systemic processes; others are site and age specific. The clinical appearance, treatment and prognosis may

be quite different with an identical histology.

Lecture Objectives: The student will be able to:

1. Apply radiographic and clinical diagnosis when separating lesions with identical histology.
2. Understand that identical histologic lesions may present in very different ages groups and that the appropriate treatments are not similar.
3. Project systemic involvement on the basis of accurate diagnosis of oral bone lesions, and refer the patient for medical consult when appropriate.

Week 7: Midterm Exam

Week 8: Oral Cancer I

Week 9: Oral Cancer II

Lecture Goals: The goal of this session is to understand the stages of dysplasia and the effect carcinogens and promoters have on the oral mucous membranes. The histologic criteria for dysplasia will be reviewed, as will leukoplakia and erythroplakia of the oral soft tissues. Carcinoma will be examined with respect to histologic subtype, histologic grade, tumor size, regional nodal involvement, and metastatic spread of disease. Application of clinical assessment will be stressed with appropriate laboratory tests presented.

Lecture Objectives: The student will be able to:

1. Assess a histologic slide of dysplasia and accurately determine the degree of severity with correlation to correct treatment and prognosis.
2. Compare the differences between known carcinogens and promoters of disease.
3. Evaluate the new concepts of field cancerization; skip areas in dysplasia, and multifocal presentation of disease.
4. Determine appropriate laboratory tests including biopsy sites, cytologic smears and Toluidine blue will be evaluated.

Week 10: Soft Tissue Tumors and Reactive Lesions

Lecture Goals: The goal of this lecture is to present a variety of common soft tissue lesions comparing their etiology, clinical appearance, histology and treatment. The oral soft tissues present with a myriad of lesions, some of which are reactive while others are neoplastic. It is integral to apply this etiologic difference when approaching treatment as the prognosis of two similar clinical presentations may be quite different, and inappropriate therapy may not resolve the lesion, it may exacerbate it.

Lecture Objectives: The student will be able to:

1. Develop a differential diagnosis for soft tissue lesions, which includes each lesions etiology, treatment and prognosis. The consequence of inappropriate therapy should also be addressed and understood.
2. Understand which lesions are associated with systemic or genetic diseases, and apply this knowledge when determining therapy.

3. Understand the ramifications of lesions with a viral etiology with respect to sexually transmitted diseases as well as the legal issues in the arena of child welfare.

Week 11: Odontogenic Tumors

Lecture Goals: The student should be able to relate the etiology of the Odontogenic tumors with their histopathologic, radiographic and clinical presentations. Understanding which germ layer each Odontogenic tumor is derived from will enable the student to develop an appropriate radiographic differential diagnosis for lesions, which include both radiolucent and radiopaque lesions. Applying the knowledge of amelogenesis, cementogenesis, and dentinogenesis will enable the student to make the appropriate choices for treatment with the best possible prognosis.

Lecture Objectives: The student will be able to:

1. Subclassify the Odontogenic tumors into epithelial, mesenchymal and mixed etiologies.
2. Recognize the histologic features of ameloblasts and cementoblasts as well as the product created by the cells.
3. Determine appropriate treatment for each lesion, and apply this knowledge for each patient with optimum prognosis.
4. Include Odontogenic tumors in the differential diagnosis of both radiolucent and radiopaque lesions

Week 12: Salivary Gland Pathology Diseases, Tumors and Radiology

Lecture Goals: An understanding of the tumors and diseases of the major and minor salivary glands. The oral environment is altered significantly with the presence or absence of saliva. The consequences of xerostomia will be evaluated secondary to systemic disease, noscomial infections, viral infections, chemotherapeutics, radiation and HIV infection. Tumor genesis of both benign and malignant salivary gland tumors will be approached with respect to histogenesis, behavior, treatment and prognosis.

Lecture Objectives: The student will be able to:

1. Assess salivary gland lesions with respect to etiology whether from a viral, inflammatory, autoimmune, neoplastic, or reactive source, and to process that information and accurately project treatment and prognosis.
2. Be able to perform salivary flow rates, stimulated and unstimulated, in the assessment of xerostomic patients to determine primary or secondary decrease in salivary output.
3. Understand the mechanism behind the use of cholinergic stimulating medications, as well as the advantages and disadvantages associated with these medications.
4. Be able to choose the optimum biopsy site and how and where to perform a biopsy on a salivary gland tumor with out seeding the adjacent tissues.

Week 13: HIV and AIDS

Lecture Goals: The lecture will present the spectrum of HIV illness and the diagnostic criteria (case definitions) for AIDS. The most current antiretroviral treatment regimens will also be discussed, including their rationale and assessment of treatment outcomes. Compare the clinical characteristics of oral ulcerations in HIV seropositive patients and determine the accurate diagnosis by application of laboratory tests combined with therapeutic diagnosis. Understand the

viral component of HSV, HZ, HL, KS, and NHL and how the viral etiology of these lesions modifies clinical presentation with respect to diagnosis and treatment planning. Describe the major clinical manifestations of superinfection with *Candida albicans* and the different treatments appropriate to each clinical subtype. Understand how each of the clinical manifestations of HIV can modify dental treatment

Lecture Objectives:

1. Describe the natural history of HIV illness.
2. List major criteria that define AIDS.
3. Discuss the rationale for antiretroviral combination therapy.
4. Discuss diagnostic tests for HIV infection and outcome of antiretroviral treatment.

The following are the ADEA Competencies used throughout the DEN 2311 Oral Pathology Course

Core Competencies ©:

C.1 Apply a professional code of ethics in all endeavors.

C.4 Use evidence-based decision making to evaluate and incorporate emerging treatment modalities.

Health Promotion and Disease Prevention (HP)

HP.2 Respect the goals, values, beliefs, and preferences of the patient/client while promoting optimal oral and general health.

HP.4 Identify individual and population risk factors and develop strategies that promote health related quality of life.

Patient/Client Care (PC)

Assessment

PC.1 Systematically collect, analyze, and record data on the general, oral, and psychosocial health status of a variety of patients/clients using methods consistent with medico-legal principles.

This competency includes:

- a. Select, obtain, and interpret diagnostic information recognizing its advantages and limitations.
- b. Recognize predisposing and etiologic risk factors that require intervention to prevent disease.
- d. Recognize health conditions and medications that impact overall patient/client care.

Planning

PC.3 Collaborate with the patient/client, and/or other health professionals, to formulate a comprehensive dental hygiene care plan that is patient/client-centered and based on current scientific evidence.

This competency includes:

- a. Prioritize the care plan based on the health status and the actual and potential problems of the individual to facilitate optimal oral health.
- d. Make referrals to other health care professionals.