

GENERAL AND ORAL PATHOLOGY

**Lamar Institute of
Technology**

DHYG 1339

**Course Syllabus
Spring**

**Instructor:
Debbie Brown, R.D.H., MS
dwbrown@lit.edu**



TABLE OF CONTENTS

SCHEDULE AND ASSIGNMENTS	3
COURSE DESCRIPTION	5
COURSE GOALS WITH SCANS	5
CREDIT HOURS.....	6
CLASS MEETING TIME	6
INSTRUCTOR.....	6
PROGRAM/COURSE POLICIES	6
TEACHING METHODS	8
REQUIRED TEXTS.....	8
REFERENCE TEXTS	8
COURSE REQUIREMENTS.....	9
EVALUATION CRITERIA.....	9
CONTENT OUTLINE	10
INTRODUCTION TO GENERAL AND ORAL PATHOLOGY.....	15
INFLAMMATION AND REPAIR.....	16
IMMUNITY.....	17
INFECTIOUS DISEASES	18
DEVELOPMENTAL DISORDERS	19
GENETICS.....	20
NEOPLASIA	21
NON-NEOPLASTIC DISEASES OF BONE	22
ORAL MANIFESTATIONS OF SYSTEMIC DISEASES	23
APPENDIX I.....	24
CASE STUDY INFORMATION	24
APPENDIX II.....	27
GRADE COMPUTATION SHEET	27
APPENDIX III.....	29
STUDY GUIDES	29

SCHEDULE AND ASSIGNMENTS

Topic		Reading Assignments	Assignments
JANUARY			
Week 1	Introduction to General and Oral Pathology	Ibsen, Chapter 1	
	Introduction to General and Oral Pathology	Ibsen, Chapter 1	
Week 2	Inflammation and Repair	Ibsen, Chapter 2	
	Inflammation and Repair	Ibsen, Chapter 2	
Week 3	Inflammation and Repair	Ibsen, Chapter 2	
	Inflammation and Repair	Ibsen, Chapter 2	Group 1 Case Study Presentation
FEBRUARY			
Week 4	EXAM 1	Chapters 1 & 2	
	Immunity	Ibsen, Chapter 3	Group 2 Case Study Presentation
Week 5	Immunity	Ibsen, Chapter 3	Group 3 Case Study Presentation
	Immunity	Ibsen, Chapter 3	Group 4 Case Study Presentation
Week 6	Infectious Diseases	Ibsen, Chapter 4	Group 5 Case Study Presentation
	Infectious Diseases	Ibsen, Chapter 4	Group 6 Case Study Presentation
Week 7	Infectious Diseases	Ibsen, Chapter 4	Group 7 Case Study Presentation
	Developmental Disorders	Ibsen, Chapter 5	Group 8 Case Study Presentation
MARCH			
Week 8	EXAM 2	Chapters 3 & 4	
	Developmental Disorders	Ibsen, Chapter 5	Group 9 Case Study Presentation
Spring Break		NO CLASS	
Week 9	Developmental Disorders	Ibsen, Chapter 5	Group 1 Case Study Presentation
	Oral Manifestations of Systemic Diseases	Ibsen, Chapter 9	Group 2 Case Study Presentation
Week 10	Oral Manifestations of Systemic Diseases	Ibsen, Chapter 9	Group 3 Case Study Presentation
	Oral Manifestations of Systemic Diseases	Ibsen, Chapter 9	Group 4 Case Study Presentation
Week 11	EXAM 3	Chapters 5 & 9	
	Neoplasia	Ibsen, Chapter 7	Group 5 Case Study Presentation

General and Oral Pathology, DHYG 1339
Spring 2011

Topic		Reading Assignments	Assignments
APRIL			
Week 12	Neoplasia	Ibsen, Chapter 7	Group 6 Case Study Presentation
	Faculty In-Service	NO CLASS	
Week 13	Neoplasia	Ibsen, Chapter 7	Group 7 Case Study Presentation
	Neoplasia	Ibsen, Chapter 7	Group 8 Case Study Presentation
Week 14	Non-Neoplastic Diseases	Ibsen, Chapter 8	Group 9 Case Study Presentation
	EXAM 4	Chapters 7 & 8	
Week 15	Genetics	Ibsen, Chapter 6	
	Genetics	Ibsen, Chapter 6	
MAY			
Week 16	Genetics	Ibsen, Chapter 6	
TBA	FINAL EXAM	Comprehensive	8:00-10:00am

COURSE DESCRIPTION

DHYG 1339 is a study of disturbances in human body development, diseases of the body, and disease prevention measures with an emphasis on the oral cavity and associated structures.

PREREQUISITE

DHYG 1401, 1431, 1304, 1235 & 1103.

CO-REQUISITE: DHYG 1319, 2301, 2133 & 1260.

COURSE GOALS WITH SCANS

At the completion of the course the student should be able to demonstrate the following as evidenced by satisfactory (70% or over) examination, quiz and assignment grades:

1. Describe the dental hygienist's responsibility in recognizing, documenting and referring oral pathology. (SCANS: F1.5, F2.3, F5.5, F6.5, F8.5, F9.5, F10.5, F12.4, F13.4, C5.5, C6.5, C7.2)
2. Identify normal, deviations of normal and pathology of oral diseases. (SCANS: F1.5, F5.5, F6.5, F8.5, F9.5, F10.5, F11.5, C5.5, C7.2)
3. Describe the effects of specific diseases or conditions on the following systems and describe any oral effects associated with these conditions: (SCANS: F1.5, F2.3, F7.3, F8.5, F9.5, F10.5, F11.5, F12.4, F13.4, F14.4, C5.5)

Hematopoietic	Respiratory
Endocrine	Integumentary
Skeletal	
4. Identify the lesion, etiology, disease process, treatment and prognosis for the following categories of oral conditions: (SCANS: F1.5, F2.3, F9.5, F10.5, F12.4, F16.5, C5.5, C6.5, C7.2, C9.3)

Inflammatory	Non-Neoplastic Diseases
Immune	Infectious Diseases
Neoplastic	
Genetic	
Developmental	
5. Provide the elements of a differential diagnosis for specific diseases when appropriate. (SCANS: F1.5, F2.3, F9.5, F10.5, F12.4, C5.5, C6.5, C7.2, C9.3)

Beginning in the late 1980's, the U.S. Department of Labor **Secretary's Commission on Achieving Necessary Skills (SCANS)** conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in *What Work Requires in Schools*. In its research, the Commission determined that "workplace know-how" consists of two elements: foundation skills and workplace competencies. The three-part foundation skills and five-part workplace competences are further defined in the SCANS attachment.

CREDIT HOURS

3 Semester hours

CLASS MEETING TIME

8:00 – 9:15 am Tuesday & Thursday Room 112 Multi-Purpose Center

INSTRUCTOR

Debbie Brown, RDH, MS, Associate Professor, Office: Room 211 Multi-Purpose Center.
Phone 409-880-8867 (office).

E-mail: dwbrown@lit.edu.

Students should discuss questions by appointment or as the instructor is available.

PROGRAM/COURSE POLICIES

1. **Attendance Policy:** In order to ensure that the student in the dental hygiene program acquire the necessary didactic and clinical competencies outlined in the curriculum, it is necessary that the student attend all assigned lecture classes.

Spring Semesters. Dental hygiene students will be allowed **two** absences in any lecture.

In the event that a student misses a lecture class beyond the allowed absences, the faculty will review the student's academic record. If it becomes inadvisable for the student to continue in the program, the faculty will initiate an administrative drop from the course.

Students are expected to arrive and leave class according to the published schedule or as instructed by the faculty member. Being tardy for lecture not only affects the learning of the tardy student but it also disrupts the learning of the other students in the class. Students who arrive late for class not only miss important information but also disturb fellow classmates. Three days tardy will be counted as one absence.

Faculty has the authority to modify the above policies if unusual circumstances mandate a change.

2. **Absences.** If an absence is necessary please notify the instructor as soon as possible by calling my office number or the Program Secretary: 880-8846 (8:00 – 5:00).
3. **Disabilities Statement.** The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities.

If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at 409-880-1737 or visit the office located in the Cecil Beeson Building, room 116B.

4. **Examination and Quiz Policy:**

Examinations will be based on objectives, lecture notes, handouts, assigned readings, audiovisual material and class discussions. Major examinations will consist of multiple choice, true/false, matching, short answer, and case study questions. The final examination will be comprehensive and consist of questions similar to those found on the major examinations. Questions on the Genetics Chapter will also be included on the final.

Students are expected to complete examinations as scheduled. Make-up examinations will be given **ONLY** if the absence is due to illness (confirmed by a physicians' excuse), a death in the immediate family, or at the discretion of the Instructor. All make-up examinations must be taken within two (2) weeks from the scheduled exam date. All examinations will be kept on file by the Instructor. Students may have access to the examination by appointment during the Instructor's office hours. Exams may be reviewed up to two (2) weeks following the exam date. A grade of "0" will be recorded for all assignments due on the day of absences unless **prior** arrangements have been made with the Instructor.

5. **Electronic Equipment.** Electronic equipment such as telephones, pagers, and video equipment are **not** allowed in the classroom. All cell phones must be turned off and put away. Text messaging during class time will not be tolerated. Text messaging during an exam will be considered academic dishonesty. The exam will be considered over and the student will receive a zero for the exam.
6. **Leaving Class during Lecture**
You should be prepared to remain in class for the entire class period. Any personal business should be taken care of prior to or after class. If a medical problem exists or an emergency occurs please inform the instructor.

Please refer to the Student Handbook for a complete listing of program policies.

TEACHING METHODS

1. Lecture
2. Slide presentation
3. Discussion
4. Group presentations of case studies
5. Examinations

REQUIRED TEXTS

1. Ibsen, OAC & Phelan, JA., Oral Pathology for the Dental Hygienist, WB Saunders Co., Fifth Edition, 2009. ISBN 1416049916.

REFERENCE TEXTS

1. DeLong & Burkhart. General and Oral Pathology for the Dental Hygienist, Lippincott, Williams & Wilkins, 2007.
2. Razier & Drzymkowski. Essentials of Human Diseases and Conditions, Fourth edition, Saunders, 2009.
3. Mulvihill, Zelman, Holdaway, Tompany, and Raymond. Human Diseases: A Systemic Approach, Seventh Edition, 2010.
4. Porth, Carol M. Pathophysiology: Concepts of Altered Health States, Seventh Edition, 2005.
5. Price, Sylvia A. and Wilson, Lorraine M., Pathophysiology. Clinical Concepts of Disease Processes, Sixth Edition, Mosby, 2003.
6. Regezi, JA & Sciubba, JJ, Oral Pathology: Clinical Pathologic Correlations, Fourth Edition, WB Saunders Co., 2003.
7. R.P. Langlais, DDS, & C.S. Miller, DMD, Color Atlas Of Common Oral Diseases, Third Edition, Williams and Wilkins, 2003.

AUDIOVISUAL REFERENCES

1. Oral Pathology for the Dental Hygienist Slide Set, Olga Ibsen, RDH, MS, and Joan Phelan, DDS, W.B. Saunders Co., Philadelphia, PA, 2009.
2. Oral Pathology Slide Series SL 60-76, ADA Council on Dental Therapeutics, Second Edition, 1968.
3. Slide Atlas of Oral Diseases - Clinical and Pathologic Correlations, Second Edition, R. Cawson, W. Binnie, and J. Eveson, Mosby - Wolfe, 1994.
4. Color Atlas of Common Oral Diseases Image Collection, R. Langlais and C. Miller, Lippincott Williams & Wilkins, 2003.

COURSE REQUIREMENTS

1. The student must pass the course with a 70% or higher in order to receive credit for DHYG 1339.
2. Requirements for this course include four tests, one comprehensive final, and two case study presentations and reports.
3. The student should be able to correlate findings from their dental hygiene patients in the clinic with normal and abnormal conditions presented through lecture and slide presentations and class discussions.
4. The student is required to complete two comprehensive case studies and develop a differential diagnosis from the information given. See Appendix I for case study criteria and grade sheet.

EVALUATION CRITERIA

Four major examinations	70%
Comprehensive final examination	20%
Case Studies	10%

Grade Scale:

90 to 100	A
80 to 89	B
70 to 79	C
60 to 69	D
59 & Below	F

CONTENT OUTLINE

- | | | |
|-----|---|--------------------|
| I. | Chapter 1 - Introduction to Preliminary Diagnosis of Oral Lesions | 180 minutes |
| | <ul style="list-style-type: none">A. Vocabulary<ul style="list-style-type: none">1. Clinical appearance of soft tissue lesions2. Soft tissue consistency3. Color of lesion4. Size of lesion5. Surface texture6. Radiographic terms used to describe lesions in boneB. The Diagnostic Process<ul style="list-style-type: none">1. Making a diagnosisC. Variants of Normal<ul style="list-style-type: none">1. Retrocuspid Papilla2. LeukoedemaD. Benign Conditions of Unknown Cause<ul style="list-style-type: none">1. Lingual thyroid nodule2. Median rhomboid glossitis3. Geographic tongue4. Fissured tongue5. Hairy tongue | |
| II. | Chapter 2 - Inflammation and Repair | 270 minutes |
| | <ul style="list-style-type: none">A. InjuryB. Natural Defenses Against InjuryC. Inflammation<ul style="list-style-type: none">1. Microscopic events and clinical signs of inflammation2. Cells involved in the acute inflammatory response3. Biochemical mediators of inflammation4. Systemic manifestations of inflammation5. Chronic inflammation6. Hyperplasia, hypertrophy and atrophyD. Regeneration and Repair<ul style="list-style-type: none">1. Microscopic events that occur during repair2. Types of repair3. Bone tissue repairE. Injuries to Teeth<ul style="list-style-type: none">1. Attrition2. Abrasion3. Abfraction4. Erosion5. Methamphetamine AbuseF. Injuries to Oral Soft Tissues<ul style="list-style-type: none">1. Aspirin burn2. Phenol burn3. Electric burn4. Other burns5. Lesions from self-induced injuries6. Lesions associated with cocaine use7. Hematoma8. Traumatic Ulcer9. Frictional keratosis | |

General and Oral Pathology, DHYG 1339
Spring 2011

- 10. Nicotine stomatitis
 - 11. Tobacco pouch keratosis
 - 12. Traumatic neuroma
 - 13. Amalgam tattoo
 - 14. Melanosis
 - 15. Solar cheilitis
 - 16. Mucocele
 - 17. Necrotizing sialometaplasia
 - 18. Sialolith
 - 19. Acute and chronic sialadenitis
 - G. Reactive Connective Tissue Hyperplasia
 - 1. Pyogenic granuloma
 - 2. Peripheral giant cell granuloma
 - 3. Irritation fibroma
 - 4. Denture-induced fibrous hyperplasia
 - 5. Papillary hyperplasia of the palate
 - 6. Gingival Enlargement
 - 7. Chronic Hyperplastic pulpitis
 - H. Inflammatory Periapical Lesions
 - 1. Periapical abscess
 - 2. Dental or periapical granuloma
 - 3. Radicular cyst
 - 4. Resorption of teeth
 - 5. Focal sclerosing osteomyelitis
 - 6. Alveolar osteitis
- III. Chapter 3 – Immunity **270 minutes**
- A. The Acquired Immune Response
 - B. Antigens
 - C. Cells Involved in the Immune Response
 - 1. Lymphocytes
 - 2. Macrophages
 - 3. Cytokines
 - D. Major Divisions of the Immune Response
 - E. Memory and Immunity
 - F. Types of Immunity
 - 1. Passive immunity
 - 2. Active immunity
 - G. Immunopathology
 - 1. Hypersensitivity
 - 2. Autoimmune Diseases
 - 3. Immunodeficiency
 - H. Oral Diseases with Immunologic Pathogenesis
 - 1. Aphthous ulcers
 - 2. Urticaria and angioedema
 - 3. Contact mucositis and dermatitis
 - 4. Fixed drug eruptions
 - 5. Erythema multiforme
 - 6. Lichen Planus
 - 7. Reactive Arthritis Syndrome
 - 8. Langerhans Cell Disease
 - I. Autoimmune Diseases that Affect the Oral Cavity
 - 1. Sjogren Syndrome

General and Oral Pathology, DHYG 1339
Spring 2011

2. Systemic Lupus Erythematosus
3. Pemphigus Vulgaris
4. Mucous Membrane Pemphigoid
5. Bullous Pemphigoid
6. Behçet Syndrome

IV. Chapter 4 - Infectious Diseases **270 minutes**

- A. Bacterial Infections
 1. Tuberculosis
 2. Actinomycosis
 3. Syphilis
 4. Necrotizing Ulcerative Gingivitis
 5. Pericoronitis
 6. Acute Osteomyelitis
 7. Chronic Osteomyelitis
- B. Fungal Infections
 1. Candidiasis
 2. Deep Fungal Infections
 3. Mucormycosis
- C. Viral Infections
 1. Papillomavirus infection
 2. Herpes Simplex infection
 3. Varicella-Zoster virus
 4. Epstein-Barr virus infection
 5. Coxsackievirus infections
 6. Other viral infections that may have oral manifestations

V. Chapter 5 – Developmental Disorders **270 minutes**

- A. Developmental Soft Tissue Abnormalities
 1. Ankyloglossia
 2. Commissural Lip Pits
 3. Lingual Thyroid
- B. Developmental Cysts
 1. Odontogenic cysts
 2. Nonodontogenic cysts
 3. Pseudocysts
- C. Developmental Abnormalities of Teeth
 1. Abnormalities in the number of teeth
 2. Abnormalities in the size of teeth
 3. Abnormalities in the shape of teeth
 4. Abnormalities of tooth structure
 5. Abnormalities of tooth eruption

VI. Chapter 6 – Genetics **270 minutes**

- A. Genes and Chromosomes
 1. Chromosomal Abnormalities
 2. Gross Chromosomal Abnormalities
- B. Patterns of inheritance
- C. Molecular Chromosomal Abnormalities
 1. Cyclic Neutropenia
 2. Papillon-Lefevre Syndrome
 3. Focal Palmoplantar and Gingival hyperkeratosis
 4. Gingival fibromatosis

- 5. Laband's Syndrome
- D. Inherited Disorders Affecting the Jaw Bones and Facies
 - 1. Cherubism
 - 2. Ellis-Van Creveld Syndrome
 - 3. Cleidocranial dysplasia
 - 4. Gardner's Syndrome
 - 5. Mandibulofacial dysostosis
 - 6. Nevoid Basal Cell Carcinoma Syndrome
 - 7. Osteogenesis Imperfecta
- E. Inherited Disorders Affecting the Oral Mucosa
 - 1. Cleft Palate
 - 2. Hereditary Hemorrhagic Telangiectasia
 - 3. Multiple Mucosal Neuroma syndrome
 - 4. Neurofibromatosis of von Recklinghausen
 - 5. Peutz-Jeghers syndrome
 - 6. White sponge nevus
- F. Inherited Disorders Affecting the Teeth
 - 1. Amelogenesis imperfecta
 - 2. Dentinogenesis imperfecta
 - 3. Dentin dysplasia
 - 4. Hypohodrotic ectodermal dysplasia
 - 5. Hypophosphatasia
 - 6. Hypophosphatemic vitamin D-resistant Rickets

VII. Chapter 7 – Neoplasia

420 minutes

- A. Causes of Neoplasia
- B. Classification of Tumors
- C. Names of Tumors
- D. Tumors of Squamous Epithelium
 - 1. Papilloma
 - 2. Premalignant lesions
 - 3. Squamous cell carcinoma
 - 4. Verrucous carcinoma
 - 5. Basal cell carcinoma
- E. Salivary Gland Tumors
 - 1. Pleomorphic Adenoma
 - 2. Monomorphic Adenoma
 - 3. Adenoid Cystic carcinoma
 - 4. Mucoepidermoid carcinoma
 - 5. Other malignant salivary gland tumors
- F. Odontogenic Tumors
 - 1. Epithelial odontogenic tumors
 - 2. Mesenchymal odontogenic tumors
 - 3. Mixed odontogenic tumors
 - 4. Peripheral odontogenic tumors
- G. Tumors of Soft Tissue
 - 1. Lipoma
 - 2. Tumors of nerve tissue
 - 3. Tumors of muscle
 - 4. Vascular tumors
- H. Tumors of Melanin-Producing Cells
 - 1. Melanocytic nevi
 - 2. Malignant melanoma
- I. Tumors of Bone and Cartilage

General and Oral Pathology, DHYG 1339
Spring 2011

- 1. Osteoma
 - 2. Osteosarcoma
 - 3. Tumors of cartilage
 - J. Tumors of Blood-Forming Tissues
 - 1. Leukemia
 - 2. Lymphoma
 - 3. Multiple Myeloma
 - K. Metastatic Tumors of the Jaws
- VIII. Chapter 8 – Nonneoplastic Diseases of Bone **30 minutes**
 - A. Benign Fibro-osseous Lesions
 - 1. Periapical cemento-osseous dysplasia
 - 2. Focal cemento-osseous dysplasia
 - 3. Florid cemento-osseous dysplasia
 - 4. Fibrous dysplasia
 - B. Paget Disease of Bone
 - 1. Clinical and radiographic features
 - 2. Diagnosis and treatment
 - C. Central Giant Cell Granuloma
 - D. Osteomalacia
 - 1. Clinical and radiographic features
 - 2. Treatment
- IX. Chapter 9 – Oral Manifestations of Systemic Diseases **270 minutes**
 - A. Endocrine Disorders
 - 1. Hyperpituitarism
 - 2. Hyperthyroidism
 - 3. Hypothyroidism
 - 4. Hyperparathyroidism
 - 5. Addison Disease
 - B. Blood Disorders
 - 1. Disorders of red blood cells and hemoglobin
 - 2. Disorders of white blood cells
 - 3. Bleeding disorders
 - C. Immunodeficiency
 - 1. Primary immunodeficiencies
 - 2. Secondary immunodeficiencies
 - D. Effects of Drugs on the Oral Cavity

INTRODUCTION TO GENERAL AND ORAL PATHOLOGY

Objectives:

At the completion of this unit the student should be able to:

1. Define each of the terms in the vocabulary list for this chapter.
2. List and define the eight diagnostic categories that contribute to the diagnostic process.
3. Name a diagnostic category and give an example of a lesion, anomaly, or condition for which this category greatly contributes to the diagnosis.
4. Define "variant of normal" and give three examples of such lesions involving the tongue.
5. List and describe the clinical characteristics and identify a clinical picture of fissured tongue, median rhomboid glossitis, geographic tongue, ectopic geographic tongue, and hairy tongue.
6. Describe the clinical and histologic differences between leukoedema and linea alba.
7. Describe a given lesion according to size, shape, location, texture, consistency, color and radiographic appearance using commonly accepted dental terminology.

INFLAMMATION AND REPAIR

Objectives:

At the completion of this unit the student should be able to:

1. Define the terms in the vocabulary list for this chapter.
2. List the five classic signs of inflammation that occur locally at the site of inflammation.
3. List three systemic signs of inflammation.
4. Describe the microscopic events associated with each of the classic signs of inflammation.
5. List and describe the microscopic events of the inflammatory process.
6. List the types of white blood cells that participate in inflammation and describe how each is involved.
7. Describe the differences between acute and chronic inflammation.
8. Define and contrast hyperplasia, hypertrophy, and atrophy.
9. Describe the microscopic events that occur during the repair of a mucosal wound.
10. Describe and contrast healing by primary intention, healing by secondary intention, and healing by tertiary intention.
11. Describe local and systemic factors that can impair healing.
12. Describe and contrast attrition, abrasion, and erosion.
13. Describe the pattern of erosion seen in bulimia.
14. Describe the relationship between bruxism and abrasion.
15. Describe the cause, clinical features, and treatment of each of the following: aspirin and phenol burns, electric burn, traumatic ulcer, frictional keratosis, linea alba, nicotine stomatitis.
16. Describe the clinical features, cause (when known), treatment, and histologic appearance of each of the following: traumatic neuroma, postinflammatory melanosis, solar cheilitis, mucocoele, ranula, necrotizing sialometaplasia, pyogenic granuloma, peripheral giant cell granuloma, chronic hyperplastic pulpitis, and irritation fibroma.
17. Describe the difference between a mucocoele and a ranula.
18. Define sialolithiasis.
19. Describe the difference between acute and chronic sialadenitis.
20. Describe the clinical features, radiographic appearance, and histologic appearance of a periapical abscess, a periapical granuloma, and a periapical cyst.
21. Describe and contrast internal and external tooth resorption.

IMMUNITY

Objectives:

At the completion of this unit the student should be able to:

1. Define each of the words in the vocabulary list for this chapter.
2. Describe the primary difference between the immune response and the inflammatory response.
3. List and describe the two main types of lymphocytes, their origins, and their activities.
4. List the activities of macrophages.
5. Describe, using the cells involved, the difference between the humoral immune response and the cell-mediated immune response.
6. Describe the functions of the five antibodies.
7. Describe the difference between passive and active immunity.
8. Give one example of passive immunity and one example of active immunity.
9. List and describe four types of hypersensitivity reactions, and give an example of each.
10. Define autoimmunity, and describe how it results in disease.
11. Define immunodeficiency, and describe how it results in disease.
12. Describe and contrast the clinical features of each of the three types of aphthous ulcers.
13. List three systemic diseases associated with aphthous ulcers.
14. Describe and compare the clinical features of urticaria, angioedema, contact mucositis, fixed drug eruption, and erythema multiforme.
15. Describe the clinical features and contrast the features of lichen planus.
16. List the triad of systemic signs that compose reactive arthritis, and describe the oral lesions that occur in this syndrome.
17. Name the two cells that histologically characterize Langerhans cell disease. Describe the acute disseminated form, chronic disseminated form, and chronic localized form and state the names that have traditionally been used for each of these conditions.
18. Describe the oral manifestations of each of the following autoimmune diseases: Sjogren syndrome, lupus erythematosus, pemphigus vulgaris, mucous membrane pemphigoid, Behçet syndrome.
19. Describe the clinical features of desquamative gingivitis, and list three diseases in which it may occur.
20. Describe the components of Behçet syndrome.

INFECTIOUS DISEASES

Objectives:

At the completion of this unit the student should be able to:

1. For each of the following infectious diseases, name the organism causing it, list the route or routes of transmission of the organism and the oral manifestations of the disease, and describe how the diagnosis is made: tuberculosis, actinomycosis, syphilis (primary, secondary, tertiary), verruca vulgaris, condyloma acuminatum, and primary herpetic gingivostomatitis.
2. List and describe four forms of oral candidiasis.
3. Describe the clinical features of herpes labialis.
4. Describe the clinical features of recurrent intraoral herpes simplex infection, and compare them with the clinical features of minor aphthous ulcers.
5. Describe the clinical characteristics of herpes zoster when it affects the skin of the face and oral mucosa.
6. List two oral infectious diseases for which a cytologic smear may assist in confirming the diagnosis.
7. List four diseases associated with the Epstein-Barr virus.
8. List two diseases caused by coxsackieviruses that have oral manifestations.

DEVELOPMENTAL DISORDERS

Objectives:

At the completion of this unit the student should be able to:

1. Define each of the words in the vocabulary list for this chapter.
2. Define inherited disorders.
3. Recognize developmental disorders of the dentition.
4. Define each of the development anomalies discussed in this chapter.
5. Identify clinically, radiographically, or both, the developmental anomalies discussed in this chapter.
6. Distinguish between intraosseous cysts and extraosseous cysts.
7. Describe the differences between odontogenic and nonodontogenic cysts.
8. Name four odontogenic cysts that are intraosseous.
9. Name two odontogenic cysts that are extraosseous.
10. Name four nonodontogenic cysts that are intraosseous.
11. Name four nonodontogenic cysts that are found in the soft tissues of the head, neck, and oral region.
12. List and define three anomalies that affect the number of teeth.
13. List and define two anomalies that affect the size of teeth.
14. List and define five anomalies that affect the shape of teeth.
15. Define and identify each of the following anomalies affecting tooth eruption: impacted teeth, embedded teeth, and ankylosed teeth.
16. Identify the diagnostic process that contributes most significantly to the final diagnosis of each developmental anomaly discussed in this chapter.

GENETICS

Objectives:

At the completion of this unit the student should be able to:

1. Define each of the words listed in the vocabulary for this chapter.
2. Explain what is meant by the Lyon hypothesis and give an example of its clinical significance.
3. Explain what is meant by a gross chromosomal abnormality and give three examples of syndromes that result from gross chromosomal abnormalities, and their characteristics.
4. List the four inheritance patterns.
5. Explain what is meant by X-linked inheritance.
6. State the inheritance pattern and describe the oral manifestations and, if appropriate, the characteristic facies for each of the following: cyclic neutropenia, Papillon-Lefevre (PLS) syndrome, cherubism, chondroectodermal dysplasia (Ellis-van Creveld syndrome), mandibulofacial dysostosis (Treacher Collins syndrome), gingival fibromatosis, cleidocranial dysplasia, osteogenesis imperfecta, hereditary hemorrhagic telangiectasia (Osler-Rendu-Parkes Weber syndrome), Peutz-Jeghers syndrome, white sponge nevus (Cannon disease), ectodermal dysplasia, hypophosphatasia, and hypophosphatemic vitamin D-resistant rickets.
7. State the inheritance pattern, the oral or facial manifestations, and the type and location of the malignancy associated with each of the following syndromes: Gardner syndrome; nevoid basal cell carcinoma syndrome (Gorlin syndrome); multiple mucosal neuromas, medullary carcinoma of the thyroid gland, and pheochromocytoma syndrome (multiple endocrine neoplasia type 2B [MEN 2B]); and neurofibromatosis of von Recklinghausen.
8. State the location and malignant potential of the intestinal polyps in Peutz-Jeghers syndrome and Gardner syndrome.
9. List the four types of amelogenesis imperfecta.
10. Briefly compare and contrast dentinogenesis imperfecta, amelogenesis imperfecta, and dentin dysplasia, including the inheritance patterns, the clinical manifestations, and the radiographic appearance of each.

NEOPLASIA

Objectives:

At the completion of this unit the student should be able to:

1. Define each of the words listed in the vocabulary for this chapter.
2. Explain the difference between a benign tumor and a malignant tumor.
3. Define leukoplakia and erythroplakia.
4. Define the following neoplasms, describe the clinical features of each, and explain how they are treated: papilloma, squamous cell carcinoma, verrucous carcinoma, basal cell carcinoma, pleomorphic adenoma, monomorphic adenoma, adenoid cystic carcinoma, mucoepidermoid carcinoma, ameloblastoma, calcifying epithelial odontogenic tumor (CEOT), adenomatoid odontogenic tumor (AOT), odontogenic myxoma, central cementifying and ossifying fibromas, benign cementoblastoma, ameloblastic fibroma, ameloblastic fibro-odontoma, odontoma, peripheral ossifying fibroma. lipoma, neurofibroma and schwannoma, granular cell tumor, congenital epulis, rhabdomyosarcoma, hemangioma, lymphangioma, Kaposi sarcoma, melanocytic nevi, malignant melanoma, osteoma, osteosarcoma, chondrosarcoma, leukemia, lymphoma, multiple myeloma, and metastatic jaw tumors.

NON-NEOPLASTIC DISEASES OF BONE

Objectives:

At the completion of this unit the student should be able to:

1. Define benign fibro-osseous lesions.
2. Define dysplasia as it relates to bone diseases and differentiate the term from epithelial dysplasia.
3. Describe the clinical, radiographic, and microscopic features of periapical cemento-osseous dysplasia, focal cemento-osseous dysplasia, and florid cemento-osseous dysplasia.
4. Compare and contrast periapical cemento-osseous dysplasia, focal cemento-osseous dysplasia, and florid cemento-osseous dysplasia.
5. List the benign fibro-osseous lesions that occur in the jawbones.
6. Compare and contrast monostotic fibrous dysplasia with polyostotic fibrous dysplasia.
7. Compare and contrast the radiographic appearance, histologic appearance, and treatment of fibrous dysplasia of the jaws with those of ossifying fibroma of the jaws.
8. Compare and contrast the three types of polyostotic fibrous dysplasia.
9. Describe the histologic appearance of Paget disease of bone and describe its clinical and radiographic appearance when the maxilla or mandible is involved.
10. State the cause of osteomalacia and rickets.
11. Describe the clinical, radiographic and microscopic features of the central giant cell granuloma.

ORAL MANIFESTATIONS OF SYSTEMIC DISEASES

Objectives:

At the completion of this unit the student should be able to:

1. Define each of the words listed in the vocabulary for this chapter.
2. Describe the difference between gigantism and acromegaly and list the physical characteristics of each.
3. State the oral manifestations of hyperthyroidism.
4. Describe the difference between primary and secondary hyperparathyroidism.
5. Define Addison disease and describe the changes that occur on the skin and oral mucosa in a patient with Addison diseases.
6. Compare and contrast the cause, laboratory findings, and oral manifestations of each of the following: iron-deficiency anemia, pernicious anemia, folic acid deficiency, and vitamin B deficiency.
7. Compare and contrast the definitions and oral manifestations of thalassemia major and sickle cell anemia.
8. Define celiac sprue.
9. Describe the difference between primary and secondary aplastic anemia.
10. Describe the oral manifestations of polycythemia.
11. Explain why platelets may be deficient in polycythemia vera.
12. Describe the most characteristic oral manifestations of agranulocytosis.
13. Describe and contrast acute and chronic leukemia.
14. State the purpose of each of the following laboratory tests: platelet count, bleeding time, prothrombin time (PT), partial thromboplastin time (PTT), and international normalized ratio (INR).
15. List two causes of thrombocytopenic purpura.
16. Describe the oral manifestations of thrombocytopenia and nonthrombocytopenic purpura.
17. Define hemophilia and describe its oral manifestations and treatment.
18. Describe the difference between primary and secondary immunodeficiency.

APPENDIX I

Case Study Information

CASE STUDY REPORT/PRESENTATION

DESCRIPTION:

The purpose of the case studies is to guide the development of critical thinking skills and the application of theory. The cases supplement conditions discussed in lectures and provide an opportunity to evaluate scientific literature.

OBJECTIVES: The student will be able to:

- Evaluate current scientific literature
- Use critical thinking skills to assess the condition
- Foster cooperative learning
- Reinforce recognition of oral conditions

INSTRUCTIONS:

Students will be assigned to groups of three. Each group must develop a differential diagnosis from assigned case studies. The group will present the case study to the class. Each group will have two case studies for the semester. This should not be a re-write of the case. Just state the relevant facts and evidence that enter into your discussion of your differential diagnosis.

The case studies reports and presentations:

- Reports:
 - Must be typed
 - No more than 4 pages (including the references) double spaced
 - 1 of the 4 pages should be the reference page
 - The references should be peer reviewed and dental related
 - #12 font
 - Justify your diagnosis with evidence from the case, your text, and outside research. Include all necessary information to justify your diagnosis.
 - State what the correct diagnosis based on clinical evidence presented in the case and research. Include all necessary information to justify your diagnosis.
 - Justification should include why the other conditions included in the differential diagnosis are not correct.
 - The reports are due on the day of the presentation by class time.
- Class Presentations:
 - No more than 10 to 15 minutes
 - Presentation should not include the diagnosis but should be included in the report
 - Presentation should not include the justifications for the other conditions but should be included in the report
 - The pictures and/or x-rays will be provided on PowerPoint for the presentations by the Instructor
 - Each group member should participate in the presentation

DHYG 1339				
Case Study Report/Presentation				
ADA Standard	2-26 2-27	Graduates must be competent in the evaluation of current scientific literature. Graduates must be competent in problem solving strategies related to comprehensive patient care and management of patients.		
Student			Date:	
Group #		Grade:		_____ Points Awarded

1= Meets all requirements; ½ = Needs improvement; 0 = Does not meet all requirements

The student, in accordance with the standards set forth by the ADA and the Dental Hygiene Program, has demonstrated the following criteria.		Total Points	Points Awarded
1	The Diagnosis was correct.	1	
2	Facts from the case history were used to develop a correct differential diagnosis.	1	
3	Facts from the examination were used to develop a correct differential diagnosis.	1	
4	Justifications for the correct differential diagnosis were adequate.	1	
5	Facts from the case history and examination were used to eliminate the incorrect differential diagnosis. (1 points for each incorrect differential diagnosis)	4	
6	Justifications for the incorrect differential diagnosis were adequate. (1 points for each incorrect differential diagnosis)	4	
7	Ideas are clearly organized, developed and supported.	1	
8	The group made a professional presentation and all group members participated.	1	
9	The presenter uses materials to keep the audience engaged. Limited filler words ("ums") are used.	1	
10	References used were dental related.	1	
11	Presenters solicited questions from the audience.	1	
12	Report was turned in the day of the presentation.	1	
	Total Points Possible	18	
Comments:			

APPENDIX II

Grade Computation Sheet

Oral Path Grade Computation Sheet

Test Grades:		Case Study Grades:	
1	_____	1.	_____
2.	_____	2.	_____
3.	_____		
4.	_____		

Test average: _____

Case Study average: _____

Test average:	_____	X .70=	_____
Case Study	_____	X .10=	_____
average:			
Final Exam Grade:	_____	X .20=	_____
Total of above:			_____
Final Grade:			_____

APPENDIX III

Study Guides

ASSOCIATIONS BETWEEN CONDITIONS

Conditions associated with palatal perforations:

- Phycomycosis
- Syphilis
- Midline Granuloma

Conditions that can be clinically described as desquamative gingivitis:

- Cicatricial Pemphigoid
- Erosive Lichen Planus
- Discoid Lupus

Conditions associated with oral and perioral pigmentations:

- Peutz-Jeghers Syndrome
- Addison's Disease
- McCune-Albright Syndrome
- Neurofibromatosis

Conditions associated with over exuberant fibrous connective tissue repair:

- Generalized Gingival Hyperplasia
- Peripheral Fibroma
- Traumatic Fibroma
- Denture Induced Hyperplasia
- Pyogenic Granuloma
- Peripheral Giant Cell Granuloma

Conditions associated with the apex of a vital tooth:

- Cementoblastoma
- Periapical Cemental Dysplasia
- Florid Osseous Dysplasia
- Focal Sclerosing Osteomyelitis

Conditions associated with valvular or other heart abnormalities that may indicate premedication:

- Marfan's Syndrome
- Ehler's-Danlos Syndrome
- Trisomy 21
- Fragile X Syndrome
- Systemic Lupus Erythematosus

Radiolucencies associated with the crown of an impacted tooth:

- Dentigerous Cyst
- Odontogenic Keratocyst
- Ameloblastoma
- Ameloblastic Fibroma
- Calcifying Epithelial Odontogenic Tumor
- Adenomatoid Odontogenic Tumor

Locally aggressive odontogenic tumors:

- Ameloblastoma
- Calcifying Epithelial Odontogenic Tumor
- Odontogenic Myxoma

Conditions associated with changes in eruption patterns:

Early Exfoliation

- Hyperthyroidism
- Hypophosphatasia
- Idiopathic Histiocytosis
- Cherubism

Delayed Exfoliation

- Cleidocranial Dysplasia
- Hypothyroidism

Early Permanent Eruption

- Hyperthyroidism

Delayed Permanent Eruption

- Cherubism
- Cleidocranial Dysplasia
- Trisomy 21
- Hypothyroidism
- Epidermolysis Bullosa

Conditions associated with the premature loss of permanent teeth:

- Hypophosphatasia
- Idiopathic Histiocytosis




