GENERAL AND ORAL PATHOLOGY

Lamar Institute of Technology

DHYG 1339

Course Syllabus
Revised Fall 2018

Instructor:

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MPC 216

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SCHEDULE AND ASSIGNMENTS

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Week 2	Inflammation and Repair	Ibsen, Chapter 2	
Week 3	Inflammation and Repair	Ibsen, Chapter 2	
Week 3	Inflammation and Repair	Ibsen, Chapter 2	
Week 4	***EXAM 1***	**Chapters 1 & 2**	
October			
Week 4	Immunity	Ibsen, Chapter 3	
Week 5	Immunity	Ibsen, Chapter 3	
Week 5	Immunity	Ibsen, Chapter 3	Group 1 Case Study Presentation
Week 6	Immunity	Ibsen, Chapter 3	Group 2 Case Study Presentation
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Week 8	***EXAM 2***	**Chapters 3 & 4**	
Week 8	Developmental Disorders	Ibsen, Chapter 5	Group 6 Case Study Presentation
November			
Week 9	Developmental Disorders	Ibsen, Chapter5	Group 7 Case Study Presentation
Week 9	Developmental Disorders	Ibsen, Chapter 5	Group 8 Case Study Presentation
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Topic		Reading Assignments	Assignments
November			
Week 11	***EXAM 3***	**Chapters 5 & 6**	
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Week 12	Neoplasia	Ibsen, Chapter 7	
Week 13	Neoplasia & Non-Neoplastic Diseases	Ibsen, Chapter 7 & 8	
December			
Week 13	***EXAM 4***	**Chapters 7 & 8**	
Week 14	Oral Manifestations of Systemic Diseases	Ibsen, Chapter 9	
Week 14	Oral Manifestations of Systemic Diseases	Ibsen, Chapter 9	
Week 15	***Exam 5***	**Chapter 9**	

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 1301, 1227, 1431, 1304, 1207, 1219, 1235, 1260 & 2301.

CO-REQUISITE: DHYG 1311, 2261 & 2331.

COURSE GOALS WITH SCANS

At the completion of the course the student should be able to demonstrate the following as evidenced by satisfactory (75% or over) examination, quiz and assignment grades:

1. Describe the dental hygienist's responsibility in recognizing, documenting and referring oral pathology.

2. Identify normal, deviations of normal and pathology of oral diseases.

3. Describe the effects of specific diseases or conditions on the following systems and describe any oral effects associated with these conditions:
   - Hematopoietic
   - Respiratory
   - Endocrine
   - Integumentary
   - Skeletal

4. Identify the lesion, etiology, disease process, treatment and prognosis for the following categories of oral conditions:
   - Inflammatory
   - Non-Neoplastic Diseases
   - Immune
   - Infectious Diseases
   - Neoplastic
   - Genetic
   - Developmental

5. Provide the elements of a differential diagnosis for specific diseases when appropriate.

CREDIT HOURS

3 Semester hours

CLASS MEETING TIME

10:45am – 12:00pm Monday & Wednesday Room 112 Multi-Purpose Center

INSTRUCTOR

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PROGRAM/COURSE POLICIES

1. Attendance Policy

Absenteeism

In order to ensure the students in the dental hygiene program achieve the necessary didactic and clinical competencies outlined in the curriculum, it is necessary that the student complete all assigned lecture classes, clinical and laboratory hours. It is the responsibility of the student to attend class, clinic or lab. The instructor expects each student to be present at each session.

It is expected that students will appear to take their exams at the regularly scheduled examination time. 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.

If students are unable to attend lecture class, clinic or lab, it is **mandatory that you call the appropriate instructor prior to the scheduled class, clinic or lab time**. The student is responsible for all material missed at the time of absence. Extenuating circumstances will be taken into account. Extenuating circumstances might include but are not limited to: funeral of immediate family member, maternity, hospitalization, etc. If the student has surgery, a debilitating injury, or an extended illness, a doctor's release will be required before returning to clinic.

a. **Fall/Spring Semesters:**
   Dental hygiene students will be allowed **two excused absences** in any lecture, clinic or lab. Absences must be accompanied by a written excuse on the next class day. In the event that a student misses class, clinic or lab beyond the allowed absences, the following policy will be enforced:
   2 absences = verbal warning
   Beginning with the 3 absence, **2 points** will be deducted from the final course grade for each absence thereafter.

b. **Summer Sessions:**
   Dental hygiene students will be allowed **one excused absence** in any lecture, clinic or lab. Absences must be accompanied by a written excuse on the next class day. In the event that a student misses class, clinic or lab beyond the allowed absences, the following policy will be enforced:
   1 absence = verbal warning

Beginning with the 2nd absence, **2 points** will be deducted from the final course grade for each absence thereafter.

Tardiness

Tardiness is disruptive to the instructor and the students in the classroom. It is expected that students will arrive on time for class, clinic or lab, and remain until dismissed by the instructor. If tardiness becomes an issue, the following policy will be enforced:

Tardy 1 time = verbal warning
Tardy 2 times is considered an absence.

Students should plan on attending classes, labs and clinic sessions as assigned throughout the semester. Family outings, vacations and personal business should be scheduled when school is not in session and will not be considered excuses for missing assignments, examinations, classes, labs or clinic time.

2. Disability 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 statutes require that all 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 in Student Services, Cecil Beeson Building. You may also visit the online resource at http://www.lit.edu/depts/stuserv/special/defaults.aspx

3. Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

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.

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 cell phones, Apple watches, 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. PowerPoint 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., Seventh Edition, 2018. ISBN 978-0-323-40062-6.

REFERENCE TEXTS

1. DeLong & Burkhart. General and Oral Pathology for the Dental Hygienist, Lippincott, Williams & Wilkins, Second Edition, 2013.
2. Frazier & Drzymkowski. Essentials of Human Diseases and Conditions, Fifth edition, Saunders, 2012.
3. Mulvihill, Zelman, Holdaway, Tompary, and Raymond. Human Diseases: A Systemic Approach, Eighth Edition, 2014.
4. Porth, Carol M. Pathophysiology: Concepts of Altered Health States, Ninth Edition, 2013.
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, Sixth Edition, WB Saunders Co., 2011.
7. R.P. Langlais, DDS, & C.S. Miller, DMD, Color Atlas Of Common Oral Diseases, Fifth Edition, Williams and Wilkins, 2016.

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 75% or higher in order to receive credit for DHYG 1339.
2. Requirements for this course include five tests and one case study presentation and report.
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 PowerPoint presentations and class discussions.
4. The student is required to complete one comprehensive case study and develop a differential diagnosis from the information given. See Addendum for case study criteria and grade sheet.

EVALUATION CRITERIA

Five major examinations	90%
Case Study	10%

Grade Scale:

92 to 100	A
83 to 91	B
75 to 82	C
60 to 74	D
59 & Below	F

CONTENT OUTLINE

I. Chapter 1 - Introduction to Preliminary Diagnosis of Oral Lesions
- A. Vocabulary
  1. Clinical appearance of soft tissue lesions
  2. Soft tissue consistency
  3. Color of lesion
  4. Size of lesion
  5. Surface texture
  6. Radiographic terms used to describe lesions in bone
- B. The Diagnostic Process
  1. Making a diagnosis
- C. Variants of Normal
  1. Retrocuspid Papilla
  2. Leukoedema
- D. Benign Conditions of Unknown Cause
  1. Lingual thyroid nodule
  2. Median rhomboid glossitis
  3. Erythema migrans
  4. Fissured tongue
  5. Hairy tongue

II. Chapter 2 - Inflammation and Repair
- A. Injury
- B. Natural Defenses Against Injury
- C. Inflammation
  1. Microscopic events and clinical signs of inflammation
  2. Cells involved in the acute inflammatory response
  3. Biochemical mediators of inflammation
  4. Systemic manifestations of inflammation
  5. Chronic inflammation
  6. Hyperplasia, hypertrophy and atrophy
- D. Regeneration and Repair
  1. Microscopic events that occur during repair
  2. Types of repair
  3. Bone tissue repair
- E. Injuries to Teeth
  1. Attrition
  2. Abrasion
  3. Abfraction
  4. Erosion
  5. Methamphetamine Abuse
- F. Injuries to Oral Soft Tissues
  1. Aspirin burn
  2. Phenol burn
  3. Electric burn
  4. Other burns
  5. Lesions from self-induced injuries
  6. Lesions associated with cocaine use
  7. Hematoma
  8. Traumatic Ulcer
  9. Frictional keratosis

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 gant cell granuloma
3. Irritation fibroma
4. Denture-induced fibrous hyperplasia
5. Papillary hyperplasia of the palate
6. Gingival Enlargement
7. Chronic Hyperplasitc pulpitis

H. Inflammatory Periapical Lesions
1. Periapical abscess
2. Dental or periapical granuloma
3. Radicular cyst
4. Residual cyst
5. Resorption of teeth
6. Focal sclerosing osteomyelitis
7. Alveolar osteitis

III. Chapter 3 – Immunity
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B. Antigens
C. Cells Involved in the Immune Response
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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. Immmunodeficiency

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

J. Immunodeficiency
1. Primary immunodeficiencies
2. Secondary immunodeficiencies

IV. Chapter 4 - Infectious Diseases
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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. Verruca Vulgaris
2. Condyloma Acuminatum
3. Multifocal epithelial hyperplasia
4. Herpes Simplex infections
5. Varicella-Zoster viruses
6. Epstein-Barr virus infection
7. Coxsackievirus infections
8. Other viral infections that may have oral manifestations

V. Chapter 5 – Developmental Disorders
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2. Commissural Lip Pits
3. Lingual Thyroid

B. Developmental Cysts
1. Odontogenic cysts
2. Nonodontogenic cysts
3. Pseudocysts

C. Developmental Abnormalities of Teeth
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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
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
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   2. Dentinogenesis imperfecta
   3. Dentin dysplasia
   4. Hypohodrotic ectodermal dysplasia
   5. Hypophosppatasia
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VII. Chapter 7 – Neoplasia
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   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
1. Osteoma
2. Osteosarcoma
3. Tumors of cartilage

J. Tumors of Blood-Forming Tissues
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2. Lymphoma
3. Multiple Myeloma

K. Metastatic Tumors of the Jaws

VIII. Chapter 8 – Nonneoplastic Diseases of Bone

A. Benign Fibro-osseous Lesions
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2. Focal cemento-osseous dysplasia
3. Florid cemento-osseous dysplasia
4. Fibrous dysplasia

B. Paget Disease of Bone
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2. Diagnosis and treatment

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D. Aneurysmal Bone Cyst

E. Osteomalacia
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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. Celiac Disease
4. Bleeding disorders

C. 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, erythema migrans, ectopic geographic tongue, and hairy tongue.
6. Describe the clinical and histologic differences between leukoedema and linea alba.
7. Be able to 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 four major systemic clinical 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, mucocele, ranula, necrotizing sialometaplasia, pyogenic granuloma, peripheral giant cell granuloma, chronic hyperplastic pulpitis, and irritation fibroma.
17. Describe the difference between a mucocele 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 three main types of lymphocytes, their origins, and their activities.
4. List the activities of macrophages and dendritic cells.
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.
21. Describe the difference between primary and secondary immunodeficiency.

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.
9. Describe measles and mumps.

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, Laband syndrome, 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 and aneurysmal bone cyst.

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 disease.
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 thyrombocytopenia and nonthrombocytopenic purpura.
17. Define hemophilia and describe its oral manifestations and treatment.