



ILLINOIS VALLEY COMMUNITY COLLEGE

COURSE OUTLINE

DIVISION: Workforce Development

COURSE: DLA 2220 Oral Pathology I

Date: Fall 2022

Credit Hours: 0.5

Complete all that apply or mark "None" where appropriate:

Prerequisite(s): DLA 1210

Enrollment by assessment or other measure? Yes No

If yes, please describe:

Corequisite(s): None

Pre- or Corequisite(s): None

Consent of Instructor: Yes No

Delivery Method: **Lecture** **0.5 Contact Hours** (1 contact = 1 credit hour)
 Seminar **0 Contact Hours** (1 contact = 1 credit hour)
 Lab **0 Contact Hours** (2-3 contact = 1 credit hour)
 Clinical **0 Contact Hours** (3 contact = 1 credit hour)
 Online
 Blended
 Virtual Class Meeting (VCM)

Offered: **Fall** **Spring** **Summer**

CATALOG DESCRIPTION and IAI NUMBER (if applicable):

This course will ensure a comprehensive understanding in oral pathology to provide thorough extraoral and intraoral examinations what will ensure proper identification of abnormal conditions as early as possible. This course will be taught at the dental hygiene level to ensure both DA and DH CODA Standards are met, as it is continued in the dental hygiene program in DLH 2204: Oral Pathology II. The diagnostic principals described in this course will be applied and assessed to every lesion or condition

identified. At the conclusion of this two-part course, students will be able to recognize abnormal findings while doing a clinical examination and develop skills necessary to obtain more information from the patient.

ACCREDITATION STATEMENTS AND COURSE NOTES:

CODA – Dental Hygiene Standards Covered

Standard 2 - Educational Program

- 2-8 The curriculum must include content in the following four areas: general education, biomedical sciences, dental sciences and dental hygiene science. This content must be integrated and of sufficient depth, scope, sequence of instruction, quality and emphasis to ensure achievement of the curriculum's defined competencies. A curriculum document must be submitted for each course included in the dental hygiene program for all four content areas.
- 2-8b Biomedical science content must include content in anatomy, physiology, chemistry, biochemistry, microbiology, immunology, general and maxillofacial pathology and/or pathophysiology, nutrition and pharmacology.
- 2-8c Dental sciences content must include tooth morphology, head, neck and oral anatomy, oral embryology and histology, oral pathology, radiography, periodontology, pain management, and dental materials.
- 2-8d Dental hygiene science content must include oral health education and preventive counseling, health promotion, patient management, clinical dental hygiene, provision of services for and management of patients with special needs, community dental/oral health, medical and dental emergencies, legal and ethical aspects of dental hygiene practice, infection and hazard control management, and the provision of oral health care services to patients with bloodborne infectious diseases
- 2-9 The basic clinical education aspect of the curriculum must include a formal course sequence in scientific principles of dental hygiene practice, which extends throughout the curriculum and is coordinated and integrated with clinical experience in providing dental hygiene services.

Patient Care Competencies

- 2-14 Graduates must be competent in providing dental hygiene care for all types of classifications of periodontal disease including patients who exhibit moderate to severe periodontal disease.

COURSE TOPICS AND CONTENT REQUIREMENTS:

- I. Introduction to Preliminary Diagnosis of Oral Lesions
 - a. The Diagnostic Process
 - i. Clinical Diagnosis
 - ii. Radiographic Diagnosis
 - iii. Historical Diagnosis
 - iv. Laboratory Diagnosis
 - v. Microscopic Diagnosis
 - vi. Surgical Diagnosis
 - vii. Therapeutic Diagnosis
 - viii. Differential Diagnosis
 - b. Variants of Normal

- i. Fordyce Granules
 - ii. Torus Palatinus
 - iii. Mandibular Tori
 - iv. Melanin Pigmentation
 - v. Retrocuspid Papilla
 - vi. Lingual Varicosities
 - vii. Linea Alba
 - viii. Leukoedema
 - c. Benign Conditions
 - i. Lingual Thyroid
 - ii. Median Rhomboid Glossitis (Central Papillary Atrophy)
 - iii. Erythema Migrans (Geographic Tongue)
 - iv. Fissured Tongue
 - v. Hair Tongue
- II. Inflammation and Repair
 - a. Injury
 - b. Innate Defenses
 - c. Inflammation
 - i. Microscopic Events of Inflammation and Clinical Signs
 - ii. White Blood Cells in the Inflammatory Response
 - 1. Neutrophils
 - 2. Macrophages
 - iii. Biochemical Mediators involved in Inflammation
 - 1. Kinin System
 - 2. Clotting Mechanism
 - 3. Complement System
 - 4. Other Biochemical Mediators
 - a. Prostaglandins
 - b. Released WBC lysosomal enzymes
 - c. Endotoxins
 - d. Lysosomal enzymes from pathogenic microorganisms
 - iv. Systemic Clinical Signs of Inflammation
 - 1. Fever
 - 2. Leukocytosis
 - 3. Lymphadenopathy
 - 4. Elevated Levels of C-Reactive Protein
 - v. Chronic Inflammation
 - vi. Anti-inflammatory Therapy
 - d. Reactive Tissue Responses to Injury
 - i. Hypertrophy
 - ii. Hyperplasia
 - iii. Atrophy
 - e. Tissue Repair
 - i. Regeneration
 - ii. Repair
 - 1. Microscopic Events During Repair
 - a. Day of Injury
 - b. Day after injury
 - c. Two days after injury
 - i. Fibroblasts

- ii. Fibroplasia
 - iii. Granulation tissue
 - iv. Epithelization
 - d. Seven days after injury
 - i. Myofibroblasts
 - e. Two weeks after injury
 - 2. Types of Repairs
 - a. Healing by Primary Intention
 - b. Healing by Secondary Intention
 - c. Healing by Tertiary Intention
 - 3. Bone Tissue Repair
 - a. Osteoblasts
 - 4. Factors that Impair Healing
 - a. necrosis
- f. Traumatic Injuries to Teeth
 - i. Attrition
 - ii. Abrasion
 - iii. Abfraction
 - iv. Erosion
- g. Injuries to Oral Soft Tissue
 - i. Oral Mucosal Burns
 - 1. Aspirin Burns
 - 2. Phenol and Other Chemical Burns
 - 3. Electric Burn
 - 4. Thermal Burns
 - ii. Lesions Associated with Cocaine Use
 - iii. Lesions from Self-Induced Injuries
 - iv. Traumatic Ulcer
 - v. Hematoma
 - vi. Frictional Keratosis
 - vii. Linea Alba
 - viii. Nicotine Stomatitis
 - ix. Smokeless Tobacco Keratosis (Tobacco Pouch Keratosis, Spit Tobacco Keratosis)
 - x. Traumatic Neuroma
 - xi. Amalgam Tattoo
 - xii. Melanosis
 - xiii. Solar Cheilitis (Actinic Cheilitis)
 - xiv. Mucous Retention Lesions
 - 1. Mucocele
 - 2. Mucous cyst
 - 3. Mucous retention cyst
 - 4. Ranula
 - xv. Sialolith
 - xvi. Necrotizing Sialometaplasia
 - xvii. Sialadenitis
- h. Reactive Connective Tissue Hyperplasia
 - i. Pyogenic Granuloma
 - ii. Peripheral Giant Cell Granuloma
 - iii. Peripheral Ossifying Fibroma (Peripheral Fibroma with Calcification)

- iv. Fibroma, Irritation Fibroma, Traumatic Fibroma, and Focal Fibrous Hyperplasia
 - v. Denture-Induced Fibrous Hyperplasia
 - vi. Inflammatory Papillary Hyperplasia of the Palate
 - vii. Gingival Enlargement
 - viii. Chronic Hyperplastic Pulpitis
 - i. Inflammatory Periapical Lesions
 - i. Periapical Abscess
 - ii. Periapical Granuloma
 - iii. Radicular Cysts (Periapical Cysts)
 - iv. Tooth Resorption
 - v. Focal Sclerosing Osteomyelitis
 - vi. Alveolar Osteitis
- III. Immunity and Immunologic Oral Lesions
 - a. Immune Response
 - i. Acquired Immune Response
 - b. Antigens in the Immune System
 - c. Cellular Involvement in the Immune Response
 - i. B-cell Lymphocytes
 - ii. T-cell Lymphocytes
 - iii. Natural Killer Cells
 - iv. Macrophages
 - v. Dendritic Cells
 - 1. Langerhans Cells
 - d. Cytokines in the Immune Response
 - e. Major Divisions of the Immune Response
 - i. Humoral immunity
 - ii. Cell-mediated immunity
 - f. Types of Immunity
 - i. Active Immunity
 - ii. Natural Passive Immunity
 - iii. Immunization
 - iv. Killed-Type vaccines
 - v. Attenuated
 - vi. Molecular Vaccines
 - g. Immunopathology
 - i. Hypersensitivity
 - 1. Type I Hypersensitivity
 - 2. Type II Hypersensitivity
 - 3. Type III Hypersensitivity
 - 4. Type IV Hypersensitivity
 - 5. Drug Hypersensitivity
 - ii. Autoimmune Diseases
 - iii. Immunodeficiency
 - h. Oral Immunologic Lesions and Diseases
 - i. Aphthous Ulcers and Recurrent Aphthous Stomatitis
 - 1. Types of Aphthous Ulcers
 - 2. Diagnosis
 - 3. Treatment and Prognosis
 - ii. Urticaria and Angioedema

- 1. Diagnosis
 - 2. Treatment and Prognosis
 - iii. Allergic Contact Mucositis and Dermatitis
 - 1. Diagnosis
 - 2. Treatment and Prognosis
 - iv. Fixed Drug Eruptions
 - v. Erythema Multiforme
 - 1. Diagnosis
 - 2. Treatment and prognosis
 - vi. Stevens-Johnson Syndrome
 - vii. Lichen Planus
 - 1. Types of Lichen Planus
 - 2. Diagnosis
 - 3. Treatment and Prognosis
 - viii. Reactive Arthritis (Reiter Syndrome)
 - 1. Diagnosis
 - 2. Treatment and Prognosis
 - ix. Langerhans Cell Histiocytosis (Langerhans Cell Disease)
 - i. Autoimmune Diseases with Oral Manifestations
 - i. Sjögren Syndrome
 - 1. Diagnosis
 - 2. Treatment and Prognosis
 - ii. Systemic Lupus Erythematosus
 - 1. Diagnosis
 - 2. Treatment and Prognosis
 - iii. Pemphigus Vulgaris
 - 1. Diagnosis
 - 2. Treatment and Prognosis
 - iv. Mucous Membrane Pemphigoid
 - 1. Diagnosis
 - 2. Treatment and Prognosis
 - v. Bullous Pemphigoid
 - 1. Diagnosis
 - 2. Treatment and Prognosis
 - vi. Behçet Syndrome (Behçet Disease)
 - 1. Diagnosis
 - 2. Treatment and Prognosis
 - j. Immunodeficiency
 - i. Primary Immunodeficiency
 - ii. Secondary Immunodeficiency
- IV. Infectious Diseases
 - a. Bacterial Infections
 - i. Impetigo
 - ii. Tonsillitis and Pharyngitis
 - iii. Tuberculosis
 - iv. Actinomycosis
 - v. Syphilis
 - vi. Necrotizing Ulcerative Gingivitis (NUG)
 - vii. Pericoronitis
 - viii. Acute Osteomyelitis

- ix. Chronic Osteomyelitis
- b. Fungal Infections
 - i. Candidiasis
 - 1. Types of Oral Candidiasis
 - a. Pseudomembranous Candidiasis
 - b. Erythematous Candidiasis
 - c. Denture Stomatitis
 - d. Chronic Hyperplastic Candidiasis
 - e. Angular Cheilitis
 - f. Chronic Mucocutaneous Candidiasis
 - g. Median Rhomboid Glossitis
 - 2. Deep Fungal Infections
 - 3. Mucormycosis
- c. Viral Infections
 - i. Human Papillomavirus Infection
 - 1. Verruca Vulgaris
 - 2. Condyloma Acuminatum
 - 3. Multifocal Epithelial Hyperplasia
 - ii. Herpes Simplex Infection
 - 1. Primary Herpetic Gingivostomatitis
 - 2. Recurrent Herpes Simplex Infection
 - iii. Varicella-Zoster Virus
 - 1. Chicken Pox
 - 2. Herpes Zoster
 - a. Shingles
 - iv. Epstein-Barr Virus Infection
 - 1. Infectious Mononucleosis
 - 2. Hairy Leukoplakia
 - v. Coxsackievirus Infections
 - 1. Herpangina
 - 2. Hand-foot-and-mouth Disease
 - 3. Acute Lymphonodular Pharyngitis
 - vi. Other Viral Infections that May have Oral Manifestations
 - 1. Measles
 - 2. Mumps
- d. Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome
 - i. The spectrum of HIV
 - ii. Diagnosing Acquired Immunodeficiency Syndrome
 - iii. Human Immunodeficiency Virus Testing
 - iv. Clinical Manifestations
 - v. Medical Management
 - vi. Oral Manifestations
 - 1. Oral Candidiasis
 - 2. Herpes Simplex Infection
 - 3. Herpes Zoster
 - 4. Hairy Leukoplakia
 - 5. Human Papillomavirus Infections
 - 6. Kaposi Sarcoma
 - 7. Lymphoma
 - 8. Gingival and Periodontal Disease

- 9. Spontaneous Gingival Bleeding
- 10. Aphthous Ulcers
- 11. Salivary Gland Disease

INSTRUCTIONAL METHODS:

Traditional Classroom
Flipped Classroom
Class Presentations
Visual Aids
Case Study: NBDHE-style
Critical Thinking Activities
Exams
Demonstration
Synopsis Tables

EVALUATION OF STUDENT ACHIEVEMENT:

Reading assigned materials, note taking and participation in classroom discussion is expected of students.

Written examinations are used to evaluate student progress. A minimum of four tests will be given. All exam grades are weighted proportionately to determine the final grade.

A grade of "C" is required for graduation from the Dental Assisting Program. The following grading scale will be used as a guide in determining the final letter grade for this course:

A= 90-100
B= 80-89
C= 70-79
D= 60-69
F= 0-59

INSTRUCTIONAL MATERIALS:

Textbooks

Oral Pathology for the Dental Hygienist with General Pathology Introductions, 7th Edition, 2018. Olga A.C. Ibsen & Joan Andersen Phelan

Resources

- Evolve Elsevier Student Resources
 - Practice Exams
 - Synopsis tables
 - Case Studies

LEARNING OUTCOMES AND GOALS:

Institutional Learning Outcomes

- 1) Communication – to communicate effectively;
- 2) Inquiry – to apply critical, logical, creative, aesthetic, or quantitative analytical reasoning to formulate a judgement or conclusion;

- 3) Social Consciousness – to understand what it means to be a socially conscious person, locally and globally;
- 4) Responsibility – to recognize how personal choices affect self and society.

Course Outcomes and Competencies

1. Demonstrate a Basic Understanding of the Diagnostic Process

- 1.1. List and discuss the eight diagnostic categories that contribute to the diagnostic process.
- 1.2. Name a diagnostic category and give an example of a lesion, anomaly, or condition for which this category greatly contributes to the diagnosis.
- 1.3. Describe the radiographic appearance and historical data (including the age, sex, and race of the patient) that are relevant to periapical cemento-osseous dysplasia (cementoma).
- 1.4. Define leukoplakia and erythroplakia.
- 1.5. For the following lesions, state all of the diagnostic categories that can contribute to the diagnosis: tori, squamous cell carcinoma, linea alba, erythema migrans, leukoplakia, nutritional deficiencies, angular cheilitis, and necrotizing ulcerative gingivitis (NUG).

2. Demonstrate a basic understanding of the variants of normal and benign conditions.

- 2.1. Define “variant of normal” and give three examples of these lesions involving the tongue.
- 2.2. Describe the clinical appearance of Fordyce granules (spots), torus palatinus, mandibular tori, melanin pigmentation, retrocuspid papilla, lingual varicosities, linea alba, and leukoedema and identify them in the clinical setting or on a clinical illustration.
- 2.3. Describe the clinical and histologic differences between leukoedema and linea alba.
- 2.4. Define lingual thyroid and list three symptoms associated with it.
- 2.5. List and describe the clinical characteristics and identify a clinical picture of median rhomboid glossitis (central papillary atrophy), erythema migrans (geographic tongue), fissured tongue, and hairy tongue.

3. Demonstrate a comprehensive understanding of Inflammation.

- 3.1. Describe the differences between acute and chronic inflammation.
- 3.2. List and describe the major local and systemic clinical signs of inflammation.
- 3.3. Describe how the microscopic events are associated with each of the major clinical signs of inflammation.
- 3.4. List the white blood cells that are involved in the inflammatory response and describe how each is involved.
- 3.5. List and describe the biochemical mediators involved in inflammation.
- 3.6. List and describe the four major systemic clinical signs of inflammation.
- 3.7. Discuss chronic inflammation, as well as antiinflammatory therapy.

4. Demonstrate a basic understanding of tissue response to injury, tissue repair, and traumatic injuries.

- 4.1. Define and contrast hyperplasia, hypertrophy, and atrophy.
- 4.2. Compare and contrast the concepts of regeneration and repair.

- 4.3. Describe the microscopic events that occur during repair in the oral cavity.
- 4.4. Describe the microscopic events that occur during healing in bone.
- 4.5. Describe and contrast healing by differing intentions.
- 4.6. List local and systemic factors that can impair healing.
- 4.7. Describe and contrast attrition, abrasion, and erosion.
- 4.8. Describe the relationship between bruxism, abrasion, and abfraction.
- 4.9. Describe the pattern of erosion seen in bulimia.
- 5. Demonstrate a basic understanding of injuries to oral soft tissue**
 - 5.1. Describe the cause, clinical features, and treatment of each of the following: oral mucosal burns, aspirin burns, phenol and other chemical burns, electric burns, thermal burns, lesions from cocaine use and self-induced injuries, hematomas, traumatic ulcers, frictional keratosis, linea alba, and nicotine stomatitis.
 - 5.2. Describe the clinical features, cause (when known), treatment, and microscopic appearance of each of the following: traumatic neuroma, amalgam tattoo, melanosis, oral and labial melanotic macule, solar cheilitis, mucocele, ranula, sialolith, necrotizing sialometaplasia, sialadenitis, pyogenic granuloma, peripheral giant cell granuloma, chronic hyperplastic pulpitis, irritation fibroma, denture-induced fibrous hyperplasia, gingival enlargement, and chronic hyperplastic pulpitis.
- 6. Demonstrate a basic understanding of inflammatory periapical lesions.**
 - 6.1. Describe and differentiate among a periapical abscess, a periapical granuloma, and a radicular cyst.
 - 6.2. Discuss tooth resorption, both external and internal.
 - 6.3. Discuss the causes and diagnosis of focal sclerosing osteomyelitis and alveolar osteitis.
- 7. Demonstrate a basic understanding of Immune Response, Immunity Types, and Hypersensitivity**
 - 7.1. Describe the differences between an immune response and an inflammatory response.
 - 7.2. List the three main types of lymphocytes and their origins.
 - 7.3. Describe the involvement of B-cell lymphocytes and plasma cells in the production of antibodies.
 - 7.4. List and describe the different types of T-cell lymphocytes and their functions.
 - 7.5. Describe the functions of natural killer cells.
 - 7.6. Describe the origin of macrophages and dendritic cells and list their activities in the immune response.
 - 7.7. Describe where cytokines are produced and the roles they play in the immune response.
 - 7.8. Describe the differences between humoral immunity and cell-mediated immunity and include the cells involved in each.
 - 7.9. Describe the differences between passive and active immunity and give an example for each type of immunity.
 - 7.10. List and describe four types of hypersensitivity reactions and give an example for each type of hypersensitivity.
- 8. Demonstrate a basic understanding of Autoimmune Diseases, Oral Lesions, and Reiter Syndrome**

- 8.1. Define autoimmunity and describe how it results in disease.
 - 8.2. Define immunodeficiency and describe how it results in disease.
 - 8.3. Describe and contrast the clinical features of each of the three types of aphthous ulcers.
 - 8.4. Describe the diagnosis, treatment, and prognosis of aphthous ulcers.
 - 8.5. List systemic diseases associated with aphthous ulcers.
 - 8.6. Describe and compare the clinical features of urticaria, angioedema, contact mucositis, and fixed drug eruption.
 - 8.7. Describe the clinical features of erythema multiforme and Stevens-Johnson syndrome.
 - 8.8. Describe the clinical and microscopic features of lichen planus.
 - 8.9. Name and describe the types of lichen planus.
 - 8.10. Discuss the diagnosis, treatment, and prognosis of lichen planus.
 - 8.11. List the triad of systemic signs that comprise reactive arthritis (Reiter syndrome) and describe the oral lesions that occur in this condition.
- 9. Demonstrate a basic understanding of Langerhans, Oral Manifestations, and Immunodeficiency**
- 9.1. Name the two cells that characterize Langerhans cell histiocytosis microscopically and describe the radiographic appearance of jaw lesions in Langerhans cell histiocytosis.
 - 9.2. Describe the oral manifestations, diagnosis, treatment, and prognosis of each of the following autoimmune diseases: Sjögren syndrome, lupus erythematosus, pemphigus vulgaris, mucous membrane pemphigoid, bullous pemphigoid, and Behçet syndrome.
 - 9.3. Define desquamative gingivitis, describe the clinical features, and list three diseases in which desquamative gingivitis may occur.
 - 9.4. Describe the clinical features of Behçet syndrome.
 - 9.5. Do the following related to immunodeficiency:
 - 9.6. Describe the difference between primary and secondary immunodeficiency.
 - 9.7. List and describe three examples of primary immunodeficiency.
 - 9.8. List four causes of secondary immunodeficiency.
- 10. Demonstrate a basic understanding of Opportunistic and Bacterial Infections**
- 10.1. Define each of the words in the vocabulary list for this chapter.
 - 10.2. Describe the factors that allow opportunistic infections to develop, state the difference between an inflammatory and an immune response to infection, and list two examples of opportunistic infections that can occur in the oral cavity.
 - 10.3. 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: impetigo, tuberculosis, actinomycosis, syphilis (primary, secondary, tertiary), necrotizing ulcerative gingivitis, pericoronitis, and osteomyelitis (acute and chronic).
 - 10.4. Describe the relationship between streptococcal tonsillitis, pharyngitis, scarlet fever, and rheumatic fever.
- 11. Demonstrate a basic understanding of Fungal and Viral Infections**
- 11.1. List and describe four forms of oral candidiasis.
 - 11.2. Discuss deep fungal infections.

- 11.3. Describe mucormycosis.
 - 11.4. Do the following related to viral infections:
 - 11.5. Discuss how a human papillomavirus (HPV) infection occurs.
 - 11.6. List and describe the three benign lesions caused by HPV infections in the oral cavity: verruca vulgaris, condyloma acuminatum, and focal epithelial hyperplasia.
 - 11.7. Discuss the two major types of the herpes simplex virus.
 - 11.8. Describe the clinical features of herpes labialis.
 - 11.9. Describe the clinical features of recurrent intraoral herpes simplex infection and compare them with the clinical features of minor aphthous ulcers.
 - 11.10. Describe the clinical characteristics of herpes zoster when it affects the skin of the face and oral mucosa.
 - 11.11. List and describe four diseases associated with the Epstein-Barr virus.
 - 11.12. List and describe two diseases caused by coxsackieviruses that have oral manifestations, and state the routes of transmission of coxsackieviruses.
 - 11.13. Describe measles and mumps.
- 12. Demonstrate a basic understanding of HIV and AIDS**
- 12.1. Describe how HIV infection is diagnosed.
 - 12.2. Describe the spectrum of HIV disease, including initial infection, latent infection, and the development and diagnosis of AIDS.
 - 12.3. List and describe the clinical appearance of five oral manifestations of HIV infection.