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Date reviewed: Fall 2024  
Text update: Spring 2020  
C & G E Approved: Fall 2024  
Semester effective: Fall 2025

Dental Hygiene (DNTL) 2021 General and Oral Pathology (4 Units) CSU  
[formerly Dental Hygiene 21]

Prerequisites: Successful completion of all first semester Dental Hygiene Program courses, Biology 2250, 2257, and 2260 with a grade of “C” or higher

Prerequisite knowledge/skills:

Before entering the course, the student should be able to:

1. describe key structural features of different human cell and major tissue types,
2. identify and describe the anatomy of the systems of the human body,
3. relate structure and function at the cellular through system levels of organization of human body systems,
4. describe structural or anatomical changes that occur in disease, injury or aging of the human body systems,
5. demonstrate the construction of a correctly spelled list of 200 human surface anatomy features,
6. describe and distinguish various roles of major classes of biomolecules in living cells,
7. describe key functional features of different types of human cells and how they communicate,
8. identify key functions of major organ systems and the physiological mechanisms underlying their operation,
9. demonstrate an understanding of how organ systems of the body are integrated and regulated,
10. demonstrate an understanding of how homeostasis is maintained in the body,
11. demonstrate knowledge of metabolic and physiological disorders of the major organ systems,
12. analyze experimental data to demonstrate physiological principles, and
13. demonstrate an understanding of the scientific method, experimental design, and the philosophy of science,
14. apply the scientific method and philosophy of science by designing components of and carrying out physiological experiments,
15. classify and describe microorganisms,
16. demonstrate knowledgeable use of the nomenclature of the microbes,
17. analyze the growth characteristics of microbes using routine laboratory culture techniques,
18. compare and contrast eukaryotic and prokaryotic cells,
19. demonstrate basic proficiency in using the Gram stain technique,
20. exercise aseptic techniques in handling microbes,
21. demonstrate sterilization and disinfection of the laboratory and laboratory materials,
22. describe the interaction of antibiotics with microbes,
23. describe host-parasite interaction,
24. describe the cytology and physiology of the human immune system,
25. demonstrate proficient use of the light microscope for the viewing of microorganisms,
26. describe the genetic material and the replication of the nucleic acids of both the eukaryotic and prokaryotic microbes,
27. demonstrate and recognize the mutability of the microbial genome,
28. describe the use of plasmids and bacteriophage for use in genetic engineering, and

29. describe the life cycle, nutrition, and possible pathogenicity of important representative of bacteria, viruses, prions, fungi, and protozoa, and helminths.

Advisory: None

Hours and Units Calculations:

64 hours lecture. 128 Outside of class hours. (192 Total Student Learning Hours) 4 Units

Catalog Description: This course covers the pathological processes of inflammation, immunology neoplasia, developmental disorders, infection, systemic disease, genetics, healing and repair. Recognition of abnormal conditions of the human body with a special emphasis on normal conditions in the oral cavity.

Type of Class/Course: Degree Credit

Text:

Ibsen and Peters, *Oral Pathology for the Dental Hygienist*, 8th ed. Elsevier, 2023.

Reference: Newland, Meiller, Wynn and Crossley, *Oral Soft Tissue Diseases*, 7<sup>th</sup> edition, 2017, Wolters Kluwer

Other reading assignments and outside research, utilizing the Taft College Library and internet, will be required.

Additional Required Materials: None

Course Objectives:

By the end of the course, a successful student will be able to:

1. identify and explain the various pathological processes involved in disease, inflammation, immunological defense, neoplasia, developmental disorders, healing and repair,
2. recognize abnormalities of the human body and differentiate between variations of normal and abnormal oral tissue,
3. explain the processes involved in disease and the systems the body employs in its defense,
4. identify etiologic factors and the signs and symptoms that are associated with diseases,
5. describe the body systems responsible for adaptation, wound healing, and repair,
6. recognize abnormal oral or systemic conditions that must be called to the attention of a dentist or those that preclude, or alter, dental hygiene practice,
7. analyze the social and economic significance of disease and disease control,
8. demonstrate a knowledge of major disease conditions with emphasis on those that occur in the oral cavity,
9. understand the degenerative and regenerative processes associated with pathogenesis,
10. examine oral tissues and recognize common pathological conditions based upon clinical presentation, symptoms, and history,
11. describe oral conditions accurately, propose a differential diagnosis and investigate the process of achieving a definitive diagnosis, and
12. recognize pathological processes as depicted in oral radiographs.

DNTL2021 General And Oral Pathology - Student Learning Outcomes (SLO's)
1. Identify common oral pathological conditions based upon clinical presentation, symptoms and history.
2. Differentiate between variations of normal and abnormal oral tissues.
3. Describe an oral condition accurately, present a differential diagnosis and investigate the process of achieving a definitive diagnosis.

Course Scope and Content:

- |           |   |
|-----------|---|
| Unit I    | Diagnosis of Oral Lesions                       |
| A.        | The Diagnostic Process                          |
| B.        | Terminology                                     |
| C.        | Variants of Normal                              |
| D.        | Benign Conditions of Unknown Cause              |
| Unit II   | Inflammation and Repair                         |
| A.        | Injury  |
| B.        | Regeneration and Repair                         |
| C.        | Injuries to Teeth                               |
| D.        | Injuries to Oral Soft Tissue                    |
| E.        | Reactive Connective Tissue Hyperplasia          |
| F.        | Inflammatory Periapical Lesion                  |
| Unit III  | Immunity  |
| A.        | The Acquired Immune Response                    |
| B.        | Types of Immunity                               |
| C.        | Immunopathology                                 |
| D.        | Oral Diseases with Immunologic Pathogens        |
| E.        | Autoimmune Diseases that Affect the Oral Cavity |
| Unit IV   | Infectious Diseases                             |
| A.        | Bacterial Infections                            |
| B.        | Fungal Infections                               |
| C.        | Viral Infections                                |
| D.        | Human Immunodeficiency Virus                    |
| E.        | Oral Manifestations of AIDS                     |
| Unit V    | Developmental Disorders                         |
| A.        | Embryonic Development Review                    |
| B.        | Soft Tissue Abnormalities                       |
| C.        | Cysts   |
| D.        | Developmental Abnormalities of Teeth            |
| Unit VI   | Genetics  |
| A.        | Genes and Chromosomes                           |
| B.        | Chromosomal Abnormalities                       |
| C.        | Patterns of Inheritance                         |
| D.        | Oral Conditions of Genetic Origin               |
| Unit VII  | Neoplasia                                       |
| A.        | Classification                                  |
| B.        | Epithelial Tumors                               |
| C.        | Odontogenic Tumors                              |
| D.        | Tumors of Soft Tissue                           |
| E.        | Tumors of Melanin Producing Cells               |
| F.        | Tumors of Bone and Cartilage                    |
| G.        | Tumors of Blood Forming Tissue                  |
| Unit VIII | Non-neoplastic Diseases of Bone                 |
| A.        | Fibro-osseous Lesions                           |



- B. Paget Disease of Bone
- C. Central Giant Cell Granuloma
- D. Aneurysmal Bone Cyst

Unit IX Oral Manifestations of Systemic Disease

- A. Endocrine Disorders
- B. Diabetes Mellitus
- C. Red Blood Cell Disorders
- D. White Blood Cell Disorders
- E. Bleeding Disorders
- F. Immunodeficiency
- G. Oral Manifestations of Cancer Therapy
- H. Effects of Drugs on the Oral Cavity

Unit X Cardiac Diseases

- A. Cardiac Physiology
- B. Coronary Heart Disease
- C. Hypertensive Heart Disease
- D. Congestive Heart Failure
- E. Arrhythmias
- F. Endocarditis
- G. Valvular Heart Disease
- H. Cerebrovascular Disease
- I. Congenital Heart Defects
- J. Rheumatic Heart Disease
- K. Assessment of Patient History

Unit XI Respiratory Disease

- A. Normal Lung Function
- B. Lung Diseases of the Airways
- C. Lung Diseases of the Alveoli
- D. Lung Diseases of the Interstitium
- E. Lung Diseases of the Blood Vessels
- F. Lung Diseases of the Pleura
- G. Lung Diseases of the Chest Wall

Learning Activities Required Outside of Class:

The students in this class will spend a minimum of 8 hours per week outside of the regular class time doing the following:

1. Independent research and studying
2. Assigned reading
3. Completion and preparation of case studies

Methods of Instruction:

1. Lecture
2. Class discussions
3. Audio-visual presentations

Methods of Evaluation:

1. Oral presentation and critique of case studies



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2. Examinations including:
  - a. multiple choice items
  - b. matching items
  - c. true/false items
  - d. identification of photographs
  - e. evaluation of radiographs with regard to pathological lesions

Supplemental Data:

TOP Code:	124020: Dental Hygienist
SAM Priority Code:	C: Clearly Occupational
Distance Education:	Not Applicable
Funding Agency:	Y: Not Applicable(funds not used)
Program Status:	1: Program Applicable
Noncredit Category:	Y: Not Applicable, Credit Course
Special Class Status:	N: Course is not a special class
Basic Skills Status:	N: Course is not a basic skills course
Prior to College Level:	Y: Not applicable
Cooperative Work Experience:	N: Is not part of a cooperative work experience education program
Eligible for Credit by Exam:	NO



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Eligible for Pass/No Pass:	NO
Taft College General Education:	NONE
Discipline:	Dental Technology