

COURSE INFORMATION

COURSE PREFIX/NO: **DHG 125**
COURSE TITLE: **Dental Anatomy & Morphology**
LECTURE HRS: 1.0
LAB HRS: 3.0
CREDIT HRS/SEMESTER: 2.0

[DL ATTENDANCE/VA STATEMENT](#)
[TEXTBOOK INFORMATION](#)

COURSE DESCRIPTION

This course covers the embryogenesis and histology of the head and neck structures with primary emphasis on the oral cavity. The formation, eruption patterns, and morphology of primary and permanent dentitions are studied.

Co-Requisite: DHG 154

Pre-Requisite: Admission into the Dental Hygiene Program

COURSE COMPETENCIES

1. Demonstrate a thorough understanding of the anatomical structures and landmarks of the oral cavity and face.
2. Demonstrate a thorough working knowledge of anatomical and morphological nomenclature, as applied to the human dentition.
3. Identify and describe the individual parts of a tooth, names of the teeth, functions, coding systems, surfaces and root structures of individual teeth.
4. Describe the morphology of the primary dentition and the differences between primary and permanent dentition.
5. Define occlusion and identify the various classes of occlusion according to angle's Classification.
6. Be familiar with the development of the palate, and the developmental disturbances associated with these structures.
7. Describe the stages of tooth development, root formation, eruption, and the anomalies that can occur during this time.
8. Be familiar with eruption patterns of the primary and permanent teeth.
9. Discuss the apposition, maturation and components of enamel.
10. Discuss the components and types of dentin.
11. Discuss the development of cementum, and be familiar with the different types of cementum.
12. Be familiar with the components and features of the periodontium.

TEXT & WORKBOOK

Illustrated Dental Embryology, Histology and Anatomy, Mary Bath-Balogh and Margaret J. Fehrenbach

REFERENCE TEXTS

Clinical Dental Hygienist, Wilkins
Wheeler's Atlas of Tooth Form, Wheeler
Anatomy of Orofacial Structures, 5th edition, Brand, Isselard

INSTRUCTORS:

Kathy Peter, RDH, BHS Wanda Hayes, RDH, BS

COURSE REQUIREMENTS

In order to successfully complete DHG 125, the student is required to fulfill the following requirements:

1. attend all lecture and lab sessions
2. complete all reading assignments prior to class session.
3. complete your drawings to a proficiency of 80%
4. successfully complete all written tests with a minimum average of 80%
5. contact the instructor prior to class/lab unavoidable absence

LAB REQUIREMENTS

Each student will be required to complete representative drawings of the teeth and label accurately as outlined in the lab objectives. Your grade will be determined by neatness, promptness of the assignment and accuracy of the drawings.

Necessary supplies:

workbook #2 pencils art eraser Typodont

Drawings will be evaluated as completed. Completion dates will be announced at least one week prior to the due date. Five points will be deducted from Lab grade for each day late.

METHODS OF INSTRUCTION

Lecture
Discussions
Overhead Projections
Plastic Models
Extracted Teeth
Articulated Models
Reading Assignments
Drawing Teeth
Identification of Teeth
Written Tests

EVALUATION STRATEGIES Testing

Students will be evaluated in DHG 125, Dental Anatomy and Morphology by taking written tests for the lecture sessions. Quizzes will also be used periodically as an evaluation tool to reinforce the material given during the lecture. The tests and quizzes will be constructed with multiple choice, matching, true and false statements, and several theory application (short essay) questions. The lab portion of DHG 125 will be evaluated by the completion of the Dental

Anatomy Drawings. Evaluation will be based upon the accuracy, labeling, neatness, and promptness of the assignment.

Attendance

Students are expected to attend all lecture and clinical sessions of DHG 125. If an absence is unavoidable, the student must contact the instructor prior to class. The student should take responsibility for this absence and make arrangements to get class assignments, notes, handouts or any other information from a classmate. Absence is no excuse for not being informed. If a student is absent more than three (3) consecutive days, a doctor's statement will be needed.

GRADING

The final grading scale for DHG 125 is as follows:

100-94 A
93-87 B
86-80 C
79 and below F

The grade for DHG 125 will be determined as follows:

Written tests, Comprehensive Final, Tooth Identification Tests:	80%
Drawings:	20%
	100%

*Each individual component of the final grade must be at 80% proficiency prior to final grade analysis (lecture and lab components)

DENTAL ANATOMY and MORPHOLOGY DHG 125

COURSE OUTLINE

I. Intra oral and extra oral anatomical landmarks:

1. the face
2. the gingival unit
3. intra oral landmarks
4. the tongue

II. Anatomical Structures

A. Nomenclature and General Considerations:

1. deciduous teeth
2. permanent teeth
3. surfaces
4. elevations and depressions

B. Dental Physiology

1. proximal contact area
2. interproximal space
3. occlusion
4. embrasures
5. facial and lingual contours
6. cervical line curvatures

III. Development, Calcification, and Eruption

A. Primary Dentition

1. development
2. eruption
3. exfoliation

B. Permanent Dentition

1. development
2. eruption

IV. Individual Tooth Form of the Permanent Dentition

A. Maxillary Arch

1. central incisor
2. lateral incisor
3. cuspid
4. first premolar
5. second premolar
6. first molar
7. second molar
8. third molar

B. Mand

1. central incisor
2. lateral incisor
3. cuspid
4. first premolar
5. second premolar
6. first molar
7. second molar
8. third molar

V. Overview of Prenatal Development

A. Preimplantation period

B. Embryonic period

1. Second week
2. Third week
3. Fourth week

C. Fetal period

VI. Development of the Face

A. Development of the face

1. Stomodeum and oral cavity formation
2. Mandibular arch and lower face formation
3. Maxillary process and midface formation
4. Frontonasal process and upper face formation

VII. Development of Orofacial Structures

A. Palatal development

1. Primary palate formation
2. Secondary palate formation
3. Completion of palate

B. Nasal cavity and septum development

VIII. Tooth Development and Eruption

A. Tooth development

1. Initiation stage
2. Bud stage
3. Cap stage
4. Bell stage
5. Apposition and maturation stages

B. Primary tooth eruption and shedding

C. Permanent tooth eruption

IX. Enamel

- A. Enamel
- B. Apposition of enamel matrix
- C. Maturation of enamel matrix
- D. Components of mature enamel
- E. Further microscopic features of mature enamel

X. Dentin and Pulp

- A. Dentin pulp complex
- B. Dentin
 - 1. Apposition of dentin matrix
 - 2. Maturation of dentin
 - 3. Components of mature dentin
 - 4. Types of dentin
 - 5. Microscopic features of mature dentin
 - 6. Age changes in dentin
- C. Pulp
 - 1. Anatomy of pulp
 - 2. Microscopic features of pulp
 - 3. Microscopic zones in pulp
 - 4. Age changes in pulp

XI. Periodontium: Cementum, Alveolar Bone, Periodontal Ligament

- A. Periodontium and components
- B. Cementum
 - 1. Development of cementum
 - 2. Microscopic appearance of cementum
 - 3. Types of cementum
- C. Alveolar bone
 - 1. Anatomy of the jaw bones
 - 2. Development of the jaw bones
- D. Periodontal ligament
 - 1. Components of the periodontal ligament