

Montgomery County Community College
DHG 113
Dental Histology and Embryology
2-2-0

COURSE DESCRIPTION:

This course is designed to familiarize the dental hygiene student with basic histological tissues. Development and microscopic structure of the cells, tissues, and organs of the oral cavity are studied. Special emphasis is given to the development of the face, the oral cavity and the tooth with its surrounding tissues.

PREREQUISITE(S):

- MAT 080 – Fundamentals of Mathematics, or MAT 011 – Beginning Algebra, or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of “C.” Placement score information can be found on the ACT335 document linked to the online course description.
- Official Final High School Transcript or GED Transcript.
- High School Chemistry or CHE 121 – General Chemistry – Inorganic (or higher) within 5 years with a minimum grade of “C.”
- BIO 131 – Human Anatomy & Physiology I, BIO 132 - Human Anatomy & Physiology II, and BIO 140 – Microbiology and Immunology within 5 years with a minimum grade of “B” in one course, with a minimum grade of “C” in the 2nd and 3rd courses. Must be completed within two attempts.
- ENG 101 – English Composition I with a minimum grade of “C.”
- ESW 206 – Basic Nutrition with a minimum grade of “C.”
- TEAS®. Comprehensive Score of 50 or higher and TEAS®. Reading Comprehensive Score of 75 (or higher) within 3 years. Must be completed within 2 attempts. See the TEAS® Information Packet. Please note there is a fee for the TEAS®.

CO-REQUISITE(S):

- DHG 100-Theory & Practice of Dental Hygiene I
- DHG 111-Dental Anatomy
- DHG 155-Dental Radiography

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
1. Discuss the embryologic development of the face and the oral cavity.	Lecture Group Discussion Case Studies Games Learning Modules	Case-Based Exams Discussion Board Postings Projects
2. Discuss the process of tooth development and eruption.	Lecture Group Discussion Case Studies Games Learning Modules	Case-Based Exams Discussion Board Postings Projects
3. Relate the distinguishing structural and developmental characteristics of oral tissues with their function.	Lecture Group Discussion Games Collaborative Assignments Case Studies Learning Modules	Case-Based Exams Discussion Board Postings Projects
4. Recognize normal growth and development and clinical deviations and abnormalities.	Lecture Group Discussion Collaborative Assignments Case Studies Games Learning Modules	Case-Based Exams Discussion Board Postings Projects
5. Correlate principles of oral histology and embryology with clinical conditions.	Lecture Group Discussion Collaborative Assignments Games Learning Modules Case Studies	Case-Based Exams Discussion Board Postings Projects

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Director of Educational Effectiveness. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS:

1. Epithelium, Connective Tissue, and Oral Mucosa
2. Salivary Glands
3. Cartilage and Bone including TMJ/Disorders
4. Blood, Nerve and Lymph Tissue
5. Embryology of the Face and Oral Cavity
6. Tooth Eruption
7. Dentogingival Junction
8. Dentin and Pulp
9. Enamel
10. Cementum and Alveolar Bone
11. Periodontal Ligament

Required Textbooks and Materials:

- Fehrenbach, M. and Tracy Popowics. *Illustrated Dental Embryology, Histology and Anatomy* 6th ed. Elsevier-Saunders, 2025.
- Fehrenbach, M. and Tracy Popowics. *Student Workbook for Illustrated Dental Embryology, Histology and Anatomy* 6th ed. Elsevier-Saunders, 2025.

Other:

- Clinic Handbook 2025-2026, Montgomery County Community College
- Proctor and Gamble Continuing Education Credits provided by www.dentalcare.com
- Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Rosemary Herman, RDH, M.Ed.
VPAA or designee Compliance Verification:

Date: 12/2024
Date: 3/20/2025



This course is consistent with Montgomery County Community College's mission. It was developed, approved, and will be delivered in full compliance with the policies and procedures established by the College.