



Broward Community College

Course Outline

STATUS: ACTIVE

COMMON COURSE NUMBER: DEH 1130

COURSE TITLE: Oral Histology and Embryology

CREDIT HOURS: 2

CONTACT HOURS BREAKDOWN:

Lecture/Discussion 32

Lab 0

Other 0

Contact Hours/Week 4/week: Second 8 weeks Term II

CATALOG COURSE DESCRIPTION: This course studies the embryonic development and the histology of the components of the oral cavity. This includes a comprehensive study of the cells and tissues of the oral cavity.

Prerequisite: DEH 1602

Corequisite: DEH 1802, DEH 1802L, DES 1051

UNIT TITLES:

- 1.General Histology
- 2.Basic Tissues and Organ Systems
- 3.Histology of Soft Tissues of the Oral Cavity
- 4.General Embryology
- 5.Oral - Facial Development
- 6.Development of Teeth
- 7.Eruption and Exfoliation of Teeth
- 8.Formation of Enamel, Dentin, Cementum, and Pulp
- 9.Periodontal Ligament

I. Course Overview:

Upon successful completion of this course, the students should be able to describe the early embryonic development of the face and oral cavity, including microscopic structure and morphology of tissues of the teeth and supporting structure.

II. Units:

LAST REVIEW Academic Year 2004-2005 NEXT REVIEW Academic Year 2009-2010

Interim Revision Dates:

Unit 1. 1.General Histology

General Outcome:

1.0 The students should be able to describe basic cellular structure and development.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 1.1 List components of the cell.
- 1.2 Describe the function of individual cellular structures.
- 1.3 Describe the cell cycle and division processes.
- 1.4 Describe cellular differentiation.
- 1.5 Define and discuss protein synthesis.
- 1.6 Describe DNA transcription.
- 1.7 Relate cellular significance to dental oral tissues

Unit 2. 2. Basic Tissues and Organ Systems

General Outcome:

2.0 The students should be able to describe in detail tissue types and organ systems.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 2.1 Describe the types of epithelial tissues.
- 2.2 Describe connective tissues, including bone and blood.
- 2.3 Describe the types of muscle tissue.

2.4 Describe nervous tissue.

2.5 List and describe 9 organ systems.

Unit 3. 3. Histology of Soft Tissues of the Oral Cavity

General Outcome:

3.0 The students should be able to name and describe soft tissues of the oral cavity.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 3.1 Describe 3 types of oral mucosa.
- 3.2 List the structures of the oral cavity which are composed of lining mucosa.
- 3.3 Name the structures that are masticatory mucosa.
- 3.4 Describe specialized mucosa.
- 3.5 List the major and minor salivary glands.
- 3.6 Describe 3 types of tonsils.

Unit 4. 4.General Embryology

General Outcome:

4.0 The students should be able to name and describe the periods of development in embryology.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 4.1 Define fertilization.
- 4.2 Describe the proliferative period.
- 4.3 Describe the embryonic period.
- 4.4 Give a detailed account of the fetal period.
- 4.5 Define teratology.

Unit 5. 5. Oral - Facial Development

General Outcome:

5.0 The students should be able to describe in detail oral-facial development.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

5.1 Define oropharynx.

5.2 Describe the oral pit and stomodeum.

5.3 Describe the 5 branchial arches and what each gives rise to.

5.4 Name the 4 processes involved in facial development.

5.5 Describe the development of these facial structures.

5.6 Define primary and secondary palate.

5.7 Describe the development of the tongue.

5.8 Describe congenital malformations.

Unit 6. 6. Tooth Development

General Outcome:

6.0 The students should be able to describe the stages of tooth development.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

6.1 Define initiation.

6.2 List and describe the bud, cap, and bell stages.

6.3 Define dentinogenesis.

6.4 Define amelogenesis.

6.5 Describe crown maturation.

6.6 Describe root formation.

Unit 7. 7 Eruption and Exfoliation of Teeth

General Outcome:

7.0 The students should be able to list and describe patterns of eruption and exfoliation.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 7.1 Define pre-eruptive tooth movement.
- 7.2 Describe eruption.
- 7.3 List exfoliation dates of primary teeth.
- 7.4 Describe clinical considerations of tooth development.

Unit 8. 8. Formation of Enamel, Dentin, Cementum, and Pulp

General Outcome:

8.0 The students should be able to describe in detail the location, composition, and function of tooth structures.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 8.1 Describe enamel.
- 8.2 Describe the location and function of enamel.
- 8.3 Describe the microscopic structure and composition of enamel.
- 8.4 Describe dentin.
- 8.5 List and define types and functions of dentin.
- 8.6 Describe the development, composition, and function of pulp.
- 8.7 Describe the location and functions of cementum.

Unit 9. 9 Periodontal Ligament

General Outcome:

9.0 The students should be able to describe the location, fiber composition and function of the PDL.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 9.1 List the types of periodontal ligament fibers.
- 9.2 Describe the location of each set of fibers.
- 9.3 Describe the location and function of the PDL.
- 9.4 Describe clinical considerations involving changes In the PDL.