

**DH 74 Course Outline as of Fall 2023****CATALOG INFORMATION**

Dept and Nbr: DH 74

Title: HEAD,NECK,ANT,HISTO,EMBR

Full Title: Head and Neck Anatomy, Histology and Embryology

Last Reviewed: 10/10/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

The students will study the anatomy of the head, neck and oral cavity, including anatomical nomenclature; they will develop an understanding of embryologic development and developmental defects with a focus on oral hard and soft tissues. This course will emphasize the structure and function of the oral cavity with a focus on normal anatomy and their structures, identification of landmarks, including musculature, skeletal system, nervous system and vasculature, related to the administration of local anesthesia. The course will also cover source and spread of dental infection in relation to the fascial spaces in the lymphatic system.

**Prerequisites/Corequisites:**

Course Completion of DH 70

**Recommended Preparation:****Limits on Enrollment:**

Acceptance to Allied Dental Program

**Schedule of Classes Information:**

Description: The students will study the anatomy of the head, neck and oral cavity, including anatomical nomenclature; they will develop an understanding of embryologic development and

developmental defects with a focus on oral hard and soft tissues. This course will emphasize the structure and function of the oral cavity with a focus on normal anatomy and their structures, identification of landmarks, including musculature, skeletal system, nervous system and vasculature, related to the administration of local anesthesia. The course will also cover source and spread of dental infection in relation to the fascial spaces in the lymphatic system. (Grade Only)

Prerequisites/Corequisites: Course Completion of DH 70

Recommended:

Limits on Enrollment: Acceptance to Allied Dental Program

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Spring 2000	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Major Applicable Course

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Integrate an understanding of the development, structures, systems and anatomy of the head and neck into clinical dental hygiene practice.
2. Differentiate between the normal and abnormal/pathologic when conducting a physical examination of the patient's head and neck structures.

### **Objectives:**

At the conclusion of this course, the student should be able to:

1. Describe the process of embryologic and prenatal development of the orofacial structures and the clinical considerations due to developmental disturbances within these periods.
2. Discuss the stages of tooth development including eruption and exfoliation patterns and the clinical considerations due to developmental disturbances.
3. Discuss the histological features of basic tissues: epithelium, connective tissue, nerve tissue, and muscle tissue.
4. Discuss the histological features, development, and properties of the enamel, dentin, pulp, cementum, alveolar process, and periodontal ligament.
5. Identify the types of oral mucosa, discuss the regional differences, and integrate this knowledge into patient care.
6. Identify and describe the skeletal, lymphatic, vascular, nervous, and the muscular systems associated with the head and neck region.

7. Identify and describe the function of the glands associated with the head and neck.
8. Identify the fasciae and spaces in the head and neck.
9. Describe the anatomy, movements and associated muscles and ligaments of the temporomandibular joint.
10. Accurately identify and use the anatomical landmarks needed for successful local anesthesia.
11. Apply knowledge of head and neck structures to extraoral and intraoral examination in clinical dental hygiene.

## **Topics and Scope:**

### **I. Orofacial Structures**

- A. Face and neck region
- B. Oral cavity and oropharynx

### **II. Dental Embryology**

- A. Prenatal development
- B. Face and neck development
- C. Orofacial development
- D. Tooth development, eruption, and shedding of teeth

### **III. Dental Histology**

- A. Cells
- B. Basic tissue
- C. Oral mucosa
- D. Enamel, dentin, pulp, and root formation
- E. Alveolar process, attachment apparatus, cementum, and periodontal ligament
- F. Gingiva and dentogingival junctional complex

### **IV. Head and Neck Anatomy**

- A. Surface anatomy
- B. Systems
  1. Skeletal
  2. Nervous
  3. Vascular
  4. Muscular
  5. Lymphatic
- C. Temporomandibular joint
- D. Glandular tissue
- E. Fasciae and spaces
- F. Radiographic interpretation of anatomical structures and deviations from normal

### **V. Anatomy of Local Anesthesia**

### **VI. Spread of Infection**

### **VII. Laboratory Competencies**

- A. Identification of phases of embryological and fetal development
- B. Identification of phases of tooth development, eruption, and shedding of teeth
- C. Identification of orofacial structures
- D. Identification of surface anatomy of the face and neck
- E. Identification of vascular, skeletal, musculature, nervous, lymphatic systems anatomy in the head and neck
- F. Identification of temporomandibular anatomy
- G. Identification of the glands associated with the head and neck regions
- H. Identification of fasciae and spaces in the head and neck regions
- I. Identification of anatomy and deviations from normal on radiographs
- J. Identification of anatomical landmarks for local anesthesia
- K. Identification of routes of the spread of infection in the head and neck regions

## Assignment:

### Lecture-Related Assignments

1. Reading (20-40 pages per week)
2. Quizzes (5-8)
3. Exams, including midterm and final (2-3)

### Lab-Related Assignments:

1. Lab assignments: drawings, models, skulls (8-12)
2. Local anesthesia - identification of landmarks and evaluation of clinical considerations (2-4)
3. Exams, including midterm and final (1-2)

## Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing  
0 - 0%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Local anesthesia - identification of landmarks and evaluation of clinical considerations

Problem solving  
10 - 20%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Lab assignments

Skill Demonstrations  
25 - 35%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes, exams, final

Exams  
50 - 60%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

None

Other Category  
0 - 0%

## Representative Textbooks and Materials:

Illustrated Anatomy of the Head and Neck, 6th Ed. Fehrenbach, Margaret and Herring, Susan, Elsevier. 2021.

Student Workbook for Illustrated Anatomy of the Head and Neck. 6th Ed. Fehrenbach,

Margaret. Elsevier, 2021.

Illustrated Embryology, Histology, and Anatomy. 5th Ed. Fehrenbach, Margaret and Popowics, Tracy. Elsevier. 2020.

Student Workbook for Illustrated Embryology, Histology, and Anatomy. 5th Ed. Fehrenbach, Margaret. Elsevier. 2020.

Instructor prepared materials