

DH R012: HEAD AND NECK ANATOMY FOR DENTAL HYGIENE

Originator
smcdonald

College

Oxnard College

Discipline (CB01A)

DH - Dental Hygiene

Course Number (CB01B)

R012

Course Title (CB02)

Head and Neck Anatomy for Dental Hygiene

Banner/Short Title

Head and Neck Anatomy for DH

Credit Type

Credit

Start Term

Fall 2023

Catalog Course Description

This course studies the anatomical structures of the head and neck regions and relates these structures to the clinical practice of dental hygiene.

Taxonomy of Programs (TOP) Code (CB03)

1240.20 - *Dental Hygienist

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

C (Not transferable)

Course Basic Skills Status (CB08)

N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

C - Clearly Occupational

Course Cooperative Work Experience Education Status (CB10)

N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)

Y - Not Applicable

Course Noncredit Category (CB22)

Y - Credit Course

Funding Agency Category (CB23)

Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)

1 - Program Applicable

General Education Status (CB25)

Y - Not Applicable

Support Course Status (CB26)

N - Course is not a support course

Field trips

May be required

Grading method

(L) Letter Graded

Does this course require an instructional materials fee?

No

Repeatable for Credit

No

Is this course part of a family?

No

Units and Hours

Carnegie Unit Override

No

In-Class

Lecture

Minimum Contact/In-Class Lecture Hours

35

Maximum Contact/In-Class Lecture Hours

35

Activity

Laboratory

Minimum Contact/In-Class Laboratory Hours

26.25

Maximum Contact/In-Class Laboratory Hours

26.25

Total in-Class

Total in-Class

Total Minimum Contact/In-Class Hours

61.25

Total Maximum Contact/In-Class Hours

61.25

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class

Minimum Outside-of-Class Hours

70

Maximum Outside-of-Class Hours

70

Total Student Learning

Total Student Learning

Total Minimum Student Learning Hours

131.25

Total Maximum Student Learning Hours

131.25

Minimum Units (CB07)

2.5

Maximum Units (CB06)

2.5

Prerequisites

DH R001 and READ R105 and MATH R100 or MATH R101 or MATH R104 or MATH R105 or MATH R105H or MATH R106 or MATH R115 or MATH R117 or MATH R120 and ANAT R101 and CHEM R110 or CHEM R120 and CHEM R112 and COMM R101 and ENGL R101 or ENGL R101H and MICR R100 and MICR R100L and PHSO R101 and PSY R101 and SOC R101 and ANTH R102 or ANTH R102H or ANTH R107 or ETHS R107 or ANTH R114 or ETHS R114 or CHST R101 or CHST R102 or ECE R107 or SJS R110 or ETHS R110 or SOC R103 or SOC R108 or CHST R108

Corequisites

DH R010 and DH R011 and DH R013 and DH R014 and DH R015

Advisories on Recommended Preparation

SPAN R100 or SPAN R110 or SPAN R200 or SPAN R210 or SPAN R220 or SPAN R220H or SPAN R230 or SPAN R230H

Limitations on Enrollment

Current CPR certification for health care provider (American Heart Association) or professional rescuer (American Red Cross)

Current negative TB test or chest x-ray

No acrylic or long nails in clinical settings

No visible tattoos or visible body piercings except single studs in earlobes

Physical examination demonstrating general good health

Proof of freedom from and immunity to communicable diseases

Others (specify)

Other Limitations on Enrollment

Admittance to Dental Hygiene program per application process

Entrance Skills

Entrance Skills

Students must possess basic knowledge human cells, tissues, and organs and how they comprise the anatomy of the head and neck.

Prerequisite Course Objectives

ANAT R101-Discuss both the gross and macro-anatomical structures and basic functions of the human system using accepted anatomical terms, planes, and points of reference.

ANAT R101-Distinguish the major cell and tissue types based on their morphology and functional characteristics.

ANAT R101-Predict, explain and analyze which cell or tissue type would be located in a given region based on the known characteristics of cells and tissues.

ANAT R101-Identify and recognize the parts of the human organ systems focusing most intently on the integument, skeletal, muscular, nervous, endocrine, digestive, circulatory, respiratory and uro-genital systems.

ANAT R101-Describe the key structural features of different human cell and major tissue types.

ANAT R101-Identify and describe the anatomy of the systems of the human body.

ANAT R101-Relate structure and function at the cellular through system levels of organization of human body systems.

ANAT R101-Describe structural and anatomical changes that occur in disease, injury, congenital malformation or aging of the human body systems.

CHEM R110-Describe covalent and ionic bonding in simple terms. Predict molecular shapes and polarities by VSEPR (Valence Shell Electron Pair Repulsion) Theory.

CHEM R110-Relate electron configuration to the periodic table, and use the table to predict or explain variations in size, ionization energy, electronegativity, and metallic or non-metallic character.

CHEM R110-Identify and give general physical properties of the three states of matter. Describe phase-change between the three states.

CHEM R110-Name or give the formulas of simple inorganic compounds.

CHEM R110-Differentiate clearly between chemical and physical changes, and among elements, compounds and mixtures.

CHEM R110-Write and evaluate chemical reactions and balance chemical equations.

CHEM R110-Describe atomic structure in terms of protons, neutrons, and electrons using the Bohr model.

CHEM R110-Describe the properties of water and other liquids.

CHEM R110-Categorize the properties of solutions and describe the solution process on a molecular level.

CHEM R110-Describe properties of acids and bases, calculate pH, and compare and contrast the behavior associated with acids and bases.

CHEM R112-Define the types of radioactive decay particles and describe their effects on the human body.

CHEM R112-Describe properties, bonding and structure of various classes of organic compounds.

CHEM R112-Describe the nature of hydrocarbons and organic functional groups in terms of bonding, structure, properties, reactions and natural occurrence.

CHEM R112-Describe the nature of hydrogen bond.

CHEM R112-Describe the process of polymerization.

CHEM R112-Explain the concepts of optical activity and optical isomerism and its reactions.

CHEM R112-State whether an organic structure is polar or nonpolar, and use this determination to compare physical properties of various compounds.

CHEM R112-Describe the structural features of carbohydrates.

CHEM R112-Recognize glycosidic linkage.

CHEM R112-State the monosaccharide composition of the disaccharides, such as sucrose, lactose, and maltose.

CHEM R112-Name, describe and write the structural formulas for the organic products formed in the important chemical reactions of the four major classes of biological compounds.

CHEM R112-Describe the structural features of amino acids and proteins.

CHEM R112-Name the components of an enzyme.

CHEM R112-Explain the role of enzyme in bio-transformation.

CHEM R112-Compare and contrast the processes of DNA replication and transcription, RNA translation, and common types of mutations.

CHEM R112-Demonstrate knowledge of major biochemical components in metabolism.

DH R001-Correctly define and use a variety of different dental terminology

DH R001-List the types of tooth numbering and employ the principles

DH R001-Identify basic head and neck anatomy

DH R001-Identify basic radiographic landmarks

ENGL R101-Demonstrate college-level control of mechanical elements of writing such as grammar, syntax, spelling, vocabulary, and idiomatic usage

ENGL R101H- Demonstrate college-level control of mechanical elements of writing such as grammar, syntax, spelling, vocabulary, and idiomatic usage

PHSO R101-Define and recall terms used to describe the physiological processes covered in the course.

PHSO R101-Explain the basic concepts of physiology and relate them to clinical situations.

PHSO R101-Analyze and evaluate the concepts of physiologic theories as they relate to the laws of physics and chemistry.

PHSO R101-Write clear, concise and coherent expositions that demonstrate the ability to communicate physiological concepts.

Requisite Justification

Requisite Type

Prerequisite

Requisite

DH R001

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

MATH R101 or MATH R104 or MATH R105 or MATH R105H or MATH R106 or MATH R115 or MATH R117 or MATH R120

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

ANAT R101 and ANAT 101L

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

CHEM R110 or CHEM R120

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

CHEM R112

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

COMM R101

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

ENGL R101 or ENGL R101H

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

MICR R100

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

MICR R100L

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Closely related lecture/laboratory course

Requisite Type

Prerequisite

Requisite

PSY R101

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

SOC R101

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

ANTH R102 or ANTH R102H

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

ANTH R114

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

CHST R101

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

ECE R107

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

SJS R110 or ETHS R110

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

SOC R103

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

SOC R108 or CHST R108

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Corequisite

Requisite

DH R010

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Corequisite

Requisite

DH R011

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Corequisite

Requisite

DH R013

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Corequisite

Requisite

DH R014

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Corequisite

Requisite

DH R015

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Advisory

Requisite

BIS R122

Requisite Type

Prerequisite

Requisite

READ R105

Requisite Type

Advisory

Requisite

SPAN R100 OR SPAN R110 OR SPAN R200 OR SPAN R210 OR SPAN 220 or SPAN 220H OR SPAN R230H

Requisite Type

Prerequisite

Requisite

CHST R102

Requisite Type

Prerequisite

Requisite

ANTH R107 or ETHS R107

Student Learning Outcomes (CSLOs)**Upon satisfactory completion of the course, students will be able to:**

- | | |
|---|---|
| 1 | Upon successful completion of DH 12 Head and Neck Anatomy the student will have a basic understanding of the Masticatory System. |
| 2 | Upon successful completion of DH 12 Head and Neck Anatomy the student will have a basic understanding of the specific tissues that comprise the Masticatory System. |
| 3 | Upon successful completion of DH 12 Head and Neck Anatomy the student will have the foundational knowledge to begin DH 20 Local Anesthesia Lab. |

Course Objectives**Upon satisfactory completion of the course, students will be able to:**

- | | |
|----|---|
| 1 | Identify the various openings, foramina, and canals located within the skull |
| 2 | Describe and locate various parts and landmarks of both the maxilla and mandible |
| 3 | Define the terms, nose, nasal cavity, nasal epithelium, and paranasal sinuses and understand the anatomy of those structures |
| 4 | Describe the functions of the nasal cavity, nasal epithelium, and paranasal sinuses |
| 5 | Describe the anatomical relationship of the maxillary sinus and maxillary teeth and the relationship of these structures with regard to infections of either one |
| 6 | Describe the origin, insertion, action and nerve and blood supply of the muscles of mastication |
| 7 | Categorize the muscles of mastication according to their role in referred pain to various areas, especially the temporomandibular joint (TMJ) in regards to elevation, depression, protrusion, retrusion, and lateral excursion |
| 8 | Describe the functions of the sternocleidomastoid and trapezius muscles and their role in referred pain to various areas, especially the TMJ |
| 9 | Identify the structure and describe the movement of the TMJ |
| 10 | Diagram and label a sagittal section of the TMJ |
| 11 | Discuss the problems associated with the TMJ |
| 12 | Name the various groupings or locations of the muscles of facial expression of their nerve supply |
| 13 | Name and identify the muscles surrounding the mouth |
| 14 | Describe the role of the buccinator muscle in mastication |
| 15 | Describe the origins, insertions, actions, and nerve supply of the muscles of the soft palate, pharynx, and the interrelationship of all these muscles in chewing, swallowing, and speech |
| 16 | Identify blood supply and venous drainage to all areas of the oral cavity including all the teeth |
| 17 | Name and locate the major and minor salivary glands and classify each of the glands according to its response |
| 18 | Name the specific branches of the trigeminal nerve and which areas of the face, teeth and oral cavity each supplies |
| 19 | Describe the major groups of lymph nodes that drain the teeth and oral cavity |
| 20 | Define primary, secondary, and tertiary lymph node involvement as it relates to infections and cancer |
| 21 | Identify the spread of infection in facial spaces |

Course Content

Lecture/Course Content

1. Introduction to General Anatomy
 - a. Clinical applications
 - b. Anatomical nomenclature
 - c. Normal anatomical landmarks
2. Surface Anatomy
 - a. Regions of the head
 - b. Regions of the neck
3. Bones
 - a. Skeletal system
 - b. Bones of the head and neck
 - c. Abnormalities of bone
4. Muscles
 - a. Muscular system
 - b. Muscles of head and neck
5. Temporomandibular Joint
 - a. Anatomy of the TMJ
 - b. Jaw movements with muscle relationships
 - c. Disorders of the joint
6. Blood Supply
 - a. Vascular system
 - b. Arterial blood supply to the head and neck
 - c. Venous drainage of the head and neck
 - d. Blood vessel lesions
7. Glandular Tissue
 - a. Glandular tissue
 - b. Lacrimal glands
 - c. Salivary glands
 - d. Thyroid glands
 - e. Parathyroid glands
 - f. Thymus gland
8. Introduction to the Nervous System
 - a. Nervous system
 - b. Nerves to the oral cavity and associated structures
 - c. Nerve lesions of the head and neck
9. Anatomy of Local Anesthesia
 - a. Anatomical considerations for local anesthesia
 - b. Maxillary nerve anesthesia
 - c. Mandibular nerve anesthesia
 - d. Gow-Gates Mandibular nerve block
10. Lymphatics
 - a. Lymphatic system
 - b. Lymph nodes of the head and neck
 - c. Tonsils
 - d. Lymphadenopathy
 - e. Metastasis and cancer
11. Fascia and Spaces
 - a. Fascia
 - b. Spaces
12. Spread of Dental Infection
 - a. Infectious process
 - b. Dental infections
 - c. Spread of dental infections
 - d. Prevention of the spread of dental infections

Laboratory or Activity Content

1. Laboratory introduction to Anatomy of the Head and Neck by locating and identifying the following using slides, models, skulls, texts and DVD's:
 - a. Anatomical nomenclature
 - b. Normal anatomical landmarks
2. Surface Anatomy
 - a. Regions of the head
 - b. Regions of the neck
3. Bones
 - a. Skeletal system
 - b. Bones of the head and neck
 - c. Abnormalities of bone
4. Muscles
 - a. Muscular system
 - b. Muscles of head and neck
5. Temporomandibular Joint
 - a. Anatomy of the TMJ
 - b. Jaw movements with muscle relationships
 - c. Disorders of the joint
6. Blood Supply
 - a. Vascular system
 - b. Arterial blood supply to the head and neck
 - c. Venous drainage of the head and neck
 - d. Blood vessel lesions
7. Glandular Tissue
 - a. Glandular tissue
 - b. Lacrimal glands
 - c. Salivary glands
 - d. Thyroid glands
 - e. Parathyroid glands
 - f. Thymus gland
8. Introduction to the Nervous System
 - a. Nervous system
 - b. Nerves to the oral cavity and associated structures
 - c. Nerve lesions of the head and neck
9. Anatomy of Local Anesthesia
 - a. Anatomical considerations for local anesthesia
 - b. Maxillary nerve anesthesia
 - c. Mandibular nerve anesthesia
 - d. Gow-Gates Mandibular nerve block
10. Lymphatics
 - a. Lymphatic system
 - b. Lymph nodes of the head and neck
 - c. Tonsils
 - d. Lymphadenopathy
 - e. Metastasis and cancer
11. Fascia and Spaces
 - a. Fascia
 - b. Spaces
12. Spread of Dental Infection
 - a. Infectious process
 - b. Dental infections
 - c. Spread of dental infections
 - d. Prevention of the spread of dental infections

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Written expression

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Laboratory activities
Objective exams
Quizzes
Essays
Projects

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Audio-visual presentations
Class activities
Class discussions
Distance Education
Group discussions
Instructor-guided interpretation and analysis
Lecture
Practica

Describe specific examples of the methods the instructor will use:

Students will be instructed using lectures, YouTube videos and extensive lab to study structures.

Representative Course Assignments

Writing Assignments

1. Written assignment include essays on topics like the spread of dental infections

Critical Thinking Assignments

Students will be asked to explain how components of systems relate to the function of the system ie How does the tempromandibular joint work?

Reading Assignments

1. Student will spend a minimum of 4 hours per week outside of regular class time reading and reviewing assigned head and neck anatomy topics, such as the muscles of facial expression

Skills Demonstrations

Laboratory Practium exams will be used evaluate the students ability to identify the various anatomical structures found about the head and neck.

Outside Assignments

Articulation

Attach Syllabus

DH 12 Syll 10.docx

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

Area F: Ethnic Studies

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals

Resource Type

Textbook

Description

Fehrenbach, M.J. and Herrings, S.W (2016). *Illustrated Anatomy of the Head and Neck* (5th). Elsevier.

Resource Type

Other Instructional Materials

Description

Skulls.

Resource Type

Other Instructional Materials

Description

Cadavers.

Resource Type

Other Instructional Materials

Description

Laminated illustrations of head and neck muscles, bones, glands, blood vessels, etc..

Distance Education Addendum**Definitions****Distance Education Modalities**

Hybrid (1%–50% online)
Hybrid (51%–99% online)
100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact**Hybrid (1%–50% online) Modality:**

Method of Instruction	Document typical activities or assignments for each method of instruction
Other DE (e.g., recorded lectures)	Students are to do all reading assignments prior to viewing recorded lectures evidenced by submitting an outline of the Chapter and answers to review questions. Then and only then will recorded lectures be made available on Canvas. Questions will be submitted to me on Canvas and discussed during video conferences. Edited PowerPoint slides will be posted for instructional guidance.

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Video Conferencing	Video conferences will be utilized to present my introductory lecture for the Chapt. for instructional guidance and later for discussion and clarification. Students come to class with assigned Active Learning Assignments (ALA's) completed for use in collaborative group work and small group activities. Most ALA's are either outlines of the Chapt. or Review Questions from the Chapt. Additionally they are to write quizz questions as the read the assignment.

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Video Conferencing	Video conferences will be utilized to present my introductory lecture for the Chapt. for instructional guidance and later for discussion and clarification. Students come to class with assigned Active Learning Assignments (ALA's) completed for use in collaborative group work and small group activities. Most ALA's are either outlines of the Chapt. or Review Questions from the Chapt. Additionally they are to write quizz questions as the read the assignment.

Examinations**Hybrid (1%–50% online) Modality**

Online

Hybrid (51%–99% online) Modality

Online

Primary Minimum Qualification

DENTAL TECHNOLOGY

Additional local certifications required

Dental Hygiene faculty members must comply with the requirements set by the Commission on Dental Accreditation (CODA). CODA requires that program faculty member providing didactic instruction must have earned at least a baccalaureate degree in a discipline-related area. All dental hygiene faculty members must have current knowledge of the specific subjects they are teaching and documented background in educational methodology consistent with their teaching assignments. Dentists and dental hygienists who supervise students' clinical procedures should have qualifications which comply with the state dental or dental hygiene act. Individuals who teach and supervise dental hygiene students in clinical enrichment experiences should have qualifications comparable to faculty who teach in the dental hygiene clinic and are familiar with the program's objectives, content, instructional methods and evaluation procedures.

Review and Approval Dates**Department Chair**

10/28/2022

Dean

10/28/2022

Technical Review

11/09/2022

Curriculum Committee

11/09/2022

Curriculum Committee

11/23/2022

Control Number

CCC000163608

DOE/accreditation approval date

MM/DD/YYYY