



**CAMOSUN COLLEGE**  
**School of Health & Human Services**  
**Dental Programs**

**DHYG 219 –Head and Neck Anatomy**  
**Fall, 2014**

**COURSE OUTLINE**

---

The Approved Course Description is available on the web @ \_\_\_\_\_

**1. Instructor Information**

(a) Instructor	Bev Jackson
(b) Office hours	TBA
(c) Location	Dental Building – Room D004
(d) Phone	(250) 370-3507 <b>Alternative:</b> (250) 478-4130
(e) E-mail	<a href="mailto:jacksonb@camosun.bc.ca">jacksonb@camosun.bc.ca</a>
(f) Website	D2L will be used for select powerpoint postings TBA <a href="https://online.camosun.ca/">*https://online.camosun.ca/</a>

**2. Course Description**

a. Calendar Description

Students are introduced to anatomical and physiological features of the head and neck region including oral and periodontal anatomy. The course focus is on the healthy/normal continuum that provides the foundation for clinical dental hygiene practice as well as for further study.

b. Pre or Co-requisites: DHYG 270, DHYG 271 and Biol 160

c. Course Particulars

- i) Credits: 3
- ii) Class Hours: 4 hours per week / Out of class hours 4 per week.
- iii) This course is not available by distance education?
- iv) Prior learning in not available for this course?

**Activities:** include lecture and discussion on concepts in addition to hands on identification of bones and landmarks as well as soft tissue structure location using natural skulls. Students will also identify and discuss their understanding of structures / concepts in groups using diagrams provided or in course texts. In-class we will map muscles, nerves, blood supply using a table format. Review questions are provided for each concept to ensure comprehension and integration of knowledge.

*A weekly schedule of classes will be distributed separately. Students are expected to be prepared for class by reading text chapters and completing related manual notes for each class as necessary.*

**3. Required Materials**

(a) Texts:

Fehrenbach MJ, Herring SW. Illustrated anatomy of the head and neck. 4<sup>th</sup> Ed. Philadelphia: Saunders Elsevier; 2012.

Bath-Balogh M, Fehrenbach MJ. Illustrated dental embryology, histology, and anatomy. 3<sup>rd</sup> Ed. Philadelphia: Elsevier Saunders; 2011.

(b) Other:

*DHYG 219 Head and Neck Anatomy Manual will be available through the Camosun College Bookstore.*

*Powerpoints and additional course information will be posted as necessary on the D2L site after the course commences.*

**4. Intended Learning Outcomes**

<b>DHYG 219 Head and Neck Anatomy</b>	<b>Program (Global) Outcomes</b>
<p>By the end of this course you will know and be able to:</p> <ol style="list-style-type: none"> <li><i>1. Use dental and anatomical terms in order to complete effective intra and extra oral exams and provide descriptions of findings. (A,B,C,F,G)</i></li> <li><i>2. Identify features of the soft and hard tissues that relate to the identification and differentiation of landmarks and have a good understanding of the periodontium in order to identify individual client needs. (B,C,F)</i></li> <li><i>3. Describe normal head and neck anatomy and physiology in order to identify abnormal function, to provide a foundation for clinical dental hygiene (A,B,D,E).</i></li> </ol>	<ol style="list-style-type: none"> <li><i>A. Function as a professional dental hygienist in a variety of practice settings.</i></li> <li><i>B. Demonstrate critical thinking and use evidence based decision-making to provide optimal dental hygiene services to individuals, families and community.</i></li> <li><i>C. Advocate for the improvement of oral health and access to oral health services for individuals, families and community.</i></li> <li><i>D. Coordinate and contribute to the effective management of the practice environment to ensure quality care and services.</i></li> <li><i>E. Demonstrate competency as a clinician using the dental hygiene process of care.</i></li> <li><i>F. Educate individuals, families and community about oral health including its relationship to general health.</i></li> <li><i>G. Communicate and collaborate effectively with individuals, family, community and interdisciplinary teams.</i></li> <li><i>H. Apply health promotion principles to improve the health of individuals, families and community.</i></li> </ol>

## 5. Course Elements

1. Identify and describe structures, landmarks and anatomical relationships of the skull using appropriate terminology.
  - Using anatomical terminology describe directional relationships of structures and landmarks associated with body planes and head and neck anatomy.*
  - Discuss the structure, function and location of major bones and bony landmarks of the skull (cranium), facial bones and cervical vertebrae.*
  - Identify and relate structure to function of the soft and hard tissues associated with the temporomandibular joint (TMJ)*
  - Name sutures and the bones associated with them.*
  
2. Identify normal anatomical structures and landmarks associated with head and neck intra-oral and extra-oral anatomy and explain their location and function.
  - Identify and describe normal intra-oral structures that are commonly seen or palpated during a clinical assessment including: surfaces and structures associated with the tongue, the floor of the mouth, tonsils and associated soft tissue structures in the oropharynx, the hard and soft palates, the alveolar ridges (this list is not conclusive).*
  - Identify and describe normal extra-oral structures that are commonly seen or palpated during an extra-oral examination including: lymph nodes, the external ear, the face, and the neck.*
  
3. Discuss components of the periodontium and describe structure and function of each including hard tooth tissues.
  - Identify the names and locations of tissues that make up the teeth.*
  - Describe the anatomical divisions of the gingiva and explain characteristics of each including clinical appearance and underlying structures associated with healthy gingiva.*
  - Describe the blood supply, innervation and lymphatic drainage of the gingiva.*
  - Describe the periodontal ligament including structure, function, fiber arrangement, blood supply and innervation.*
  - Describe structure, composition and functions of cementum including cemento-enamel junction (CEJ).*
  - Discuss structure and function of the alveolar bone, including types of bone present.*
  - Explain the morphology of normal alveolar bone in relation to the teeth and in edentulism.*
  - Describe the terms dehiscence and fenestration in relation to alveolar bone.*
  
4. Describe the structure and function of the soft and hard tissues associated with the temporomandibular (TMJ) joint.
  - Identify the anatomical components of the TMJ and describe their relationship associated with function during rest and during occlusal movements.*
  - Describe the feel and sound of a normal versus abnormal functioning TMJ and have a basic understanding of clinical symptoms associated with minor TMJ disorders.*
  - Demonstrate awareness of inquiry needs associated with TMJ disorders relevant to an extra oral examination.*

5. Identify the muscles of the head and neck including location and function.

- Name and describe muscles of the head and neck including the origin, insertion, action and innervation of the muscles of mastication, facial expression, soft palate, floor of the mouth, tongue, hyoid and associated neck structures.*
- Categorize the muscles in their roles in the above areas and discuss the function of each.*
- Identify the muscle groups and actions of each that are associated with swallowing.*

6. Identify and describe nerves of the head and neck region.

- Describe basic function of the central nervous system (CNS), the peripheral nervous system (PNS), and the general function of the autonomic nervous system.*
- Describe the 12 cranial nerves, their distribution and general function.*
- Describe in detail the pathway of the trigeminal (V) nerve, identifying each branch and their distribution in relation to motor and sensory function.*
- Describe the nerves and pathways involved in parasympathetic innervation to the major salivary glands.*
- Describe general innervation and taste sensation to the tongue.*
- Describe innervation of teeth and associated periodontium.*
- Identify and differentiate the main branches of the facial (VII) nerve including their function.*

7. Identify and describe blood supply, lymphatic structures and fascial spaces of the head and neck.

- Describe branches and pathway and tissues supplied by the external carotid artery.*
- Identify blood supply to the dental and associated oral tissues.*
- Describe pathway and branches of the internal carotid artery and identify tissues supplied.*
- Describe the overall venous drainage system of the head and neck.*
- Identify the names of the vessels and describe the pathway of the venous return from the teeth and the oral cavity to the heart.*
- Explain the structure, function and location of the lymphatic system located in the head and neck region.*
- Explain lymphatic drainage of the head and neck, including the teeth and periodontium.*
- Describe primary, secondary and tertiary nodes and discuss their significance.*
- Explain the general structure and function of fascial spaces in the head and neck region.*
- Identify major fascial spaces of the head and neck and discuss their relationship to the spread of infection.*

8. Describe the paranasal sinuses.

- Describe the basic structure and function of sinuses.*
- Identify and describe the location of the 4 pairs of paranasal sinuses and describe the relationship between the hard and soft tissue structures associated with these sinuses.*
- Describe the relationship between the maxillary sinus and teeth.*



## Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://www.camosun.bc.ca/policies/policies.php> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

## 8. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Student Services or the College web site at <http://www.camosun.bc.ca>. Also, refer to the resources for learning section of the DHYG student handbook.

### STUDENT CONDUCT POLICY

There is a Student Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section. Additional information regarding the dental hygiene program is in the student handbook.  
<http://camosun.ca/learn/calendar/current/pdf/academic-policies.pdf>