

## SYLLABUS

COURSE #: DHYG 110

COURSE TITLE: Head/Neck Anatomy

CREDITS: 3

### CATALOG DESCRIPTION:

A study of anatomy and physiology of the head and neck region with an emphasis on the oral cavity.

Prerequisites: Admissions into the Dental Hygiene Program.

Corequisites: DHYG 112, 113, 114, 115, 217, and enrolled in or completed with a C or above, ENGL 211 or 218.

Semester Offered: Fall.

<i>Common Student Learning Outcomes</i>	
<i>Upon successful completion of San Juan College programs and degrees, the student will...</i>	
<i>Learn</i>	<i>Students will actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners.</i>
<i>Think</i>	<i>Students will think analytically and creatively to explore ideas, make connections, draw conclusions, and solve problems.</i>
<i>Communicate</i>	<i>Students will exchange ideas and information with clarity and originality in multiple contexts.</i>
<i>Integrate</i>	<i>Students will demonstrate proficiency in the use of technologies in the broadest sense related to their field of study.</i>
<i>Act</i>	<i>Students will act purposefully, reflectively, and respectfully in diverse and complex environments.</i>

### COURSE GOALS:

Upon completion of this course, the student will be able to correctly identify the major structures of the head and neck as evidenced by a 75% or higher accuracy on learning assessments.

### LEARNING OUTCOMES:

Upon successful completion of this course the student will be able to:

1. Discuss the clinical applications of the study of head and neck anatomy by dental professionals.
2. Apply the correct anatomical nomenclature during the study of head and neck anatomy,
3. Discuss normal anatomical variation and how it applies to different structures in the head and neck.
4. Discuss the anatomical considerations for patient examination and dental radiology of the head and neck region.
5. Locate and identify the regions and associated surface landmarks of the head and neck on a diagram.

6. Locate and identify the specific anatomical landmarks of the TMJ on a diagram and skull.
7. Describe the movements of the TMJ and their relationship to the muscles in the head and neck region.
8. Discuss the disorders of the TMJ.
9. Integrate the knowledge about the anatomy of the TMJ into the examination of the joint for disorder.
10. Identify and trace the routes of the blood vessels of the head and neck on a diagram and skull.
11. Discuss the types of lesions that can occur with blood vessels in the head and neck region.
12. Integrate the knowledge about the head and neck blood supply into clinical practice when a vascular problem is present, especially from a local anesthetic injection or during the spread of infection or cancerous cells by the blood.
13. Discuss the process of mastication, speech, and swallowing in regard to anatomical considerations.
14. Integrate the knowledge about the muscles of the head and neck into the clinical practice of patient examination and related muscular diseases.
15. Locate and identify the muscles of the head and neck on a diagram and skull.
16. Describe the origin, insertion, and action of the muscles of the head and neck.
17. State the nerve (s) innervating each of the muscles of the head and neck.
18. Locate and identify the bones of the head and neck and their landmarks on a diagram and skull.
19. Describe in detail the various parts and landmarks of the maxilla and mandible.
20. Discuss certain abnormalities of the bone.
21. Integrate the knowledge about the bones into the overall study of the head and neck anatomy.
22. Discuss the spread of infection to the sinuses and by the blood system, lymphatics, and spaces to other areas in the head and neck region.
23. Trace the routes of the spread of dental infection in the head and neck region on a diagram and skull.
24. Discuss the lesions and complications that can occur with the spread of dental infection in the head and neck region.
25. Discuss the prevention of the spread of dental infection during patient care.
26. Integrate the knowledge of the spread of dental infection into the ability to prevent and manage the spread of dental infection.
27. Locate and identify all the glandular tissue and associated structure in the head and neck region on diagram and skull.
28. Integrate the knowledge about the head and neck glands during clinical practice when these glands may be involved in a disease process.
29. Describe the component of the nervous system and outline the actions of nerves.
30. Discuss in general the major divisions of the central and peripheral nervous systems.
31. Identify and trace the routes of the cranial nerves from the skull on a series of diagrams.
32. Briefly discuss the general function of each of the cranial nerves.
33. Identify and trace the routes of the nerves to the oral cavity and associated structures of the head and neck on diagram and skull.
34. Describe the tissues innervated by each of the nerves of the head and neck.

35. Discuss certain nerve lesions associated with the head and neck region.
36. Integrate the knowledge about the head and neck nerves into the functioning region's muscles, joints, and glands, the concepts of pain management with local anesthesia, and also the related nervous system disorders.
37. List the tissues anesthetized by each type of injection and describe the target areas.
38. Locate and identify the anatomical structures used to determine the local anesthetic needle's penetration site for each type of injection on a skull.
39. Demonstrate the correct placement of the local anesthetic needle for each type of injection on a skull.
40. Identify the correct depth and tissues penetrated by the local anesthetic needle for each type of injection.
41. Discuss the complications of local anesthesia of the oral cavity associated with anatomical considerations for each type of injection.
42. Integrate the knowledge about the nerves into the administration of local anesthesia and control of pain during the dental procedure.
43. Discuss and list the lymphatic system and its components.
44. Locate and identify all the major groups of lymph nodes of the head and neck on a diagram.
45. Locate and identify all the tonsillar tissues of the head and neck on a diagram.
46. Identify the patterns of lymph drainage for each head and neck tissue or region.
47. Describe and discuss lymphadenopathy of lymphoid tissue.
48. Discuss the spread of cancer in the head and neck region and its relationship to lymph nodes.

This syllabus developed by: Michael Tornow, DDS

Date: August 10, 2010

This syllabus reviewed by: Dr. Julius N. Manz

Date: August 16, 2010

## COURSE GUIDE

DHYG 110 Head/Neck Anatomy

Instructor: Dr Michael Tornow & Ivy Tornow

Contact:

Cell Phone: 947-4253/947-4252

Email address: ivytornow@gmail.com

Office Hours: by appointment

Required Textbooks:            Illustrated Anatomy of the Head and Neck, Third Edition (2007).  
Fehrenbach, M. and Herring, S. Philadelphia: W.B. Saunders  
Company

Dental Anatomy (1998) Karst. APP/Lang

Mosby's Dental Dictionary (2008) Mosby

Supplementary Texts available in library:

- Basic Anatomy of the Head and Neck, (1992), Gardner, M. Philadelphia: Lea & Febige
- Head & Neck Histology & Anatomy: A Self-Instructional Program, (2000). Smith, S. and Karst, N. Stamford, CT: Appleton & Lange
- Dental Anatomy: It's Relevance to Dentistry, (1997), 5<sup>th</sup> Ed. Woelfel, J. and Scheid, R. Baltimore: Lippincott, Williams and Wilkins
- Clinical Practice of the Dental Hygienist, (2005), 9<sup>th</sup> Ed. Wilkins, Baltimore: Williams and Wilkins

Grading Criteria:\*

Major Exams	60%
Comprehensive Final	25%
Quizzes	15%

Grading Scale:

A= 90- 100%

B= 80- 89%

C= 75- 79%

D= 60- 74%\*\*

F= below 60%\*\*

\* *A dental hygienist must exhibit professionalism through the application of a professional Code of ethics. Unprofessional conduct will be reflected in the grade and may be grounds for dismissal. Refer to the Policy and Procedure Manual for further information.*

\*\* *A final grade below a "C" (75%) constitutes dismissal from the Dental Hygiene Program. It is the responsibility of any student having difficulty with this course to contact the professor immediately and arrange for tutoring and/or other assistance.*

## **COURSE POLICIES:**

**Class Attendance** - Because of the rate at which material is covered in this course, **class attendance is mandatory**. A strong positive relationship exists between class attendance and student success as demonstrated by many education studies, i.e., students who attend classes do better than students who miss classes. Once you fall behind, it becomes very difficult to catch up with the rest of the class. Therefore, failure to attend classes on a regular basis will probably result in a lower grade. However, life has a schedule of its own so if you anticipate being absent from class, please let me know in advance if possible (phone or e-mail), mostly as a matter of courtesy but also so arrangements for making up work can be made.

**Preparation:** During this course it is expected that the student prepare for class. This includes reading or viewing the information **prior** to class. Students should be prepared to participate in active learning discussions in each class on the topic assigned for that day. At any particular point, **students may depend on a number of unannounced quizzes**. If the student has adequately prepared for the class there should be little trouble passing these quizzes or completing course assignments.

**Make-Up Policy:** A student will not be allowed to make up quizzes (a zero will be given for each missed quiz). If a major examination is missed, it is the student's responsibility to make arrangements with the instructor and schedule a Make-Up Examination. Scheduling conflicts must be resolved through **prior arrangement**. All make-up exams must be taken within two days of return to class; otherwise, a grade of zero will be recorded for the missed exam. **Unscheduled missed lecture exams cannot be made up except in the case of a medically excused illness or family emergency (written verification required)**. The Make-Up Exam will be different from the one given to the other students and may be oral, written, or a combination of both.

**Professional Policy:** This is a professional training program and as such students are expected to behave in a professional manner. All students are expected to participate in an active, productive way that enhances learning for all in the classroom and clinical settings. All students are considered mature enough to seek faculty assistance and to monitor their own progress in meeting course requirements **Please turn off audible ringers and alarms on cell phones**. It is understood that there are those who depend on you and may need to reach you in an emergency. However, please ask your friends and family to avoid calling you unnecessarily during class. Professional language and demeanor are expected at all times.

**Academic Dishonesty:** Unethical and unprofessional activities will not be tolerated. Refer to the Policy and Procedures Manual and the SJC Student Handbook for more information.

**Student Grievance Procedure.** Policies regarding Student Grievance can be found in the SJC Course Catalog and in the Policy and Procedure Manual. A student who has a problem with the course or the course instructor should make every attempt to resolve the problem with the course instructor *first*. If the issue remains unresolved, the student should then discuss their concerns with the Dental Program Director. If the response is not adequate to the student, the student should then follow the outlined SJC policy for Student Grievance.

Course Outcomes Inventory: The effectiveness of DHYG 110 is measured by several methods:

1. Completion of all course work with a satisfactory grade.
2. Course evaluations.
3. Analysis of clinical application of material presented.
4. Scores on National and Regional Boards are reviewed and evaluated.

Accommodations Statement: Students who need accommodations (i.e. notetaker, interpreter, special seating, etc.) need to provide accommodation notices to the instructor. Students can contact the Students with Disabilities on Campus (SDOC) Coordinator in the Counseling Center, located in the Clock tower Building, to make arrangements and provide documentation in accordance with the Americans with Disabilities Act of 1990.

## DHYG 110 Head/Neck Anatomy

<b>Date</b>	<b>Topic</b>	<b>Objectives</b>
8/24	Ch. 1 Intro Ch.2 Surface Anatomy	<ol style="list-style-type: none"><li>1. Discuss the clinical applications of the study of head and neck anatomy by dental professionals</li><li>2. Apply the correct anatomical nomenclature during the study of head and neck anatomy,</li><li>3. Discuss normal anatomical variation and how it applies to different structures in the head and neck.</li><li>4. Discuss the anatomical considerations for patient examination and dental radiology of the head and neck region.</li><li>5. Locate and identify the regions and associated surface landmarks of the head and neck on a diagram.</li></ol>
8/31	Ch 3 Bones	<ol style="list-style-type: none"><li>1. Locate and identify the bones of the head and neck and their landmarks on a diagram and skull.</li><li>2. Describe in detail the various parts and landmarks of the maxilla and mandible</li></ol>
9/7	Ch 3 Bones Lab	<ol style="list-style-type: none"><li>1. Discuss certain abnormalities of the bone.</li><li>2. Integrate the knowledge about the bones into the overall study of the head and neck anatomy.</li></ol>

9/14	<b>Exam 1</b> (ch 1,2,3) Ch 4 Muscles	<ol style="list-style-type: none"><li>1. Locate and identify the muscles of the head and neck on a diagram and skull.</li><li>2. Describe the origin, insertion, and action of the muscles of the head and neck.</li><li>3. State the nerve (s) innervating each of the muscles of the</li><li>4. Locate and identify the muscles of the head and neck on a diagram and skull.</li><li>5. Describe the origin, insertion, and action of the muscles of the head and neck.</li><li>6. State the nerve (s) innervating each of the muscles of the</li></ol>
9/21	Ch 4 Muscles Lab	<ol style="list-style-type: none"><li>1. Discuss the process of mastication, speech, and swallowing in regard to anatomical considerations.</li><li>2. Integrate the knowledge about the muscles of the head and neck into the clinical practice of patient examination and related muscular diseases.</li></ol>
9/28	Ch 5 TMJ Review for exam 2	<ol style="list-style-type: none"><li>1. Locate and identify the specific anatomical landmarks of the TMJ on a diagram and skull.</li><li>2. Describe the movements of the TMJ and their relationship to the muscles in the head and neck region.</li><li>3. Discuss the disorders of the TMJ.</li><li>4. Integrate the knowledge about the anatomy of the TMJ into the examination of the joint for disorders.</li></ol>

10/5	<b>Exam 2</b> (ch. 4,5) Ch 6 Blood Supply	<ol style="list-style-type: none"><li>1. Identify and trace the routes of the blood vessels of the head and neck on a diagram and skull.</li><li>2. Discuss the types of lesions that can occur with blood vessels in the head and neck region.</li><li>3. Integrate the knowledge about the head and neck blood supply into clinical practice when a vascular problem is present, especially from a local anesthetic injection or during the spread of infection or cancerous cells by the blood.</li></ol>
10/12	Lab Ch 7 Glandular Tissue	<ol style="list-style-type: none"><li>1. Locate and identify all the glandular tissue and associated structure in the head and neck region on diagram and skull.</li><li>2. Integrate the knowledge about the head and neck glands during clinical practice when these glands may be involved in a disease process.</li></ol>
10/19	Ch 8 Nervous System	<ol style="list-style-type: none"><li>1. Describe the component of the nervous system and outline the actions of nerves.</li><li>2. Discuss in general the major divisions of the central and peripheral nervous systems.</li><li>3. Identify and trace the routes of the cranial nerves from the skull on a series of diagrams.</li><li>4. Briefly discuss the general function of each of the cranial nerves.</li></ol>

10/26	Ch 8 Nervous System <b><u>Exam 3</u></b> (6,7,8)	<ol style="list-style-type: none"><li>1. Identify and trace the routes of the nerves to the oral cavity and associated structures of the head and neck on diagram and skull.</li><li>2. Describe the tissues innervated by each of the nerves of the head and neck.</li><li>3. Discuss certain nerve lesions associated with the head and neck region.</li><li>4. Integrate the knowledge about the head and neck nerves into the functioning region's muscles, joints, and glands, the concepts of pain management with local anesthesia, and also the related nervous system disorders.</li></ol>
11/2	Ch 9 Anatomy of Local Anesthesia Lab  Guest Lecturer: Dr. Manz	<ol style="list-style-type: none"><li>1. List the tissues anesthetized by each type of injection and describe the target areas.</li><li>2. Locate and identify the anatomical structures used to determine the local anesthetic needle's penetration site for each type of injection on a skull.</li><li>3. Demonstrate the correct placement of the local anesthetic needle for each type of injection on a skull.</li><li>4. Identify the correct depth and tissues penetrated by the local anesthetic needle for each type of injection.</li></ol>

11/9	Ch 9 Anatomy of Local Anesthesia Ch 10 Lymphatics	<ol style="list-style-type: none"><li>1. Discuss the complications of local anesthesia of the oral cavity associated with anatomical considerations for each type of injection.</li><li>2. Integrate the knowledge about the nerves into the administration of local anesthesia and control of pain during the dental procedure.</li><li>3. Discuss and list the lymphatic system and its components.</li><li>4. Locate and identify all the major groups of lymph nodes of the head and neck on a diagram.</li><li>5. Locate and identify all the tonsillar tissues of the head and neck on a diagram.</li><li>6. Identify the patterns of lymph drainage for each head and neck tissue or region.</li><li>7. Describe and discuss lymphadenopathy of lymphoid tissue.</li><li>8. Discuss the spread of cancer in the head and neck region and its relationship to lymph nodes.</li></ol>
11/16	<b>Exam 4</b> (ch 9,10) Ch 11 Fascia and Spaces	<ol style="list-style-type: none"><li>1. Locate and identify the fasciae of the head and neck on a diagram and skull.</li><li>2. Locate and identify the major spaces of the head and neck on a diagram and skull.</li><li>3. Discuss the communication between the major spaces of the head and neck.</li><li>4. Integrate the knowledge of head and neck fasciae and spaces into the clinical practice of patient examination, administration of local anesthetics, and management of the spread of dental infection.</li></ol>

11/23	Ch 12 Spread of Dental Infection  Guest Lecturer: Dr. Manz - Trauma	<ol style="list-style-type: none"><li>1. Discuss the spread of infection to the sinuses and by the blood system, lymphatics, and spaces to other areas in the head and neck region.</li><li>2. Trace the routes of the spread of dental infection in the head and neck region on a diagram and skull.</li><li>3. Discuss the lesions and complications that can occur with the spread of dental infection in the head and neck region.</li><li>4. Discuss the prevention of the spread of dental infection during patient care.</li><li>5. Integrate the knowledge of the spread of dental infection into the ability to prevent and manage the spread of dental infection.</li></ol>
11/30	Review for Final	<ol style="list-style-type: none"><li>1. To assist student in passing the final exam</li></ol>
12/7	<b><u>Final Exam</u></b>	