

SYLLABUS

COURSE #: DHYG 115

COURSE TITLE: Oral Histology and Embryology

of CREDITS: 2 (2 + 0 + 0)

CATALOG DESCRIPTION:

Introduction to general histology and embryology with emphasis on the microscopic structures of enamel, dentin, pulp, cementum, periodontal ligament, bone, oral mucosa, epithelial attachment and orofacial structures.

Prerequisites: Admissions into the Dental Hygiene Program.

Co-requisites: DHYG 110, 112, 113, 114, 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:

1. To be able to differentiate between the body's cells, tissues and organs with emphasis on the oral and facial area by development structure and function.
2. To be able to identify the morphological and physiological characteristics of oral tissues.
3. To be able to assess oral and facial developmental disturbances in reference to the development of the human embryo.
4. To be able to correctly estimate the developmental patterns, eruption, and exfoliation of teeth.
5. To be able to differentiate tooth tissues by origin, formation, composition, components, characteristics, and function and assess clinical considerations of tooth tissues and supporting structures.
6. To learn the course material well enough to pass exams and Boards with confidence

LEARNING OUTCOMES:

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

1. State the development, structure and functions of the body's cells, tissues and organs.
2. Describe the development of the human embryo according to time and sequence.
3. Describe the process of oral and facial development from the time of fertilization to the fetal stage of a human infant including developmental disturbances that can arise during the process.
4. Describe the morphological and physiologic characteristics of the following tissues located in and around the oral cavity:
 - a. Epithelial Tissue
 - b. Connective Tissue
 - Connective Tissue Proper
 - Cartilage
 - Bone
 - Blood
 - Lymph
 - c. Muscle Tissue
 - d. Nerve Tissue
5. Describe the process of tooth development, eruption and exfoliation.
6. Describe the origin, formation, composition, components, characteristics, functions, and clinical considerations of the following tooth tissues and tissues supporting the teeth:
 - a. Enamel
 - b. Dentin
 - c. Pulp
 - d. Cementum
 - e. Periodontal Ligament
 - f. Alveolar Bone
 - g. Oral Mucosa
 - h. Salivary Glands and Tonsils
7. Explain clinical considerations relating to the tissues in the orofacial region.

This syllabus developed by: Charles Schumacher, DDS

This syllabus reviewed by: Dr. Julius N. Manz

Date: August 10, 2010

Date: August 16, 2010

COURSE GUIDE

DHYG 115 Oral Histology and Embryology (2 + 0 + 0) 2 credit hours

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Office: 55325

Office Hours: by appointment

Required Textbooks, Illustrated Dental Embryology, Histology, and Anatomy, (2006).
2nd Ed., Bath-Balogh, M. and Fehreback, M. Philadelphia: W. B.
Saunders Co.

Illustrated Dental Embryology, Histology, and Anatomy
Workbook, (2006). Bath-Balogh, M. and Fehrenbach, M.
Philadelphia: W. B. Saunders Co.

Supplementary Textbooks and Materials: Permar's Oral Embryology and Microscopic Anatomy, (2000). 10th
Ed, Melfi, R. and Alley, K. Philadelphia: Lippincott, Williams &
Wilkins.

Head & Neck Histology & Anatomy: A Self-Instructional
Program, (2000). Smith, S. and Karst, N. Stamford, CT:
Appleton & Lange

Color Atlas of the Head and Neck, (1998). McMinn, R. St. Louis:
Mosby-Year Book

Further reference materials available in the Dental Hygiene
Program Office and in the Library

Grading Criteria:*

Quizzes	25%
Slide Illustrations	20%
Midterm Exam	25%
Comprehensive Final Exam	30%

A= 90- 100%

B= 80- 89%

C= 75- 79%

D= 65- 74%**

F= below 65%**

**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 Clinic 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.*

Instructor's Policies:

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. If the student has adequately prepared for the class there should be little trouble passing these tests or completing course assignments.

Attendance Policy: Students are expected to attend all regularly scheduled classes for which they are registered. Valid reasons for missing classes do not relieve the student from making up any missed work. Any instruction missed and any work not subsequently completed will necessarily affect the grade of the student, regardless of the reason for the absence. Students are expected to be in the classroom, laboratory or clinic and be ready to begin the session on time.

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. 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.

Assignments: Assignments that are not received on time will receive a 10% reduction in grade for every week the assignment is overdue.

Professional Policy: All students are expected to participate in an active and productive manner which enhances learning for all in the classroom and clinical settings. Students are considered mature enough to seek faculty assistance and to monitor their own progress in meeting course requirements. Professional language and demeanor are expected at all times.

Academic Dishonesty: Unethical and unprofessional activities will not be tolerated. Refer to the Dental Hygiene Student Handbook and the SJC Catalogue for more information.

Student Grievance Procedure: Policies regarding Student Grievance can be found in the SJC Academic Catalog. 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 115 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 review 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 Clocktower Building, to make arrangements and provide documentation in accordance with the Americans with Disabilities Act of 1990.

DHYG 115 ORAL HISTOLOGY AND EMBRYOLOGY

Class Date	Topic/Activity	Objectives	Time
Tues 8/24	Introduction to Oral Histology and Embryology Chapter 7 Overview of the Cell	<ol style="list-style-type: none"> 1. Define and pronounce key terms 2. Discuss the components and functions of the cell, the cell membrane, cytoplasm, organelles, and inclusions 3. Describe cell division and the phases that are involved 4. Describe extracellular materials surrounding the cell and its intercellular junctions. 5. Integrate the knowledge of a background of the cell into the histology of the orofacial tissues and the pathology that may occur within them 	2 Hours
Tues 8/31	Quiz Chapter 8 Basic Tissues	<ol style="list-style-type: none"> 1. Define and pronounce key terms. 2. List and describe each of the basic histological types of tissues 3. Integrate the knowledge of the basic histology into the specific histology of the orofacial region and the related pathology that may occur. 	2 Hours

Tues 9/21	Quiz Histology slide illustrations due; ▪ 20, 21, 22 Chapter 4 Development of the Face and Neck	<ol style="list-style-type: none">1. Define and pronounce key terms2. Discuss the events that occur during the development of the face and neck.3. Integrate the knowledge of the development of the face and neck into understanding the observed structures of the tissues and any developmental disturbances involved of these structures.	2 Hours
Tues 9/28	Quiz Histology slide illustrations due; ▪ 23, 24, 25 Chapter 5 Development of Orofacial Structures	<ol style="list-style-type: none">1. Define and pronounce key terms2. Discuss the events that occur during the development of the orofacial structures3. Integrate the knowledge of the development of the orofacial structures into understanding the present structures of the tissues and any developmental disturbances involved in these structures	2 Hours

Tues 10/05	<p>Quiz</p> <p>Histology slide illustrations due;</p> <ul style="list-style-type: none"> ▪ 26, 28, 29 <p>Chapter 6</p> <p>Tooth Development and Eruption</p>	<ol style="list-style-type: none"> 1. Define and pronounce key terms 2. Discuss the events that occur during the development of the teeth and associated structures during tooth eruption 3. Integrate the knowledge of the development of the teeth and associated structures and tooth eruption into understanding the present anatomy of these structures and any developmental disturbances 	2 Hours
Tues 10/12	MIDTERM EXAM	Do well	2 Hours
Tues 10/19	<p>Quiz</p> <p>Histology slide illustrations due;</p> <ul style="list-style-type: none"> ▪ 10, 12, 13 <p>Chapter 9</p> <p>Oral Mucosa</p>	<ol style="list-style-type: none"> 1. Define and pronounce key terms. 2. List and describe the types of oral mucosa 3. Characterize each of the different types of epithelium associated with each type of oral mucosa 4. Describe the lamina propria of the oral mucosa 5. List and describe the clinical correlations associated with the regional differences in the oral mucosa 6. Discuss the turnover times for differing tissues in the oral cavity and their clinical correlations 7. Integrate the knowledge of the histology with the related pathology that may occur within oral 	2 Hours

		mucosa	
Tues 10/26	<p>Quiz</p> <p>Histology slide illustrations due;</p> <ul style="list-style-type: none"> ▪ 31, 53, 54 <p>Chapter 10</p> <p>Gingival and Dentogingival Junctional Tissues</p>	<ol style="list-style-type: none"> 1. Define and pronounce key terms 2. List and describe each of the types of gingival tissues 3. Describe the histological features of the different types of gingival tissues 4. Describe the composition and development of the dentogingival junctional tissues 5. Discuss turnover of the dentogingival functional tissues 6. Integrate the knowledge of the histology of the gingival and dentogingival functional tissues with the related pathology that may occur. 	2 Hours
Tues 11/02	<p>Quiz</p> <p>Histology slide illustrations due;</p> <ul style="list-style-type: none"> ▪ 56, 59, 60 <p>Chapter 11</p> <p>Head and Neck Structures</p>	<ol style="list-style-type: none"> 1. Define and pronounce key terms. 2. Describe the location of each head and neck structure 3. Discuss the histological features and embryological development of each head and neck structure 4. Integrate the knowledge of the histology of head and neck structures with the related pathology that may occur 	2 Hours

Tues 11/09	<p>Quiz</p> <p>Histology slide illustrations due;</p> <ul style="list-style-type: none"> ▪ 61, 40, 43 <p>Chapter 12</p> <p>Enamel</p>	<ol style="list-style-type: none"> 1. Define and pronounce key terms. 2. Describe the properties of enamel 3. Discuss the apposition and maturation of enamel 4. Demonstrate and discuss the microscopic features of enamel 5. Integrate the knowledge of the histology with the clinical considerations involved with enamel 	2 Hours
Tues 11/16	<p>Quiz</p> <p>Histology slide illustrations due;</p> <ul style="list-style-type: none"> ▪ 45, 46, 47 <p>Chapter 13</p> <p>Dentin and Pulp</p>	<ol style="list-style-type: none"> 1. Define and pronounce key terms 2. Discuss the dentin-pulp complex and describe the properties of dentin and pulp 3. Discuss the apposition and maturation of dentin 4. Outline the types of dentin 5. Label the anatomical components of the pulp 6. Indicate and discuss the microscopic features of dentin and pulp 7. Describe the age-related changes in pulp and dentin 8. Integrate the knowledge of the histology with the clinical considerations involved in dentin and pulp. 	2 Hours

Tues 11/23	<p>Quiz</p> <p>Histology slide illustrations due;</p> <ul style="list-style-type: none"> ▪ 14, 48, 51 <p>Chapter 14</p> <p>Periodontium: Cementum, Alveolar Bone, Periodontal Ligament</p>	<ol style="list-style-type: none"> 1. Define and pronounce key terms 2. Discuss the periodontium, and describe the properties of each of its tissues 3. Discuss the development of the periodontium 4. Outline the types of cementum and alveolar bone 5. Label the fiber groups of the periodontal ligament and discuss their functions 6. Demonstrate and discuss the microscopic features of the periodontium 7. Describe the age-related changes in the periodontium. 8. Integrate the knowledge of the histology with the clinical considerations involving the periodontium, especially those changes associated with periodontal pathology. 	2 Hours
Tues 11/30	Makeup day		2 Hours
Tues 12/07	Review for Final		2 Hours
Tues 12/14	FINAL EXAM	Do well!	2 Hours