



**DHYG 1010 Oral Embryology and Histology  
COURSE SYLLABUS  
Fall Semester 2018**

**COURSE INFORMATION**

Credit Hours/Minutes: 1 Semester credit Hour/750 minutes  
Campus/Class Location: Vidalia/Health Sciences Annex C, Room #906  
Class Meets: Tuesdays 8:00-8:50am  
Course Reference Number (CRN): 20288

**INSTRUCTOR CONTACT INFORMATION**

Course Director: Lori DeFore, RDH, BS, BTh  
Email Address: [Lori DeFore \(ldefore@southeasterntech.edu\)](mailto:ldefore@southeasterntech.edu)  
Campus/Office Location: Vidalia/Health Science Annex C, Room #909  
Office Hours: Mondays: 7:30-8:30am; 5:00-5:30pm; Tuesdays: 7:30-8:00am; 12:00-5:30pm; Wednesdays: 7:30-8:00am; 10:00-10:30am; 5:00-5:30pm; Thursdays: 7:30-8:30am  
Phone: 912-538-3251  
Fax Number: 912-538-3278

**SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK**

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Handbook \(http://www.southeasterntech.edu/student-affairs/catalog-handbook.php\)](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php).

**REQUIRED TEXTS**

1. Illustrated Dental Embryology, Histology, and Anatomy, Fourth edition. Fehrenbach and Popowics. Elsevier/ Saunders. 2015
2. Student Workbook for Illustrated Dental Embryology, Histology and Anatomy, Fourth edition. Fehrenbach and Popowics. Elsevier/ Saunders. 2015

**REQUIRED SUPPLIES & SOFTWARE**

Notebook, pen, paper, computer, and color printer access

**Students should not share login credentials with others and should change passwords periodically to maintain security.**

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## **COURSE DESCRIPTION**

This course focuses on the study of cells and tissues of the human body, with emphasis on those tissues that compose the head, neck, and oral cavity. Topics include: cellular structure and organelles, histology of epithelium, histology of muscle tissue, histology of nerve tissue, histology of connective tissue, embryological development of the head and neck, tooth development, and development of supporting structures.

## **MAJOR COURSE COMPETENCIES (CC)**

1. Cellular Structure and Organelles
2. Histology of Epithelium
3. Histology of Connective Tissue
4. Histology of Muscle Tissue
5. Histology of Nerve tissue
6. Histology of Oral Mucosa and Orofacial Structures
7. Embryological Development of the Head and Neck
8. Tooth Development
9. Development of Tooth Supporting Structures

## **PREREQUISITE(S)**

Program Admission

## **COREQUISITE(S)**

None

## **GENERAL EDUCATION CORE COMPETENCIES (GC)**

Southeastern Technical College has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

## **STUDENT REQUIREMENTS**

Students are responsible for the policies and procedures in the Southeastern Technical College (STC) Catalog and Handbook, Dental Hygiene Program Handbook, and Dental Hygiene Clinic Manual. During an examination, the following procedures must be followed: All books and personal belongings must be placed at the back of the classroom. Students will be asked to rotate seats prior to the beginning of the test. Test proctor will personally examine each desk to ensure that no writing is present on desk. Computer monitors should be facing the front of the classroom during test. When a student completes the test, he/she may raise hand and turn paper in to proctor. Student must remain in seat until test time is complete to avoid distracting other students. Students who have completed testing should be as quiet as possible and avoid any activity that might make those students who are still testing feel pressured or rushed. Students may not go to the bathroom during the test session. Test proctor must observe students at all times and notify students when there are ten remaining minutes left of the total exam time. Test proctor should routinely walk around classroom and observe testing. Test proctor should refrain from grading papers, reading materials, or using computer during the test. Students caught with cheat sheets or cell phones will be considered cheating and a zero will be issued for the examination. The STC academic dishonesty policy will be enforced. Once the test

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begins, no talking is allowed. Once the test begins, tardy students may not enter the classroom.

Students are expected to exhibit professional behavior at all times. Each student must show respect and concern for fellow students and for the course instructors. Insubordination will not be tolerated, and disciplinary measures will be enacted. No cell phones or smart electronic devices are allowed to be turned on in the classroom, clinic, or locker area. If a student is observed in possession of his/her cell phone or smart electronic device during class, a critical incident will be issued. A student cannot use his/her cell phone or smart electronic device during class. There are no exceptions to this rule and do not ask. If you have a personal situation going on, please advise your instructor and give your family the clinic receptionist's phone number for emergency contact. You should not have your cell phone or smart electronic device in the class! Personal phone calls must be handled after class.

By completing the assignments below prior to class, students will become familiar with course material prior to classroom facilitation. As a result, higher-level learning will be fostered in the classroom.

1. Read the assigned chapter(s) and be prepared to actively participate in class discussions and activities.
2. Answer/complete all case study exercises in the chapter review section for each session, if applicable.
3. Know the definitions of chapter key terms.
4. Highlight National Board Exam material in relevant chapter(s) prior to class.
5. Complete any assignments or homework given by the course director.
6. Complete and know the learning objectives for each chapter.
7. View any videos applicable to dated lesson plan material.
8. Obtain materials from the course Materials Drive: M/Dental Hygiene/DHYG 1010. Prior to class, print any materials available to be used in this class for study and during lecture and/or lab.
9. Students are advised to check their e-mails regularly for any additional information that is related to the class or the Dental Hygiene Program.

### **ATTENDANCE GUIDELINES**

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and also interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus. Students who stop attending class, but do not formally withdraw, may receive a grade of "F" (Failing 0-59) and face financial aid repercussions in upcoming semesters. Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor. Excused absences will be evaluated on a case-by-case basis by the program director. Examples of excused absences would be a car accident on the way to class or unexpected hospitalization of the student. Please do not plan a vacation or schedule a routine medical/dental appointment during the designated class times. Unexcused absences will not be made up and may lead to the student's failure of the course. Program director must be notified of any absences prior to scheduled class session.

Attendance is counted from the first scheduled class meeting of each semester. To receive credit for a course, a student must attend at least 90% of the scheduled instructional time. Assignments missed due to tardiness or absences must be made up at the convenience of the instructor. Any student attending less than the required scheduled instructional time (90%) may be dropped from the course as stated below in the

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Withdrawal Procedure. Tardy means arriving after the scheduled time for instruction to begin. Early departure means leaving before the end of the scheduled time. Three (3) tardies or early departures equal one (1) absence for the course. **For this class, which meets one session per week for 15 weeks, the maximum number of sessions a student may miss for attendance purposes is two sessions during the semester.**

### **ADDITIONAL ATTENDANCE GUIDELINES FOR HEALTH SCIENCES**

Requirements for instructional hours within Health Science programs reflect the rules of respective licensure boards and/or accrediting agencies. Therefore, these programs have stringent attendance policies. Each program's attendance policy is published in the program's handbook and/or syllabus which specify the number of allowable absences. All provisions for required makeup work in the classroom or clinical experiences are at the discretion of the instructor.

### **SPECIAL NEEDS**

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, to coordinate reasonable accommodations.

### **SPECIFIC ABSENCES**

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

### **PREGNANCY**

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please advise me and make appropriate arrangements with [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126.

### **WITHDRAWAL PROCEDURE**

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" is assigned for the course(s) when the student completes the withdrawal form.

Students who are dropped from courses due to attendance after drop/add until the 65% point of the semester will receive a "W" for the course.

Important – Student-initiated withdrawals are not allowed after the 65% point. Only instructors can drop students after the 65% point for violating the attendance procedure of the course. Students who are dropped from courses due to attendance after the 65% point will receive either a "WP" or "WF" for the semester. Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of 'W' will count in attempted hour calculations for the purpose of Financial Aid.

**Remember** - Informing your instructor that you will not return to his/her course does not satisfy the approved withdrawal procedure outlined above.

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## **MAKEUP GUIDELINES**

Students are allowed to make up only one missed exam excluding the final examination. This is only if they have an excused absence approved by the instructor. The makeup exam may be given in a different format than the original exam. A doctor's excuse and/or additional documentation will be requested. Ten points will be deducted from the test for taking the test late. All other missed exams/quizzes/class preparation assessments will result in a grade of zero "0". If you enter the classroom late, you will not be allowed to take the exam, and you will be issued a grade of zero "0" for the exam. PLEASE be on time! Projects are due on the date specified on the lesson plan at the start time of the class. Projects will not be accepted late for any reason!

Failure to complete homework assignments will result in one point being deducted from the final course grade for each assignment not completed by the deadline specified. Late or incomplete assignments will still need to be completed and turned in for instructor review and feedback. If you are going to be absent, you should deliver your assignment to your instructor prior to the deadline to ensure credit.

## **ACADEMIC DISHONESTY POLICY**

The Southeastern Technical College Academic Dishonesty Policy states that all forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the Southeastern Technical College Catalog and Handbook.

## **PROCEDURE FOR ACADEMIC MISCONDUCT**

The procedure for dealing with academic misconduct and dishonesty is as follows:

### **1. First Offense**

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

### **2. Second Offense**

Student is given a grade of "WF" (Withdrawn Failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

### **3. Third Offense**

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

## **STATEMENT OF NON-DISCRIMINATION**

The Technical College System of Georgia and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, sex, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member or citizenship status (except in those special circumstances permitted or mandated by law). This school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national

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origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

<b>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</b>	<b>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</b>
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 108 Phone: 912-538-3126 Email: <a href="mailto:hthomas@southeasterntech.edu">Helen Thomas</a> <a href="mailto:hthomas@southeasterntech.edu">hthomas@southeasterntech.edu</a>	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 138B Phone: 912-538-3230 Email: <a href="mailto:ljonas@southeasterntech.edu">Lanie Jonas</a> <a href="mailto:ljonas@southeasterntech.edu">ljonas@southeasterntech.edu</a>

**ACCESSIBILITY STATEMENT**

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

**GRIEVANCE PROCEDURES**

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College’s website.

**ACCESS TO TECHNOLOGY**

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

**TECHNICAL COLLEGE SYSTEM OF GEORGIA (TCSG) GUARANTEE/WARRANTY STATEMENT**

*The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.*

**INSTRUCTIONAL DELIVERY METHODS**

The following methods will be utilized to facilitate learning in lecture sessions. Sessions may employ PowerPoint presentations with handouts, workbook activity sheets, homework assignments, multimedia presentations, group discussions, independent reading assignments, research activities, interactive websites, games, and group collaboration.

**EVALUATION PROCEDURES**

**Exams**

Exam 1 covers chapters 3-6 Dental Embryology

Exam 2 covers chapters 7-10 Dental Histology

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Exam 3 covers chapters 11-14 Dental Histology

Exam 4 comprehensive FINAL of all course instructional material.

All exam dates are noted in the course syllabus. No makeup exam will be allowed for the final examination. Failure to take the final examination on the specified date will result in a grade of zero. The final exam will cover all course instructional material. A total of 100 points may be earned on each of the four examinations.

### **Homework**

Homework assignments are noted in the syllabus lesson plan and are due each lecture session at the beginning of class start time. Each assignment that is not completed in the specified timeframe will result in a one-point deduction from the final course grade. Late assignments are still required to be turned in for instructor review and/or feedback.

### **CLASS PREPARATION ASSESSMENT**

A class preparation assessment and grade will be given at the beginning of class sessions as noted in the lesson plan. Each student shall randomly draw one question. The question will cover some topic or portion of the course material the student should have read and studied as noted in the syllabus lesson plan. If a student demonstrates prior class preparation by answering the question correctly, a session grade of one hundred (100) shall be recorded. If a student fails to demonstrate prior class preparation by answering the question incorrectly, a session grade of zero (0) will be recorded. The student will be allowed to remain in class, but shall be required to report to campus on Thursdays from 9:00am -11:00am and study the course material to ensure time has been spent studying, and that application and understanding of course material may be achieved.

A **GROUP PROJECT** will be assigned to students on the first day of instruction. A total of 100 points may be earned on the group project. **Please follow the Power Point Project Information Guideline (Appendix A), the Grading Rubric (Appendix B), and the Self-Assessment Checklist (Appendix C) when compiling your Project. All Appendices will be provided on the first day of class.** Your overall grade is calculated from these formatting guidelines and instructions. All three appendices are contained in the course syllabus. **A hand-written, weekly progress report, two paragraphs minimum in length, from each group, will be expected to be turned in at the beginning of each class session to ensure project progress and to enable instructor to provide feedback. Students also need to bring proof of work completed.** The group project will involve assigned topics to paired students. The team members will be responsible for presenting a 10 minute overview of a developmental condition and its direct correlation to dental anomalies such as: disturbances that cause cleft palate, ectodermal dysplasia's dental affects, syphilis and Treponema pallidum and its effects on the dentition, fetal alcohol syndrome and dental effects, Down Syndrome and dental effects, or another which the instructor may assign. Each student will participate in the oral presentation and in the preparation of a Power Point Presentation. **Late projects will receive a grade of zero. Refer to your Lesson Plan in this Syllabus for the Power Point Project Presentation due date.**

Workbook assignments and handout completions **for homework** will be assigned throughout the semester. They are intended to give each student additional understanding of oral embryology and histology. The instructor will verify that each assignment is completed as well as give feedback. **The work will be checked on each test day and is directly related to the material covered on the test on that day.** (Example: Exam on chapters 1 & 2: the assignments checked and graded will be on chapters 1 & 2 from the workbook and any

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other worksheets, charts or assigned materials related to the chapters being studied.) A deduction of one point per each incomplete or late assignment will be calculated in the final course grade component.

**GRADING POLICY**

<b>Assessment/Assignment</b>	<b>Percentage</b>
Examination 1	15%
Examination 2	15%
Examination 3	15%
Examination 4 (Final)	20%
Group Project	15%
Class Preparation Assessments (8 averaged together)	20%

**CALCULATION OF FINAL COURSE GRADE**

<b>Evaluation Item</b>	<b>Grade</b>	<b>(X) %</b>	<b>Points</b>
Examination 1		0.15	
Examination 2		0.15	
Examination 3		0.15	
Examination 4 (Final)		0.20	
Group Project		0.15	
Class Preparation Assessment 1			
Class Preparation Assessment 2			
Class Preparation Assessment 3			
Class Preparation Assessment 4			
Class Preparation Assessment 5			
Class Preparation Assessment 6			
Class Preparation Assessment 7			
Class Preparation Assessment 8			
Class Preparation Assessments (8 averaged together)		0.20	
<b>-Point Deductions for late/incomplete assignments</b>			
<b>Subtotal</b>			
<b>Final Course Grade</b>			

**GRADING SCALE**

<b>Letter Grade</b>	<b>Range</b>
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59



## **DENTAL HYGIENE PROGRAM GOALS**

- A. To provide comprehensive preparation of competent individuals in the arts and sciences pertinent to the discipline of dental hygiene.
- B. To provide comprehensive preparation of competent individuals in the clinical and laboratory experiences, which are necessary to develop skills in rendering professional dental hygiene patient care to the public.
- C. To provide an environment which will foster respect for the Dental Hygiene Professional Code of Ethics and Conduct and assure recognition and acceptance of the responsibilities of the profession of dental hygiene.
- D. To prepare the graduates of the basic two-year curriculum in dental hygiene to fulfill the dental hygienist's role in community oral health services.
- E. To teach students to conduct critical reviews of current literature as a means of research and life-long learning.
- F. To teach students to seek life-long learning through continuing education courses on the latest products and developments in dentistry and medicine.

## **DHYG 1010 LEARNING OBJECTIVES: ORAL EMBRYOLOGY AND HISTOLOGY (Fourth Edition)**

### **Chapter 3: Prenatal Development**

- 1. Define and pronounce the key terms in this chapter. (A,B,D)
- 2. Outline the preimplantation period, including the major events that occur during this first week of prenatal development. (A,B,D)
- 3. Integrate a study of the preimplantation period of prenatal development into the development of the orofacial structures and the clinical considerations due to developmental disturbances associated with these structures. (A,B,D)
- 4. Outline the second week of prenatal development during the embryonic period, including the major events that occur. (A,B,D)
- 5. Outline the third week of prenatal development during the embryonic period, including the major events that occur. (A,B,D)
- 6. Outline the fourth week of prenatal development during the embryonic period, including the major events that occur. (A,B,D)
- 7. Integrate the study of the embryonic period of prenatal development into orofacial development and the clinical considerations due to developmental disturbances associated with these structures. (A,B,D)
- 8. Outline the fetal period of prenatal development, including the major events that occur after the fourth week until birth within this period. (A,B,D)
- 9. Integrate the study of the fetal period of prenatal development into orofacial development and the clinical considerations due to developmental disturbances associated with these structures. (A,B,D)
- 10. Identify the structures present during prenatal development on a diagram. (A,B,D)

### **Chapter 4: Face and Neck Development**

- 1. Define and pronounce the key terms in this chapter. (A,B,D)
- 2. Outline the events that occur during facial development, describing each step in its formation. (A,B,D)

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3. Identify the structures present during facial development on a diagram. (A,B,D)
4. Integrate the study of the facial development into understanding the observed orofacial structures and the clinical considerations due to developmental disturbances of these structures. (A,B,D)
5. Outline the events that occur during neck development, describing each step in its formation. (A,B,D)
6. Identify the structures present during neck development on a diagram. (A,B,D)
7. Integrate the study of neck development into understanding the observed orofacial structures and the clinical considerations due to developmental disturbances of these structures. (A,B,D)

### **Chapter 5: Orofacial Development**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. Outline the events that occur during palatal development, describing each step of its formation. (A,B,D)
3. Integrate the study of palatal development into understanding the present structure and the clinical considerations due to developmental disturbances involved in palatal development. (A,B,D)
4. Identify the structures present during palatal development on a diagram. (A,B,D)
5. Outline the events that occur during nasal cavity and nasal septum development. (A,B,D)
6. Integrate the study of nasal cavity and nasal septum development into understanding the present structure. (A,B,D)
7. Identify the structures present during nasal cavity and nasal septum development on a diagram. (A,B,D)
8. Outline the events that occur during the tongue development, describing each step of its formation. (A,B,D)
9. Integrate the study of tongue development into understanding the present structure and the clinical considerations due to developmental disturbances involved in tongue development. (A,B,D)
10. Identify the structures present during tongue development on a diagram. (A,B,D)

### **Chapter 6: Tooth Development and Eruption**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. Outline the five stages of tooth development. (A,B,D)
3. Integrate the study of tooth development into understanding the present tooth anatomy and the clinical considerations due to developmental disturbances. (A,B,D)
4. Outline the process of root development. (A,B,D)
5. Integrate the study of root development into understanding the present tooth anatomy and the clinical considerations due to developmental disturbances. (A,B,D)
6. Discuss periodontal ligament and alveolar process development. (A,B,D)
7. Identify the structures present during tooth crown and root development as well as the periodontal ligament and alveolar process development on a diagram. (A,B,D)
8. Outline the events that occur during tooth eruption. (A,B,D)
9. Integrate the study of tooth eruption into understanding the present tooth anatomy and the clinical considerations due to developmental disturbances. (A,B,D)
10. Identify the structures present during tooth eruption on a diagram. (A,B,D)

### **Chapter 7: Cells**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. Discuss cell properties and components, including the cell membrane, cytoplasm, organelles, and inclusions. (A,B,D)
3. Identify the components of the cell on a diagram. (A,B,D)
4. Outline the cell cycle, describing the phases of mitosis that are involved. (A,B,D)
5. Describe the extracellular materials surrounding the cell and its intercellular junctions. (A,B,D)
6. Integrate the study of cell anatomy into the further study of dental histology. (A,B,D)

### **Chapter 8: Basic Tissue**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. Discuss basic tissue properties. (A,B,D)
3. Describe epithelium properties, including its histology, classification, regeneration, and repair. (A,B,D)
4. Describe basement membrane properties, including its histology. (A,B,D)
5. Integrate the study of the histology of both epithelium and the basement membrane into the further study of dental histology. (A,B,D)
6. Discuss connective tissue properties, including its histology, classification, turnover, and repair. (A,B,D)
7. Describe specialized connective tissue properties. (A,B,D)
8. Describe cartilage properties, histology, development, repair, and aging. (A,B,D)
9. Describe bone properties, histology, development, remodeling, repair, and aging. (A,B,D)
10. Describe blood properties, plasma, and blood components. (A,B,D)
11. Integrate the study of the basic histology of connective tissue into understanding the clinical considerations of the orofacial region. (A,B,D)
12. Describe muscle properties, classifications, and histology. (A,B,D)
13. Describe nerve tissue properties and histology as well as the nervous system divisions. (A,B,D)
14. Integrate the study of the histology of both muscle and nerve tissue into the further study of dental histology. (A,B,D)
15. Identify the components of each basic tissue on a diagram. (A,B,D)

### **Chapter 9: Oral Mucosa**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. List and describe the types of oral mucosa, characterizing each type of epithelium associated with the oral cavity. (A,B,D)
3. Discuss the clinical considerations for oral mucosa pathology, integrating it into patient care. (A,B,D)
4. Identify the components of each type of oral mucosa on a diagram. (A,B,D)
5. List and discuss the clinical correlations associated with the regional differences in the oral mucosa, integrating it into patient care. (A,B,D)
6. Discuss tongue and lingual papillae properties as well as oral mucosa pigmentation and the clinical considerations for both. (A,B,D)
7. Discuss the turnover times for regions of the oral cavity and associated clinical correlations, as well as repair and aging considerations, integrating it into patient care. (A,B,D)

### **Chapter 10: Gingival and Dentogingival Junctional Tissue**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. List and describe each type of gingival tissue. (A,B,D)
3. Describe the histologic features of each type of gingival tissue and the clinical considerations for gingival tissue esthetics, integrating it into patient care. (A,B,D)
4. Identify the components of each type of gingival tissue on a diagram. (A,B,D)
5. Describe dentogingival junctional properties, histology, and development. (A,B,D)
6. Identify the structure of the dentogingival junctional tissue on a diagram. (A,B,D)
7. Discuss the clinical considerations for gingival tissue pathology, integrating it into patient care. (A,B,D)
8. Discuss turnover of the dentogingival junctional tissue and its clinical implications. (A,B,D)

### **Chapter 11: Head and Neck Structures**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. Discuss gland properties. (A,B,D)
3. Discuss salivary gland properties, including its histologic features and development, as well as the clinical considerations concerning salivary gland pathology, integrating it into patient care. (A,B,D)
4. Discuss thyroid gland properties, including its histologic features and development, as well as the clinical considerations concerning thyroid gland pathology, integrating it into patient care. (A,B,D)
5. Discuss properties of lymphatics, including the lymph nodes and intraoral tonsillar tissue, and the clinical considerations concerning lymphoid tissue pathology, integrating it into patient care. (A,B,D)
6. Discuss the properties of the nasal cavity and paranasal sinuses, as well as clinical considerations concerning each of them, integrating it into patient care. (A,B,D)
7. Identify the components of head and neck structures on a diagram. (A,B,D)

### **Chapter 12: Enamel**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. Describe the enamel properties and the clinical considerations concerned with enamel structure, integrating it into patient care. (A,B,D)
3. Discuss the processes involved in the apposition and maturation stages of enamel, as well as the clinical considerations concerned with enamel formation and pathology, integrating it into patient care. (A,B,D)
4. Discuss the histology of enamel and the clinical considerations for dental procedures concerning enamel, integrating it into patient care. (A,B,D)
5. Identify the components of the enamel on a diagram. (A,B,D)

### **Chapter 13: Dentin and Pulp**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. Discuss the dentin-pulp complex. (A,B,D)
3. Describe the properties of dentin and the clinical consideration for dentin structure, integrating it into patient care. (A,B,D)
4. Describe the processes involved in the stages of apposition and the maturation of dentin. (A,B,D)

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5. Outline the types of dentin and discuss the clinical considerations for dentin pathology, integrating it into patient care. (A,B,D)
6. Discuss the histology of dentin. (A,B,D)
7. Describe pulp properties, including its anatomic components. (A,B,D)
8. Discuss the histology of pulp and the clinical considerations for pulp pathology and repair, integrating it into patient care. (A,B,D)
9. Identify the components of both the dentin and the pulp on a diagram. (A,B,D)

**Chapter 14: Periodontium: Cementum, Alveolar Process, and Periodontal Ligament**

1. Define and pronounce the key terms in this chapter. (A,B,D)
2. Give an overview of periodontium properties, including its components. (A,B,D)
3. Identify each individual component of the periodontium on a diagram. (A,B,D)
4. Discuss cementum properties and the clinical considerations with cementum structure, integrating it into patient care. (A,B,D)
5. Discuss cementum development, histology, types, and repair as well as the clinical considerations for cementum pathology, integrating it into patient care. (A,B,D)
6. Discuss alveolar process properties, including jaw anatomy and histology. (A,B,D)
7. Discuss the clinical considerations with the alveolar process, integrating it into patient care. (A,B,D)
8. Describe periodontal ligament properties. (A,B,D)
9. Identify the fiber groups of the periodontal ligament on a diagram and discuss the functions assigned to each of them. (A,B,D)
10. Discuss the clinical considerations for periodontal ligament pathology and repair, integrating it into patient care. (A,B,D)

## DHYG 1010 Oral Embryology and Histology Fall Semester 2018 Lesson Plan

Date/Week	Chapter/Lesson	Content	Assignments & Tests Due Dates	Competency Area
8/14 Week 1	Chapter 3	<p>First day of class/Introduction to Course—Syllabi, Outline, Rules, Regulations Coverage.</p> <p>Prenatal Development Discussion with PowerPoints Create a Timeline on the periods of prenatal development: Pre-implantation, Embryonic and Fetal periods; Outline occurrences during the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> weeks of the Embryonic Period.</p> <p>Videos: Germ Layers, Gastrulation, Embryonic Folding</p> <p>Case Study: Down Syndrome</p>	<p>Complete Workbook and any related assignments prior to class.</p> <p>Read the Textbook Material prior to each class session.</p> <p>WORKBOOK Pages 8-11; Glossary Exercises: Pgs. 84-93</p> <p>Unit II Case Studies 1-5: Pages 219-228</p> <p>Assign topics for projects</p> <p>OCTOBER 16, 2018 Group Projects Presentations Due Week 10</p>	CC 1-7 GC c

8/21 Week 2	Chapters 4-5	<p>Face and Neck Development</p> <p>Discussion with PowerPoints</p> <p>Discuss facial development and the formation of: the stomodeum, oral cavity, mandibular arch, lower face, frontonasal process, upper face, maxillary process, and midface.</p> <p>Discuss neck development and the formation of: the primitive pharynx and the branchial arches.</p> <p>Group Activity: Compare the five facial processes with the mature facial structures.</p> <p>Orofacial Development</p> <p>Discussion with PowerPoints</p> <p>Outline Palatal Development Events: The formation of the primary and secondary palate and completion of palate.</p> <p>List the steps that occur during the formation of the body, base and completion of tongue development.</p> <p>Videos: Face, Palate, and Pharyngeal Arches Formation</p>	<p>Class Preparation Assessment #1</p> <p>WORKBOOK Pages 11-15</p> <p>Tongue Histology and Tooth Development PowerPoints</p> <p>Complete Workbook and any related assignments</p> <p>Project Progress Report Due</p>	CC 6,7 GC c
8/28 Week 3	Chapter 6	<p>Tooth Development and Eruption</p> <p>Discussion with PowerPoints</p> <p>Worksheet: Compare/Contrast 6 Tooth Development Stages</p> <p>Worksheet: Tissue Comparison of Enamel, Dentin, Cementum, and Alveolar Bone</p> <p>Videos: Tooth Development</p> <p>Case Studies: Ankyloglossia and Cervical Cysts</p>	<p>Class Preparation Assessment #2</p> <p>Complete Workbook and any related assignments</p> <p>Project Progress Report Due</p>	CC 8,9 GC c

9/4 Week 4	Chapter 6 CONTINUED	Tooth Development and Eruption Continued Discussion with PowerPoints Pairs Activity: Developmental disturbances during: Initiation, Bud, Cap, Apposition and Maturation, Root Formation, and Eruption. Activity: Root Formation: Outline the Formation Processes of: Root Dentin, Cementum, Pulp, Multi-Rooted Teeth, Alveolar Bone, and the Periodontal Ligament.	Complete Workbook and any related assignments: WORKBOOK Pages 16-21 Unit III Case Studies 1-5: Pages 229-238  Cell Structure Sheet on M: Drive  Project Progress Report Due	CC 8,9 GC c
9/11 Week 5	Chapters 3-6	Chapters 3-6	EXAM 1 Chapters 3-6  Allow instructor to view chapter assignments for credit.  Project Progress Report Due	CC 4, 5 GC a,c
9/18 Week 6	Chapters 7-8	Cells Discussion with PowerPoints Video: Tour of a Cell Worksheets: Cell Organelles & Functions and Mitosis Phases  Basic Tissue Discussion with PowerPoints Video: Four Tissue Types Activities: Using Individual Index Cards, List and Classify Connective Tissue Types by Location and Function. List the location and function of the 3 Connective Tissue types.	Class Preparation Assessment #3  Complete Workbook and any related assignments  WORKBOOK Page 22  Project Progress Report Due	CC 1-5 GC c



9/25 Week 7	Chapters 8-9	<p>Basic Tissue Continued Discussion with PowerPoints Index Card Activity: List the Location and Types of Muscle. Video: Three Types of Muscle</p> <p>Oral Mucosa Discussion with PowerPoints Game: Types of Mucosa Worksheets: Oral Mucosa and Gingiva</p>	<p>Class Preparation Assessment #4</p> <p>Complete Workbook and any related assignments WORKBOOK Page 23</p> <p>Project Progress Report Due</p>	CC 2-6 GC c
10/02 Week 8	Chapters 9-10	<p>Oral Mucosa Continued Discussion with PowerPoints Activity: Tongue drawing and labeling</p> <p>Gingival and Dentogingival Junctional Tissue Discussion with PowerPoints Activity: List the types of gingival tissue and defining characteristics of each.</p>	<p>Class Preparation Assessment #5</p> <p>Complete Workbook and any related assignments WORKBOOK Pages 28-32</p> <p>Project Progress Report Due</p>	CC 2-6 GC c
10/09 Week 9	Chapters 7-10	Chapters 7-10	<p>EXAM 2 Chapters 7-10 Chapter assignments due Project Progress Report Due</p>	CC 2, 3, 4 GC a,c
10/16 Week 10		POWERPOINT GROUP PROJECT PRESENTATIONS	Provide PPT Grading Rubric and Self-Assessment Checklist for Instructor	CC 1-9 GC a-cc

10/23 Week 11	Chapter 11	Head and Neck Structures Discussion with PowerPoints Game: Salivary Gland Comparison Worksheet: Fill in the Blank Key Terminology Handouts: Salivary Gland Development, Salivary Gland Mnemonic and Lymph nodes	Class Preparation Assessment #6  Complete Workbook and any related assignments WORKBOOK Pages 33-38	CC 7 GC c
10/30 Week 12	Chapters 12-13	Enamel Discussion with PowerPoints Handout: Enamel Conditions Mnemonic Dentin and Pulp Discussion with PowerPoints Game: Dentin Types Activity: Draw and Label Exercise Research: Find a clinical consideration related to dentin structure and the proper recommendations for patients with the condition.	Class Preparation Assessment #7  Complete Workbook and any related assignments  WORKBOOK Page 39 UNIT II & III Review Exercises: Pages 205-212	CC 8 GC c
11/06 Week 13	Chapter 14	Periodontium: Cementum, Alveolar Process, and Periodontal Ligament Discussion with PowerPoints Activity: Two groups Compare and Contrast Cementum Types Videos: Cementogenesis and Alveolar Bone Histology	Class Preparation Assessment #8  Complete Workbook and any related assignments WORKBOOK Pages 40-43	CC 9 GC c
11/13 Week 14	Chapters 11-14	Chapters 11-14	EXAM 3 Chapters 11-14 Allow instructor to view chapter assignments for credit.	CC 7,8,9 GC a,c
11/20 Week 15	Chapters 3-14	Interactive Final Review covering textbook and National Board Material	Review National Board Material	CC 7,8,9 GC a,c
11/27 Tuesday 8am	Chapters 3-14	Final Exam	Comprehensive Final Exam #4	CC 1-9 GC a,c

**\*This lesson plan is subject to change at the discretion of the instructor.**

**MAJOR COURSE COMPETENCIES (CC):**

1. Cellular Structure and Organelles
2. Histology of Epithelium
3. Histology of Connective Tissue
4. Histology of Muscle Tissue
5. Histology of Nerve Tissue
6. Histology of Oral Mucosa and Orofacial Structures
7. Embryological Development of the Head and Neck
8. Tooth Development
9. Development of Tooth Supporting Structures

**GENERAL CORE EDUCATIONAL COMPETENCIES (GC):**

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.

## **APPENDIX A DHYG 1010 Oral Embryology and Histology PowerPoint Self-Assessment Checklist**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### **CONTENT**

1.  Information presented is interesting and relevant to subject matter.
2.  I am well informed about my topic.
3.  I included reliable resources with factual information.
4.  I added supportive detail to the main points.
5.  I had a minimum of ten information slides in the PowerPoint, with the title and reference slide counting as two separate slides.
6.  I had a minimum of twelve slides in the presentation.

### **ORGANIZATION**

1.  Ideas are organized in a logical manner.
2.  Presentation was easy to understand.
3.  Introduction included a clear statement of the main point(s).
4.  I included a strong conclusion.

### **VISUAL AIDS AND TECHNOLOGY USE**

1.  Pictures and graphics improved the presentation and reinforced main points.
2.  Pictures, graphics, and their placement were creative.
3.  Presentation was attractive.
4.  Letters and fonts are easy to view by audience.
5.  Slides contain no spelling or grammatical errors.

### **DELIVERY**

1.  I maintained eye contact most of the time.
2.  I spoke to the entire audience.
3.  I spoke in a clear manner and a good pace.
4.  I did not read directly from note cards.

### **RESOURCES**

1.  I used resources that addressed the topic and that were accurate.
2.  I used my own words when speaking. I didn't read verbatim from slides or notes.

**APPENDIX B**

DHYG 1010 Oral Embryology and Histology PowerPoint Presentation Project Grading Rubric

Student's name \_\_\_\_\_

Title of Presentation \_\_\_\_\_

<b>Category</b>	<b>Excellent-4 points</b>	<b>Good-3 points</b>	<b>Satisfactory-2 points</b>	<b>Needs Improvement-1 point</b>
<b>Content - Accuracy</b>	All content throughout the presentation is accurate. There are no factual errors.	Most of the content is accurate but there is one piece of information that seems inaccurate.	The content is generally accurate, but one piece of information is clearly inaccurate.	Content is confusing or contains more than one factual error.
<b>Sequencing of Information</b>	Information is organized in a clear, logical way. It is easy to anticipate the next slide.	Most information is organized in a clear, logical way. One slide or piece of information seems out of place.	Some information is logically sequenced. An occasional slide or piece of information seems out of place.	There is no clear plan for the organization of information.
<b>Effectiveness</b>	Project includes all material needed to give a good understanding of the topic. The project is consistent in covering the subject material.	Project is lacking one or two key elements. Project is consistent in covering the subject material most of the time.	Project is missing more than two key elements. It is rarely consistent in covering the subject material most of the time.	Project is lacking several key elements and has inaccuracies. Project is completely inconsistent in covering the subject material.
<b>Use of Graphics</b>	All graphics are attractive (size and colors) and support the topic of the presentation.	A few graphics are not attractive, but all support the topic of the presentation.	All graphics are attractive, but a few do not support the topic of the presentation.	Several graphics are unattractive and detract from the content of the presentation.

<b>Category</b>	<b>Excellent-4 points</b>	<b>Good-3 points</b>	<b>Satisfactory-2 points</b>	<b>Needs Improvement-1 point</b>
<b>Text - Font Choice &amp; Formatting</b>	Font formats (color, bold, italic) have been carefully planned to enhance readability and content.	Font formats have been carefully planned to enhance readability.	Font formatting has been carefully planned to complement the content. It may be a little hard to read.	Font formatting makes it very difficult to read the material.
<b>Spelling and Grammar</b>	Presentation has no misspellings or grammatical errors.	Presentation has 1-2 misspellings, but no grammatical errors.	Presentation has 1-2 grammatical errors but no misspellings.	Presentation has more than 2 grammatical and/or spelling errors.
<b>Cooperation</b>	Group shares tasks, and performs responsibly all of the time.	Group shares tasks and performs responsibly most of the time.	Group shares tasks and performs responsibly some of the time.	Group often is not effective in sharing tasks and/or sharing responsibility.
<b>Delivery</b>	Members spoke at a good rate, volume and with good grammar. Pauses and filler words such as "umm" were minimal. They maintained eye-contact while using, but not reading their notes. Ten-minute time parameter used.	Members spoke a little faster or slower than necessary, or too quietly or loudly. They used acceptable grammar, with no more than 1-2 pauses or filler words such as "umm". They maintained eye-contact, but relied too much on their notes. Finished under the ten-minute time parameter.	Members spoke at a good rate and volume, but used poor grammar, with more than 2 pauses or filler words such as "umm". They relied heavily on their notes. Used only 5-8 minutes of time parameter.	Members demonstrated having paid little attention to rate, volume or grammar, pauses and 3 or more filler words. They read nearly word for word from notes. Used less than 5 minutes or more than 10 minutes of time parameter.

Total Points Earned out of a Possible 32 points (8 categories/ 4 points each =32 (A/100))

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Comments: \_\_\_\_\_

Instructor Signature: \_\_\_\_\_

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## APPENDIX C DHYG 1010 Oral Embryology and Histology PowerPoint (PPT) Project Information Sheet

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Topic research include a minimum of one textbook, two scientific journal articles and one website. Please include all four in your reference slide.
2. The PowerPoint must be a minimum of ten slides in length and both team members must speak during presentation. Under the “notes section” of the PPT, students must type out who will say what during the presentation.
3. References cited must be in American Psychological Association (APA) Sixth edition formatting using hanging indent.
4. Follow the grading rubric guidelines. Please read the rubric before compiling PPT.
5. You must incorporate pictures in your project. Insertion of short, useful, relevant videos may also be used.

Details to include in your presentation:

### ORAL HISTOLOGY

1. How does this condition impact oral histology?
2. What basic tissues does this condition affect?
3. What oral tissues does this condition affect?
4. What orofacial structures does this condition affect?
5. Does this condition impact any of the layers of the teeth?

### ORAL EMBRYOLOGY

1. Is this condition congenital? If so, discuss the embryology involved.
2. During what period does/did this condition form?
3. Does this condition affect the development of orofacial structures?
4. Does this condition affect tooth development?

### ORAL PATHOLOGY

1. Does this condition produce any intraoral lesions? If so, describe them.
2. Does this condition produce inflammation?
3. Does this condition present on radiographs? If so, describe.
4. Will this condition repair itself?
5. Does this condition affect the immune system?
6. What is the prognosis for a patient with this condition?

### TREATMENT

1. How is the condition treated?
2. Can the condition be prevented or cured?
3. What is the prognosis for the patient?

### DENTAL HYGIENE IMPLICATIONS

1. Will oral hygiene need modifying?
2. Does this condition contribute to caries or periodontal disease? Why?
3. Can the patient be treated during the active phase of this disease?