

NEW YORK CITY COLLEGE OF TECHNOLOGY
CUNY

Dental Hygiene Department
WINTER SESSION 2016

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Office Hours:

Face-2-Face:

Thurs. Jan 7 4:30 – 5:30PM

Tues. Jan 12 4:30 – 5:30PM

Thurs. Jan 14 4:30 – 5:30PM

Tues. Jan 19 4:30 – 5:30PM

Fri Jan 22 4:30 – 5:30PM

Class Hours:

Face-2-Face:

Thursday Jan 7

Tuesday Jan 12

Thursday Jan 14

Tuesday Jan 19

Friday Jan 22

Online: Tues.-Fri. 4:30– 5:30PM

Online: Tues.-Fri. 6PM-8:05 PM (except when at school)

Course Title: Histology & Embryology

Course Code: Den 1114

Credits: 1

Prerequisites: Admission into the Clinical Dental Hygiene Program

Corequisites: DEN 1112, BIO 2311/BIO2301.1L

Textbooks:

1“ILLUSTRATED DENTAL EMBRYOLOGY, HISTOLOGY, AND ANATOMY”

Fourth Edition,

Fehrenbach,Popowics

ISBN: 978-1-4557-7685-6

Elsevier/Saunders, Missouri

2) Workbook “ILLUSTRATED DENTAL EMBRYOLOGY,
HISTOLOGY, AND ANATOMY” Fourth Edition,

Fehrenbach,

Elsevier/Saunders, Missouri

ISBN: 978-1-4557-7645-0

Course Description:

DEN 1114 is a fundamental course that will assist in the development of the dental hygiene competencies. Basic principles of histology and embryology are studied with emphasis on tissues of the oral cavity and contiguous structures and their clinical considerations in dental hygiene treatment. Knowledge of the normal tissues of the oral cavity and surrounding structures is the basis for understanding diseases and abnormalities that are commonly encountered in dental hygiene practice.

Also included is the study of the development of the face, oral cavity, the tooth and its surrounding structures.

Course Goal

To introduce basic principles of histology and embryology with emphasis on tissues of the oral cavity, the teeth and contiguous structures and their clinical considerations in dental hygiene treatment.

DEN 1114 Student Learning Objectives

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

1. Identify and understand basic principles of development in relation to the histology and embryology with emphasis on tissues of the oral cavity, the teeth and contiguous structures.

Discipline Specific: Basic Knowledge

Gen Ed: Reading – technical

Oral Communication – listening

Visual – graphic representation

Process Skills – memorization

2. Identify and understand the histological and embryological concepts in relation to clinical dental hygiene treatment.

Discipline Specific: Basic Knowledge

Gen Ed: Reading – technical

Oral – listening

Visual – graphic representation

Ethical Values – intellectual integrity, professional ethics

3. Identify and discuss developmental abnormalities related to histological/embryological concepts.

Discipline Specific: Basic Knowledge

Gen Ed: Communication Skills – written

Computer Skills – PowerPoint presentation

Oral – in class presentation

4. Appreciate societal and cultural differences in the perception and reaction to facial abnormalities.

Gen Ed: Communication Skills – written (reflective narrative)

Computer Skills - word processing

Global Knowledge – respect for diversity

5. To develop an awareness of the differences between personal and professional perceptions.

Gen Ed: Group Assignment:

Communication Skills – written (reflective narrative)

Computer Skills - word processing;

Global Knowledge – respect for diversity

Teaching Methodology:

This course will utilize several approaches to teaching including but not limited to PowerPoint, writing assignments, group discussions and oral presentation, videos and lectures in order to accomplish the stated objectives.

Students are expected to arrive on time at both in-class and online sessions. Come prepared for lecture, discussion on assignments or special projects scheduled for that day. Lectures will be presented utilizing PowerPoint outlines and will be available for printing at the end of each lecture session on CUNY Blackboard <https://cunyportal.cuny.edu>. Lectures will also include videos providing visual demonstration of certain developmental processes to help the student visualize and therefore comprehend the material. Student presentations will cover developmental abnormalities in embryology. All student presentations will be part of the course materials and students are responsible for knowing this information. Lectures will address course objectives. All objectives, however, if not covered in detail during class time are the responsibility of the students. Any problem with lectures, materials or objectives should be brought to the attention of the instructor.

Assessment Methods

1. Five (5) in-class tests
 2. Workbook assignments
 3. Oral/PowerPoint presentation
 4. Reflective writing assignment
- Each test will consist of approximately 30 questions which may include multiple choice answers, diagrams and possible short answers. Daily online assignments can contain a variety of assessment modalities including but not limited to multiple-choice, fill-ins diagrams.
 - Homework assignments are required and due on dates specified. Any homework assignments not submitted at specified time will receive a '0' grade.
 - Oral Presentations and Written Assignments will be graded based on evaluation rubrics which will be distributed at the first class session and found on the class website <https://openlab.citytech.cuny.edu/den1114fall2015>.
 - If the written assignment is not submitted by date due, a grade of '0' will be received.
 - Oral presentation – the powerpoint portion of the oral presentation must be submitted prior to class presentation for review. If powerpoint is not submitted prior to presentation the student may forfeit the opportunity to present and receive a '0' grade. If powerpoint is submitted but no oral presentation is given the student will receive a maximum grade of 50%.

Unacceptable Classroom Behaviors are but are not limited to: which will result in disciplinary action:

- Changing a test or exam answer(s) after grading.
- Failing to submit or complete course assignments(s).
- Plagiarizing class or course written assignment(s).
- Cheating during a test or exam which includes but is not limited to: eyes wandering, looking at other's paper, inappropriate sitting postures, reaching into pockets, looking at notes – written on scrap paper or computerized device, body parts, food or drinks.
- Talking or whispering in any language during test or exam.
- Bringing textbooks, class notes, cell phone, iPod, iPad or any other listening or photographic devices to the test room/seat.
- Failing to participate adequately in group assignments(s)/projects(s) online.
- Failing to comply with faculty's instructions.
- Displaying disrespectful behavior to faculty and/or staff online or in class.
- Displaying unethical/disrespectful behavior and/or language toward fellow students in class or online.

Classroom Management/Disciplinary Policy*

Classroom Management: Students are expected to be logged into Blackboard Collaborate at the beginning of each online session. Failure to do so will result in an absence/lateness (see Attendance Policy). I will be logged in for the sessions and available for questions and comments. Check announcements every day for instructions for all assignments. I can also be reached at my email address and will check my emails twice a day, but not before 10AM and not after 10PM. I will not be available on Saturdays but will respond to email on Sundays after 3PM.

Disciplinary Policy: Participating in or performing any of the unacceptable classroom behaviors will result in disciplinary action which may include any of the following:

- points deducted from assignments, exam, final grade
- 5 points off final grade for lack of professionalism
- suspension for a year
- expulsion from the program or
- not being recommended to take the DH licensing exam.

The penalty will be determined by the officiating professor alone or in conjunction with the departmental Course and Standards Committee.

Cell phones are to be turned OFF during In-class sessions unless prior permission for emergency contacts is requested/granted (at which time they will be on vibrate only). TEXTING will not be permitted during class. Any violation of classroom cell phone policy will result in the phone being confiscated for the duration of the class period as well as receiving any of the above mentioned disciplinary actions.

Dishonesty, cheating and plagiarism in any form will not be tolerated.

Any student found cheating on an examination or assignment will receive a grade of **zero for that examination or assignment and will have 5 points deducted from the FINAL GRADE for a lack of professionalism.** Further disciplinary action may be taken according to NYCCT and dental hygiene department policy.

*The penalties recommended in this document are in compliance with standards stated in the college catalog. A completed detailed account of protocol regarding Academic Integrity and disciplinary action is available in the NYCCT College Catalog and via the website.

Grading Policies:

A minimum Final grade of **70** is required to pass **DEN 1114**.

The workbook assignments (5 assignments in all) are weighted equally and the total is worth 10% of the final grade.

The Final grade is calculated as follows:

Workbook Assignments	5%
Oral Presentations	10%
Writing Assignment	5%
Tests (5)	80% (16% each)

Late Submission Penalty – 1 point off the assignment grade.

Make-up Tests

Make-up tests will only be given under proven (documented) extenuating circumstances, and at the convenience of the instructor.

Policy on Retesting

Effective October 1, 1989 no student in a Dental Hygiene course will be retested in any examination for any reason.

A failure grade in a quiz/test/examination will remain and be averaged with all other course grades.

Grading Scale:

Final letter grades will be assigned according to the following standard as published in the NYCCT Student Handbook – page 30:

Grade Numerical Grade Ranges Quality Points

A = 93 -100	C+ = 77 – 79.9
A- = 90 – 92.9	C = 70 – 76.9
B+ = 87 – 89.9	D = 60 – 69.9
B = 83 – 86.9	F = Below 59.9
B- = 80 – 82.9	

Any course grade below a C may constitute dismissal from the dental hygiene program.

Academic Problems:

Please contact course instructor if you have trouble understanding concepts or material during this course. If you fail an examination, you are expected to meet with instructor as soon as possible to review the exam and develop a plan for future study.

College Attendance Policy

Students are expected to attend every class period.

Class Attendance and Participation Policy:

Online sessions: Attendance will be taken at the start of each online class both verbally and electronically. This will take place in the discussion section. You will be expected to log in for every online class if you are not logged in you will be absent. I will be logged into each session as well.

As per college policy a student may be absent during the semester without penalty for 10% of the class meeting sessions. **DEN 1114 – 2 absences**

Refer to the student manual for department policies concerning attendance, punctuality and professional behavior

College Academic Integrity:

New York City College of Technology Policy on Academic Integrity

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

Americans with Disabilities Act (ADA). The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things this statute requires that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Dental Hygiene Program Director.

Student Support Services (SSSP) is a program which addresses the needs of student with documented disabilities of all types. When student with disabilities self-identify to SSSP, they present documentation for testing accommodations. Documentation supports accommodations including, but not limited to, testing in an alternate location, time extension, scribe services, or computer assisted readers for the blind and other assistive devices during testing. SSSP cannot disclose the student's disability but can disclose any accommodation for which students are eligible. Compliance is legally mandated in accordance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the amended ADA of 2008.

Course Outline

Section WHE2

Day 1 On-line	Jan 5	<p>Class Orientation:</p> <ul style="list-style-type: none"> • Syllabus (course documents & requirements) <p>A. Overview of the cell</p> <ol style="list-style-type: none"> 1. The cell 2. Cell division 3 Extracellular materials 4. Intercellular junctions
Day 2 On-line	Jan 6	<p>Components of the cell continued; Structure and function of cells and tissues with emphasis on connective and epithelial tissues</p> <p>B. Basic tissues</p> <ol style="list-style-type: none"> 1. Epithelial tissue 2. Basement membrane 3.Connective tissue 4. Muscle tissue /Nerve tissue
Day 3 In-Class	Jan 7	<p>TEST 1 – 1 hour.</p> <p>Begin - Oral gingival mucosa</p>
Day 4 On-line	Jan 8	<p>Continue- Oral gingival mucosa</p> <p>Specialized tissue: Tongue, TMJ, tonsils, Salivary glands</p>
Day 5 In-Class	Jan 12	<p>TEST 2 – 1 hour</p> <p>Begin: Orofacial Embryology</p> <p>A. Prenatal development</p> <p>Pre-implantation and Implantation periods</p>
Day 6 On-line	Jan 13	<p>Embryonic Period</p> <ol style="list-style-type: none"> B. Face and neck development C. Orofacial structure development <ol style="list-style-type: none"> 1. Palatal development 2. Nasal cavity and septum development 3. Tongue development Continue tooth development.
Day 7 In-Class	Jan 14	<p>TEST 3 – 1 hour</p> <p>Odontogenesis (Tooth development and eruption)</p> <ol style="list-style-type: none"> a. Initiation stage b. Bud stage c. Cap stage d. Bell stage e. Apposition and maturation stages
Day 8 On-line	Jan 15	<p>Root Formation - Eruption and exfoliation.</p>
Day 9 In-Class	Jan 19	<p>TEST 4 – 1hour</p> <p>Enamel and Dentin</p>
Day 10 On-line	Jan 20	<p>Pulp & Periodontium - cementum PDL,</p>
Day 11 On-line	Jan 21	<p>Periodontium continued- PDL, and the alveolar process</p>
Day 12 In-Class	Jan 22	<p>Test 5</p>

Student Objectives & Learning Outcomes

Daily Summary

At the completion of this course the dental hygiene student will be able to:

Day 1

- Identify the components of a cell.
- Describe the function of the components of a cell.
- Identify the different tissues present in the human body.
- Identify the histological components of each tissue studied.
- Describe the function of each tissue studied.

Days 2

- Identify the structure and histology of epithelial and connective tissue.
- Describe in detail, the function of epithelial and connective tissue.
- Recognize the various locations within the human body of epithelial and connective tissue.

Days 3,4

- Describe the gross anatomy of the temporomandibular joint.
- Describe the histology of the temporomandibular joint.
- Identify the components of the synovial fluid of the TMJ.
- Establish the location of the oral mucous membranes and gingiva.
- Identify the histological structures of the oral mucous membrane.
- Identify the macroscopic and microscopic structures of the gingiva, and gingival sulcus.
- Describe the development of the tongue, and correctly define its anatomy.

Days 5,6

- Define growth and development.
- Describe the development of the primitive mouth.
- Recognize the various processes in the development of the face.
- Outline the process of palatal development.
- Identify the components which formulate the palate and the nasal septum.
- Discuss the various sequels to improper fusion of the maxillary processes.

Days 7,8

- Identify the various stages of tooth development.
- Describe the histological components of the tooth germ.
- Classify the cells involved in tooth development.
- Discuss root formation.
- Recognize the various anomalies which may result from improper tooth development.
- Describe the mechanism of tooth eruption.
- Understand the shedding of the primary teeth.
- Identify all the cells involved in the process of the eruption and shedding of the teeth.

Day 9

- Describe the composition of enamel.
- Differentiate between the macroscopic and microscopic structure of enamel.
- Identify all parts of the microscopic structures of enamel.
- Understand the process of mineralization.
- Discuss the clinical importance of enamel.
- Describe the composition of dentin.
- Identify the macroscopic and microscopic structure of dentin
- Classify the various types of dentin and their relevance to healthy tooth.

Compare and contrast root vs. crown dentin found in the tooth.
Discuss the clinical importance of dentin

Day 10

Define the location, origin and composition of the dental pulp.
Identify the macroscopic and microscopic components of the pulp.
Define the zones of the pulp.
Discuss the functions of the pulp.
Discuss the clinical importance of the pulp.
Define the location, function and composition of cementum.
Identify the macroscopic and microscopic components of cementum.
Discuss the clinical importance of cementum.
Describe the formation of the PDL.
Identify the location of the periodontal ligament.
Identify the structures and components of the periodontal ligament.
Differentiate between the periodontal ligament fibers.
Discuss the clinical importance of the periodontal ligament.

Day 11

Describe the formation of the PDL.
Identify the location of the periodontal ligament.
Identify the structures and components of the periodontal ligament.
Differentiate between the periodontal ligament fibers.
Discuss the clinical importance of the periodontal ligament
Describe the gross structure of bone.
Describe the microscopic structure of bone.
Understand the process of bone formation and resorption.
Describe the alveolar process and identify its macroscopic structures
Discuss the clinical importance of the alveolar process.

Day 12 Test 5