

**NEW YORK CITY COLLEGE OF TECHNOLOGY
CUNY
Dental Hygiene Department
STUDENT COURSE DOCUMENT
Fall 2016**

COURSE CODE: Den 1114

COURSE TITLE: Histology & Embryology

INSTRUCTOR: Maria-Elena Bilello, RDH, MSPH

CONTACT INFORMATION: Pearl 201

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OFFICE HOURS: Monday 7:30AM – 8:30AM

Tuesday 4:00PM-5:00PM

CLASS HOURS: 2 per week

CREDITS: 1

REQUIRED 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:

Developmental and microscopic anatomy of the elementary tissues. Embryologic development of the teeth and oral cavity. Comprehensive study of teeth, their supporting tissues and microscopic anatomy. This 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 surrounding structures.

Evaluation Procedures

College Grading Scale

93 – 100.....	A
90 – 92.9.....	A-
87 – 89.9.....	B+
83 – 86.9.....	B
80 – 82.9.....	B-
77 – 79.9.....	C+
70 – 76.9.....	C
Below 70.....	Fail.

Course Assessment Method:

Final grade will be calculated using: five (5) tests, weekly quizzes, workbook assignments, an oral presentation assignment and a required essay.

- Each test will consist of approximately 25-35 questions. The test format may include multiple choice answers, diagrams and possible short answer fill-ins. Weekly quizzes will also contain this variety of testing modalities.
- Homework assignments are required, counted as part of the final grade and are due on dates specified. Failure to hand-in assignments by due date will result in a grade of zero (0) for that assignment.
- Oral Presentations and Written Assignments will be graded using rubrics which will be available on class website: <http://openlab.citytech.cuny.edu/groups/den-1114-oral-histology-embryology/>.

Course Policies:

a) **Attendance Policy:**

Students are expected to attend every class period.

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

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

b) **Lateness Policy:**

Two (2) lateness are equal to one (1) absence.

c) **Professionalism:**

• **Classroom Management/Disciplinary Policy***

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

- 5 points deducted from quiz, exam, final grade for lack of professionalism
- 5 points off **final grade** for lack of professionalism

- suspension for a year
- expulsion from the program or
- failure to be 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.

- **Unacceptable Classroom Behaviors which will result in disciplinary action:**
 - Changing a quiz, test or exam answer(s) after grading.
 - Failing to submit or complete course requirement(s).
 - Plagiarizing class or course written assignment(s).
 - Cheating during a quiz, test or exam which includes but is not limited to: eyes wandering, looking at another'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 quiz, test or exam.
 - Bringing textbooks, class notes, cell phone, iTouch, iPod, iPad or any other visual, auditory or photographic devices to the test room/seat.
 - Failing to participate adequately in group assignments(s)/projects(s).
 - Failing to comply with faculty's instructions.
 - Displaying disrespectful behavior to faculty and/or staff.
 - Displaying unethical/disrespectful behavior toward fellow students
- **Cell phones are to be turned OFF during class** 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.

d) Make-Up Exams:

- Make-up tests will only be given with the presentation of 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.
- **Cancelled Classes:**
If class is cancelled for any reason the class lecture will be recorded and saved on Blackboard Collaborate. Students are responsible for all of the recorded materials which may include, but are not limited to, the Powerpoint presentation and other lecture related materials recorded in that session.

e) Dental Hygiene Department Policy on Retesting:

- No student in any Dental Hygiene course will be retested in any examination for any reason. A failing grade in a quiz/test/examination will remain and be averaged with all other course grades.

f) 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.

g) Examination Protocol:

All students are:

1. Expected to take the examination at the scheduled times.
2. In the event of an unforeseen emergency, the student is to e-mail the instructor and upon returning to school, provide medical or legal documentation to support the absence from the examination. Students who provide documentation deemed acceptable by the course instructor will be scheduled to take the examination whose format may be different from the original examination (essay, short answer).
3. Students who arrive late to examinations will not be given extended time and will be expected to complete the exam in the remaining scheduled exam time.
4. Students who miss an examination and do not provide acceptable documentation will have a score of Zero '0' entered for that examination.

Learning Experience:

This course utilizes several approaches to teaching including but not limited to lectures on PowerPoint, workbook assignments, writing assignments, group discussions, oral presentation, and videos to accomplish stated objectives.

Students are expected to come prepared for lecture; assignments or special projects are expected on scheduled day. Lectures will address course objectives and will be presented as PowerPoint outlines which will be available for printing from NYCCT's Blackboard account. Lectures may also include videos providing demonstrations to provide visualization, an additional aid in understanding and comprehension of the material. Student oral presentations are prepared from required course materials that cover developmental abnormalities and are included in testing. All lecture objectives if not covered in detail during class time are the responsibility of the students. A writing assignment is required based on the student viewing a designated video. Any problem with lectures, materials or objectives should be brought to the attention of the instructor.

EX: DEN 1114 Course Objectives

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

- 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.

Unit 1 Discipline Knowledge

A. Overview of the cell:

1. The cell
2. Cell division
3. Extracellular materials
4. Intercellular junctions

5. Basement membrane

B. Components of the cell: Structure and function of cells and tissues with emphasis on connective and epithelial tissues

B. Basic tissues

1. Epithelial tissue
2. Connective tissue

ADEA competencies used: (C4) (C9)

GenEd SLO's:

Reading – technical

Oral Communication – listening

Visual – graphic representation

Process Skills – memorization

Unit II Discipline Knowledge

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

1. Oral gingival mucosa
2. Specialized tissue:
3. Tongue, TMJ, tonsils, Salivary glands

ADEA competencies used: (C4) (C9)

GenEd SLO's:

Reading – technical

Oral Communication – listening

Visual – graphic representation

Process Skills – memorization

Unit III Discipline Knowledge

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

Orofacial Embryology

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

A. Prenatal development

1. Pre-implantation and Implantation periods
2. Embryonic Period

B. Face and neck development

C. Orofacial structure development

1. Palatal development
2. Nasal cavity and septum development
3. Tongue development Continue tooth development

ADEA competencies used: (C4) (C9)

GenEd SLO's:

Reading – technical

Oral Communication – listening

Visual – graphic representation

Process Skills – memorization

Communication Skills – written

Computer Skills – PowerPoint presentation

Oral – in class presentation

Unit 1V Discipline Knowledge

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

Tooth development and eruption (Odontogenesis)

- a. Initiation stage
- b. Bud stage
- c. Cap stage
- d. Bell stage
- e. Apposition and maturation stages

Root Formation - Eruption and exfoliation.

ADEA competencies used: (C4) (C9)

GenEd SLO's:

Reading – technical

Oral Communication – listening

Visual – graphic representation

Process Skills – memorization

Unit V Discipline Knowledge

Characteristics of:

1. Enamel and cementum
2. Dentin & pulp
3. Periodontium - PDL, bone and the alveolar process

ADEA competencies used: (C4) (C9)

GenEd SLO's:

Reading – technical

Oral Communication – listening

Visual – graphic representation

Process Skills – memorization

Topics to be Presented

COURSE OUTLINE:

Session 1	Aug. 30	Class Orientation: <ul style="list-style-type: none"> • Syllabus (course documents & requirements) • Course website A. Overview of the cell: <ol style="list-style-type: none"> 1. The cell 2. Cell division 3. Extracellular materials 4. Intercellular junctions 5. Basement membrane
Sessions 2 & 3	Sept6 Sept 13	Components of the cell continued; Structure and function of cells and tissues with emphasis on connective and epithelial tissues <ol style="list-style-type: none"> B. Basic tissues <ol style="list-style-type: none"> 1. Epithelial tissue 2. Connective tissue
Session 4	Sept.20	TEST 1 – 45 min. Begin - Oral gingival mucosa
Sessions 5 & 6	Sept. 27 Oct. 14	Continue Oral gingival mucosa Specialized tissue: Tongue, TMJ, tonsils, Salivary glands
Session 7	Oct. 18	TEST 2 – 45 minutes Begin: Orofacial Embryology <ol style="list-style-type: none"> A. Prenatal development Pre-implantation and Implantation periods
Sessions: 8 & 9	Oct. 25 Nov. 1	Embryonic Period <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
Session 10	Nov.8	TEST 3 – 45 minutes Tooth development and eruption(Odontogenesis) <ol style="list-style-type: none"> a. Initiation stage b. Bud stage c. Cap stage d. Bell stage
Session 11	Nov. 15	<ol style="list-style-type: none"> e. Apposition and maturation stages Root Formation - Eruption and exfoliation.
Session 12	Nov.22	Test 4 – 45 minutes Enamel and cementum
Session 13	Nov 29	Dentin & pulp
Session 14	Dec. 6	Periodontium - PDL, bone and the alveolar process
Session 15	Dec. 13	Test 5

READING ASSIGNMENT:

- All assigned chapters from the required text constitute the reading assignments.
- There will be one required writing assignment based on the student viewing a designated video.