



Dental Hygiene Program
Histology DNHY 3022
Head, Neck & Dental Anatomy DNHY 3124
COURSE SYLLABUS FALL 2019

DAY/TIME:

Tuesday and Thursday 8:00am-10:50am

PLACE:

Centennial Hall, Room 103-A – Lecture and Lab
Gaines Dental Hygiene Clinic – Special Lab Sessions

INSTRUCTOR:

Jill Young, B.S.D.H., M.Ed., R.D.H.
Assistant Professor of Dental Hygiene
Office: Centennial Hall, Room 126
Phone: (940) 397-4738

OFFICE HOURS:

Monday 1:00pm-5:00pm
Tuesday and Thursday 11:00am-12:00pm & 1:00pm-3:00pm
Friday by appointment

REQUIRED TEXTS:

- ILLUSTRATED ANATOMY OF THE HEAD AND NECK, by Margaret J. Fehrenbach and Susan W. Herring, 5th Ed.
- ILLUSTRATED DENTAL EMBRYOLOGY, HISTOLOGY, AND ANATOMY, by Fehrenbach and Popowics, 4th Ed.
- CLINICAL PRACTICE OF THE DENTAL HYGIENIST, by Esther M. Wilkins, 12th Ed.

SUPPLEMENTAL TEXTS:

- DENTAL HYGIENE THEORY AND PRACTICE, by Michele Darby and Margaret Walsh, 3rd Ed.

SYLLABUS CHANGE POLICY:

This syllabus is a guide for the course- not a “contract” – and is subject to change. Syllabus changes will be communicated via written revisions with a minimum of 48 hours’ notice before relevant changes take place. Please keep this syllabus as a reference. Students are responsible for this information and any changes to the syllabus as explained above.

COURSE DESCRIPTION:

Prerequisite: General Anatomy and Physiology

Dental Anatomy 3124 is a lecture course with integrated lab components. It is a fundamental, basic theory course upon which other courses are built. Through self-study, classroom lecture and participation, as well as laboratory exercises, the student will become familiar with the structures and anatomical features of the oral cavity. Head and neck anatomy is studied to integrate intra-oral structures with other bodily functions

Histology 3022 is the microscopic anatomy of the teeth and related oral structures. Subject matter includes an introduction to General Histology; the embryonic development of the face and oral cavity/development of teeth and their eruption/tooth enamel, dentin, cementum, and pulp; periodontal ligament; salivary glands; oral epithelium; dental caries and the temporomandibular joint.

KEY CONCEPTS:

1. A thorough knowledge of the structures of the oral cavity is required by the dental hygienist in order to assess the oral health status of the patient.
2. The use of appropriate, standardized nomenclature facilitates accurate descriptions of the oral cavity. This will be a vital part of not only meticulous record keeping, but also of enhanced communication among members of the dental community.
3. Distinguishing between normal/abnormal, and typical/atypical structures in the head, neck and oral cavity, as well as normal/abnormal, typical/atypical function of the anatomical features of the head and neck in order to assess the health of the patient.
4. Differentiation between primary and permanent dentition to enable effective treatment planning.
5. Knowledge of root morphology is essential for skill development involving scaling and root planing.
6. Knowledge of the innervation, nutrient, and muscle systems of the head and neck regions facilitates dental hygiene care.
7. The profession of dental hygiene is much more than the mechanical removal of tooth deposits.
8. Oral histology provides fundamental knowledge and concepts that relate directly to a basic appreciation of the rationale behind clinical therapies and basic science courses.

COURSE OBJECTIVES:

Through lectures, individual and group discussion, reading assignments, and lab exercises, the students should be able to:

1. Name the embryonic structures that form the face and approximate age of formation.
2. Identify the main embryonic structures that are involved in the formation of the upper lip and the nose.
3. Name the embryonic structures that are involved in the formation of the maxilla, mandible and tongue.
4. Describe the microscopic and histologic features of the developing tooth (enamel, dentin and cementum).
6. Describe the microscopic anatomy and function of the oral mucosa.
7. Describe the microscopic anatomy and function of the major and minor salivary glands.
8. Relate the anatomy, histology and function of the gingiva to the development of periodontal disease.
9. Describe the histologic features and function of the temporomandibular joint.
10. Identify by name the two dental arches, the permanent teeth, the deciduous teeth, and anterior and posterior teeth.

11. Describe the order in which the teeth are positioned in the dental arch, the function of each type of tooth, and the eruption sequence of deciduous and permanent teeth.
12. Identify the areas of the oral cavity, the boundaries of the oral vestibule, and the boundaries of the oral cavity proper.
13. Describe each structure of the oral cavity as to location, color, size, and/or shape.
14. Differentiate between, and describe the location of major and minor salivary glands, and classify each according to its secretion.
15. Identify the duct for each major salivary gland.
16. Discuss the components and function of the lymphatic system, and identify and correctly palpate the lymph nodes in the head and neck regions.
17. Identify the divisions of the tooth, the surfaces of the tooth, tissues of the tooth, and tissues of the periodontium.
18. Describe each tooth tissue and those of the surrounding structures as to location, composition, and function.
19. Define the terms: active and passive eruption, proliferation, supernumerary, and anomaly.
20. Describe proximal contact areas, interproximal spaces and embrasures, and give their importance to the function and integrity of the masticatory system.
21. Define Curve of Spee, Curve of Wilson, Angle's classification of occlusion and the associated types of facial profiles.
22. List and explain deviations of individual tooth positioning.
23. Define functional occlusion, and differentiate between functional and parafunctional contacts.
24. List the types of trauma from occlusion and correctly identify the effects of occlusal trauma.
25. Identify the names and eruption dates of the deciduous teeth.
26. Using extracted teeth, identify the maxillary and mandibular incisors, canines, premolars, and molars, and describe the location and contour of each.
27. Using human skulls and diagrams, correctly identify the location of the cranial and facial bones, and the anatomical landmarks of each.
28. Using human skulls and diagrams, correctly locate and identify the anatomical landmarks on the mandible and maxilla including specified foramina and canals.
29. Locate and describe the components of the TMJ.
30. Describe the origin, insertion, and function of the muscles of mastication, the muscles of facial expression, the suprahyoid and infrahyoid muscles.
31. Correctly identify each muscle of the head and neck.
32. Describe the location and function of the muscles of the tongue, soft palate, and pharynx.
33. List and describe the papillae of the tongue, and identify the function of each.

COURSE EVALUATION:

Written Exams: recorded in DNHY 3124

- Six (6) written examinations, including the final, will be given for this course. Changes to the total number of tests may be made as needed at the discretion of the instructor. Each written exam may be comprehensive from the first class session, with the greatest emphasis placed on the new material presented since the previous exam.
- A comprehensive written final examination will be given at the end of the semester covering all course material.
- A creative digital project will be due near the end of the semester (see calendar) and will be graded according to creativeness, grammar, spelling and content, and presentation (see "Special Project" below.) No late projects accepted.

Water bottles, cell phones, calculators or computers are not allowed during examinations. Possession of any of these devices during an exam will be construed as academic dishonesty and will be dealt with accordingly.

Leaving the examination room for any reason will be construed as completion on given exam and student will not be allowed back into the testing room for completion.

Laboratory Evaluations: recorded in DNHY 3124 & 3022

- One lab exam will be given in conjunction with the written exam covering osteology. It will be a landmark recognition exercise whereby the students will identify anatomical landmarks of the skull. This will be counted as a separate test grade.

Written & Online Quizzes: recorded in DNHY 3022

- Weekly quizzes will cover material presented in class, homework, handouts, PowerPoints and reading assignments. Weekly quizzes will be reviewed in class or given correct answers online.
- Quizzes will be dropped only for an absence. Only documented excused absences will be considered. If an absence is unexcused, the quiz grade will result in a zero. If the absence is excused, the student will have their quiz grade dropped. Only 1 excused absence is allowed.

Laboratory Exercise: recorded in DNHY 3124

- Students will select the correct natural teeth necessary to utilize in placing pit & fissure sealants, and for practicing amalgam polishing. After evaluation of selected teeth by the Instructor, they will be mounted in dental stone. Following completion of Dental Anatomy, they will be used in DNHY 3012, *Dental Hygiene 3* for instruction and initial practice of the placement of pit and fissure sealants, amalgam polishing, and ultrasonic scaling techniques. They may also be utilized in DNHY 4032, *Dental Hygiene 4* for instruction and initial practice with the prophylaxis jet.
- Selection of appropriate teeth for mounting will be done on the student's own time. For Fall 2019 requirements, students will select 6 anterior teeth, 4 pre-molars, 4 molars acceptable for placing pit and fissure sealants, and 2 teeth with MO, or DO amalgams/composite on molars suitable for margination with ultrasonic. All teeth will be mounted in stone for use in clinical training for sealant placement and margination on student's time.

Directions for Mounting Teeth:

- Each bag should contain the following after selection of appropriate teeth is made.
 - 6** anterior teeth at least 2 with calculus (for ultrasonic scaling)
 - 4** molars (for pit and fissure sealant placement)
 - 4** premolars (for pit and fissure sealant placement)
 - 2** teeth with either DO or MO restorations (amalgam preferred for at least 1)
1. Mount the anterior teeth with calculus with the correct facial to lingual orientation. Carefully push the roots into the stone enough to anchor, but still allowing the calculus to be visible. If possible place the proximal surfaces in contact, or as close as you can get them in the stone.
 2. If your bag contains an anterior tooth with an amalgam, then mount this tooth with the anterior teeth, also with the proximal surfaces in contact, or as close as possible.
 3. If your bag contains a posterior tooth with an amalgam, then mount this tooth with the molars.

- Keep in mind, even though these teeth are not from the same dentition set, you should be able to mount them with the correct facial/lingual or buccal/ lingual orientation. If the roots of some of the molars are too close to distinguish (fused), then just mount according to your best judgment.
- It is advisable to have your sets sorted or grouped, and the facial/lingual orientation established prior to mixing and pouring the stone.

Laboratory Assignment: recorded in DNHY 3124

Collection of Extracted Teeth:

These collected teeth will be utilized to construct models of quadrants of the mouth. The models will be used in Dental Anatomy for tooth recognition and identification, as well as in future Dental Hygiene courses as a learning tool for Pit & Fissure Sealant placement and for practice of ultrasonic scaler usage and techniques.

- You will be responsible for contacting the dentist(s) of your choice to request their participation in this project. The office that will be helping you with this assignment should be provided with the following:
 - 1 gallon or half-gallon juice type container with large opening or mouth (transparent or semi-transparent is preferable)
 - Fill the container(s) provided from ½ to ¾ full with the following solution: 1 part unscented household bleach to 10 parts water

Example of Solution Mix: 1 cup bleach to 10 cups of water OR ½ cup of bleach to 5 cups of water

- The jug/container should be labeled as follows:
 - Your name
 - (940-397-4764)
 - *the above # is for MSU*
 - Midwestern State University
 - Department of Dental Hygiene
 - The label should then be completely covered with tape to prevent accidental spills from causing it to become illegible.

Teeth presented in formaldehyde will not be accepted!

Please remember that you are now representatives of the MSU Dental Hygiene Dept. You should approach the office personnel that will be helping you with the utmost courtesy and consideration. At the completion of this course it will be expected that a thank-you note will be sent by you to the people/offices that have helped you to fulfill this project.

Special Digital Focus Project: recorded in DNHY 3022

“Simplification of Histological and Embryological Complexities Utilizing Creativity and Animation”

The objective of this program is to design a creative animation project based on any of the twelve chapters of study (F&P Chapters 3-14, Dental Embryology & Dental Histology) covered in class. The students must research the data, become thoroughly knowledgeable, and possess enough confidence with their topic to successfully transform monotonous, factual information into enlightening and entertaining material. This technique enhances the students’ capacity for long term retention through achieving the level of understanding necessary for creative adaptation and application. It also provides an opportunity other than traditional testing for artistic students to excel. A paper must accompany this project and be submitted via email. The paper must be at least 1,000 words with a bibliography. Examples of acceptable digital

formats include cartoons, video presentation, fictional short stories (electronic), online games, screen plays, you tube videos or any other digital format approved by the instructor.

The project is due during class time on the date printed on the schedule. No exceptions.
All projects must be submitted electronically through email or D2L.

Points Assessed:	
Accuracy of Content	20
Descriptive Paper	20
Creativity and Illustration	20
Poise	20
Presentation	20
Total Project Grade	100

Oral Histology and Embryology Special Project Evaluation Grading Rubric:

Rubric:			
	20 pts	10 pts	0
Accuracy	All information presented by the student was accurate. No note cards used.	1-2 inaccuracies of information presented. Note cards used but not relied upon.	2 or more inaccuracies of information. Note cards used frequently.
Descriptive Paper	The paper was precise, clear and free of grammatical errors.	The paper had 1-2 grammatical errors and was slightly imprecise and unclear.	The paper had 3 or more grammatical errors and was imprecise and unclear.
Creativity and Illustration	The project was well thought out and interesting for all. The illustration was dynamic and was presented in an electronic format with sufficient use of digital technology.	The project was unorganized but interesting. The illustration was presented electronically with insufficient use of technology.	The project was unorganized and boring. The illustration was not electronically presented.
Poise	Student displays relaxed, self-confident nature about self, with no mistakes. No Um's.	Student makes minor mistakes, but recovers quickly and displays little or no tension. 1-5 Um's.	Student displays mistakes and has trouble recovering from them. More than 5 Um's
Presentation	The presentation was entertaining, informative and held the audience's attention.	The presentation was somewhat entertaining and mostly held the audience's attention.	The presentation was not entertaining and did not hold the audience's attention.

Homework Assignments: recorded in DNHY 3124 & DNHY 3022

- Weekly homework assignments will cover material presented in class.
- Homework assignments are turned in to D2L, on the day assigned, prior to class. No late papers will be accepted. It is expected that the student will complete this work in conjunction with reading of the assigned chapters prior to classroom discussion of the topic. This will facilitate the student's capacity for understanding and discussion during the class session(s). Students are encouraged to register online and utilize the Student Resource site offered in conjunction with the text on Elsevier website evolve.elsevier.com.

As the daily course schedule is subject to change, it should be understood that regardless of the date, whenever a new section of study is begun, the homework assignment will be due prior to the start of that class period.

Failure to turn in ALL homework sheets will result in an average grade of zero for the homework assignments necessary for the final grade computation.

Final Course Computation

Dental Anatomy DNHY 3124:

The lab exercise (teeth selection and mounting) and combined homework grade (homework papers will be averaged for one collective score) will be averaged together to count as 10% of the final course grade. The 6 written exams, including of the final, will be weighted equally and comprise the remaining 90% of the final course grade.

Students missing an exam due to illness will be allowed to make up the exam on the day of their return to school. No grade higher than a 90 will be given for make-up examinations. Students will be allowed to make up only one (1) exam per semester. This does not include the Final Exam.

Missed classes due to extreme illness and/or hospitalization associated with an illness will be evaluated by the course instructor on a case by case basis.

Course Evaluation Computation Example:

Exam #1, #2, #3, Lab Practical, Exam #4, and Final Exam count 15% each

Homework 5%,

Lab Exercise (mounting teeth) 5 % = total of 100%

Examples:

Lab exercise (mounting teeth) grade = 100

Homework papers (grades are avg.) = 98

Average = 198, divided by 2 = 99

Exam #1-Unit 1 = 92

Exam #2 -Unit 2= 86

Exam #3-Unit 3 = 90

Exam #4-Midterm = 82

Exam #5-Lab Practical = 86

Exam #6-Final = 94

Test average = 530 divide by 6 = 88.33

To calculate 10%: $99 \times 1 = 99$

To calculate 90%: $88.33 \times 9 = 794.99$

$794.99 + 99 = 893.99$ divided by 10 = 89.3. Final Course Grade =89/B

Dental Histology DNHY 3022

On-Going Quizzes Average	20%
Midterm Exam	30%
Special Project	35%
On-Going Homework Avg.	<u>15%</u>
	100%

GRADING SCALE FOR ALL DENTAL HYGIENE:

A grade of "C" is required for successful completion of this course.

A = 92 to 100

C = 75 to 82

B = 83 to 91

D = 65 to 74 (Constitutes Failure of Course in Dental Hygiene)

CLASS ATTENDANCE:

Attendance is critical in order to achieve the maximum benefits of this course. Reviewing notes and the reading assignments without active participation in the course's clinical activities will not permit the student to adequately meet course objectives. Therefore, **MORE THAN 2 ABSENCES FOR ANY REASON WILL RESULT IN THE FINAL COURSE GRADE BEING LOWERED ONE FULL LETTER GRADE.** In cases of extreme illness and/or hospitalization, individual decisions may be made.

Two (2) tardies will be the equivalent of 1 absence.

Students are responsible for all material presented in lecture as well as assigned reading. It is the student's responsibility to obtain any handouts or notes missed in class.

ONLINE COURSE:

Taking an online/combo class requires you to have access to a computer (with Internet access) to complete and upload your assignments. It is your responsibility to have (or have access to) a working computer in this class. **Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings.** Computers are available on campus in various areas of the buildings as well as the Academic Success Center. **Your computer being down is not an excuse for missing a deadline!!** There are many places to access your class! Our online classes can be accessed from any computer in the world which is connected to the internet. Contact your instructor immediately upon having computer trouble. If you have technical difficulties in the course, there is also a student helpdesk available to you. The college cannot work directly on student computers due to both liability and resource limitations however they are able to help you get connected to our online services. For help, log into [D2L](#).

RECORDING OF CLASS LECTURES:

Taping of class lectures will be permitted, but **ONLY** with **PRIOR APPROVAL** of instructor.

PROFESSIONAL DEVELOPMENT:

During the semester you will be expected to attend a minimum of two (2) professional presentations outside of regularly scheduled dental hygiene courses. You will develop a portfolio including the following information: 1) certificates of attendance (if provided); 2) dates, locations and hours of attendance; 3) presenter (including all professional titles and certifications); 4) copies of all course notes/materials provided. This portfolio will continue to be developed as you progress through the Dental Hygiene Program. It is expected that upon successful completion of the requirements of the Dental Hygiene program, and following graduation, this portfolio will provide an accurate assessment of extra-curricular professional development for the individual.

PHONE USE:

Cell phone use (texting or verbal) is extremely disruptive to your fellow classmates and to the faculty teaching your course. Therefore the use of cell phones will not be tolerated, FOR ANY REASON.

If you utilize your cell phone it will be confiscated for the remainder of the scheduled day. Repeat offenders will be asked to leave the classroom and will be required to meet with the faculty and the chair of the Dental Hygiene Dept. In case of emergencies, please notify spouses, family and friends to contact you via the program secretary at 397-4764.

THE AMERICAN WITH DISABILITIES ACT:

Midwestern State University does not discriminate on the basis of an individual's disability and complies with Section 504 and the Americans with Disabilities Act in its admission, accessibility, and employment of individuals in programs and activities. MSU provides academic accommodations and auxiliary aids to individuals with disabilities, as defined by law, who are otherwise qualified to meet academic employment requirements. For assistance call (940) 397-4 618 or (940) 397- 4515.

It is the student's responsibility to declare any disabilities. After declaration, preferably at the beginning of each semester, the student needs to contact individual instructors to determine any reasonable accommodations that may be required.

ACADEMIC DISHONESTY/ Dental Hygiene Honor System:

All Dental Hygiene courses adhere to the MSU Code of Conduct. In particular, academic dishonesty, however small, creates a breach in academic integrity. A student's participation in this course comes with the expectation that his or her work will be completed in full observance of the MSU Code of Student Conduct. A student should consult the current Student Handbook for answers to any questions about the code.

Many components of dental hygiene courses are designed to be highly interactive with students helping each other learn. Students are encouraged to take full advantage of many resources available including course resources, Internet sites, other textbooks and journals, faculty, and peers when answering objectives. This interactive collegial learning environment is conducive for life-long learning.

Cheating includes, but is not limited to, (1) use of any unauthorized assistance in taking quizzes, tests, or examinations; (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or completing other assignments; or (3) the acquisition of tests or other academic materials belonging to the university faculty or staff without permission.

Plagiarism includes, but is not limited to, the use of, by paraphrase or direct quotation without correct citation in the text and on the reference list, the published or unpublished works of another person. Students may NOT submit papers and assignments that they have previously submitted for this or other courses. The use of materials generated by agencies engaged in "selling" term papers is also plagiarism. Students are encouraged to review the tutorials and suggested websites for more information about plagiarism.

Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated in this class. Whenever a student is unsure of whether a particular situation will be interpreted as academic dishonesty, he/she should ask the instructor for clarification. If students are guilty of academic dishonesty, a grade of zero (0) will be given for the quiz, assignment, etc. Cases may also be referred to the dean of Students for possible dismissal from the university.

PLEASE NOTE:

By enrolling in this course, the student expressly grants MSU a “limited right” in all intellectual property created by the student for the purpose of this course. The “limited right” shall include but shall not be limited to the right to reproduce the student’s work product in order to verify originality and authenticity, and for educational purposes. Specifically, faculty may submit student papers and assignments to an external agency to verify originality and authenticity, and to detect for plagiarism

ETHICS AND PERSONAL VALUES

The following is excerpted from *Clinical Practice of the Dental Hygienist*, 12th Ed, by Esther M. Wilkins, Chapter 1: **“Each dental hygienist represents the entire profession to the patient being served. The dental hygienist’s expressed or demonstrated attitudes toward dentistry, dental hygiene, and other health professions, as well as toward health services and preventive measures, will affect the subsequent attitude of the patient toward other dental hygienists and dental hygiene care in general.”**

..... “A dental hygienist may be involved in a variety of moral, ethical, and legal situations as part of the daily routine.”

MSU COHSHS STUDENT CONDUCT APPEALS COMMITTEE:

- All Midwestern State University (MSU) students may legitimately appeal a course grade if: 1) the student has not been evaluated according to the same criteria as his or her classmates, or 2) an error has been made in grading and/or posting (MSU Student Handbook, p. 37). In addition, the Office of the Dean of Students has the responsibility to enforce standards of conduct for students as outlined in the MSU Student Handbook (p. 70-80).
 - When enrolled in the college of Health Sciences and Human Services (COHSHS), students are often assigned to community agencies, such as health care facilities, social service agencies, or athletic environments, as part of their academic process. During these experiences, the student is expected to behave in a manner required of professionals working in this environment. COHSHS students may also be required to successfully complete a licensing/certification process following graduation. As a result, students in these programs are often held to a different academic and/or behavioral standard than students in other MSU programs. For example, students may not be allowed to progress in a program if they have been unsuccessful (D or F) in a certain number of courses in the major. In these circumstances, COHSHS faculty and administration, all of whom have had similar professional experience, may make decisions which negatively impact students’ programmatic progress.
 - COHSHS students have a right to a review of decisions made by the program faculty, which prevent individuals from progressing in their program in a timely manner. However, those who participate in the review must understand the context of the professions involved. Therefore, issues concerning the professional conduct of students in the COHSHS will NOT be brought to the University Grade Committee, but to the COHSHS Student Conduct Appeals Committee. Specifically, the COHSHS Student Conduct Appeals Committee will review faculty decisions related to:
 - Student conduct in a clinical experience, internship, or other work-related environment that negatively impact the student’s academic progress. This conduct may include behavior which is prohibited by licensing and/or professional standards or departmental policy.
 - Student removal from a program because of a) professional conduct issues, or b) failure to maintain academic standards required specifically by the program*
- SEE COHSHS WEB SITE FOR A COMPLETE COPY OF THIS POLICY**