

MIDWESTERN STATE UNIVERSITY  
PHARMACOLOGY  
DENTAL HYGIENE PROGRAM  
DNHY 4103

## COURSE SYLLABUS (SPRING 2025)

COURSE: PHARMACOLOGY (DNHY 4103)

DAY/TIME: MONDAY 8:00-11:30 AM

LOCATION: Centennial Hall Room 103

INSTRUCTOR: Stephanie McCann, RDH, MS, BS  
Centennial Hall, Room #128

Telephone: (940) 397-4650

Email: [stephanie.mccann@msutexas.edu](mailto:stephanie.mccann@msutexas.edu)

OFFICE HOURS: Mondays 1:00-5:00 PM, Wednesdays 1:00-3:00 PM, or Friday 8-12 AM (by appointment)

### REQUIRED TEXTS

APPLIED PHARMACOLOGY FOR THE DENTAL HYGIENIST, 9TH ED., HAVELES

DENTAL DRUG REFERENCE, 13TH ED, PICKET & TEREZHALMY

Please refer to the MSU Texas Bookstore for the current price of the required textbooks for this course.

Textbooks Purchased for Previous DH Courses that will be utilized in Pharmacology.

MEDICAL EMERGENCIES IN THE DENTAL OFFICE, 6TH ED, MALAMED

ANATOMY OF THE HEAD AND NECK, 3RD ED, FEHRENBACH & HERRING

Supplemental Resource Available from the Program

HANDBOOK OF LOCAL ANESTHESIA, 6TH ED, MALAMED

### SYLLABUS POLICY

This syllabus is a guide for the course and not a "contract" - and is subject to change. Syllabus changes will be communicated via written revisions with a minimum of a 48 hour notice before 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

This course provides students the opportunity to study pharmacology as it relates to clinical dental hygiene. Drug references; prescriptions; drug action; various drug groups prescribed by physicians that affect dental hygiene care, and various drug groups used in dentistry are included for study.

## COURSE PURPOSE

Through lecture and discussion, dental hygiene students will become familiar with drugs most often used and/or prescribed by dental offices as well as drug groups used to treat medical condition and medical emergencies. Emphasis will be placed on appropriate and thorough evaluation of patient medical history forms. The key element in evaluation of patient medical histories is the ability to quickly utilize reference material to analyze the patient's physical status and to determine if modifications or the treatment plan is required to provide safe and effective treatment. Discussion of the cranial and autonomic nervous systems is included as necessary to understand the effect of many drugs with special emphasis on anatomy relative to local anesthesia.

## COURSE OBJECTIVES

Given lecture, discussion and slide identification, upon successful completion of this course, students should be able to:

1. Define and appropriately use the terminology associated with pharmacology.
2. Use appropriate reference sources to evaluate a drug.
3. Write and interpret a prescription.
4. Describe the controlled substances act and explain how it affects the dental office.
5. Identify drug groups used in dentistry and discuss their indications, dosage, pharmacokinetics, pharmacologic effects, adverse reactions and drug interactions.
6. Identify and evaluate drugs used to treat various medical conditions and determine how they might modify dental hygiene treatment planning.
7. Identify the medical conditions that require antibiotic prophylaxis.
8. Identify dental procedures that cause a transient bacteremia and therefore may require antibiotic prophylaxis.
9. Describe the standard regimen and alternatives for prophylactic antibiotic premedication in dental treatment.
10. Identify and discuss special situations that may be affected by the use of pharmacologic agents i.e. pregnancy and breast feeding.
11. Compute proper dosages for local anesthetics using accepted formulas and manufacturers recommendations.
12. Demonstrate a general understanding of the function of the autonomic nervous system.

13. Identify nerves associated with dental local anesthesia and discuss the effects of local anesthesia on them.

SPECIFIC OBJECTIVES ARE PRESENTED FOR EACH CONTENT AREA/CLASS SESSION. PLEASE NOTE THE CLINICAL SKILLS ASSESSMENT SECTION AT THE END OF EACH CHAPTER IN THE REQUIRED TEXTBOOK APPLIED PHARMACOLOGY FOR THE DENTAL HYGIENIST Demonstrate the operation of the panoramic x-ray machine.

Learning Objectives related to textbook chapters and topics will be given for each class session.

## **COURSE EVALUATION**

The final grade for this course will contain three different components: examinations, homework assignments, and a pharmacology group project. The percentages are as follows:

### **EXAMINATIONS:**

Seven examinations (including the Final Exam) will be given for the lecture portion of this course. Scheduled examinations will be comprehensive in nature, but will focus on material presented since the previous examination. These examinations will comprise 80% of the course's final 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.

The Final Examination (Junior 2nd Semester Final Exam)

This is a 4-hour examination which will serve as the combined final exam for each of the courses offered in the 2nd semester of the dental hygiene curriculum; Dental Hygiene 2, Periodontology, Radiology II and pharmacology. The exam will consist of two sections:

- (1) Approximately 200 multiple choice questions covering the content of the courses listed above and
- (2) A case based portion.

The case based portion of the exam (50-75 items) will incorporate content from ALL dental hygiene courses from the first and second semesters. The case based portion will be figured into the final exam as bonus points. This format, rather than individual course final exams, will more effectively assess the student's ability to combine didactic and clinical content, as well as aid in preparing the student for the National Board Dental Hygiene Exam.

Grading: Students will receive a grade on Part I based on the 50 multiple choice items pertaining directly to PHARMACOLOGY CONTENT. Points earned on Part 2's case based items pertaining to Pharmacology will be added to Part I as bonus points to determine the final exam grade for this course. The values of Part 2 items will be determined by the individual course

instructor. Therefore, the points earned for Part 2 items will vary between courses.

Water bottles, cell phones, smartwatches, and hand-held Calculators or computers are not allowed in the room during any examination. Possession of any of these items during an exam will be construed as academic dishonestly and will be dealt with accordingly.

### **QUIZZES**

A list of the top 100 most prescribed medications will be given to students at the beginning of the semester. Students will be quizzed on these medications throughout the semester. Quizzes will comprise 5% of the final grade in this course.

### **HOMEWORK ASSIGNMENTS:**

At the discretion of the instructor, homework concerning the impending chapter will be assigned. This work will be due by 11 PM the day before lecture period in which this material will be discussed, unless otherwise noted. Homework assignments will be assigned and turned in via the D2L portal. The average of these grades will comprise 5% of the final grade. Homework assignments turned in late will receive half credit.

### **GROUP PROJECT:**

Students will be assigned in groups to research and create a commercial for a commonly used medication within the drug class assigned to that group. This project is designed for students to become familiar with the drug classifications, medications commonly prescribed within those classifications, and evaluate the potential contraindications and side effects related to dentistry. This project will comprise 10% of the final grade for this course. MORE DETAILS TO FOLLOW.

### **MAKE-UP EXAMINATIONS**

Students missing an examination 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 a make-up examination. Students will be allowed to make up only one (1) exam per semester.

### **DENTAL HYGIENE PROGRAM GRADING SCALE**

92-100	= A
83-91	= B
75-82	= C
65-74	= D

AN AVERAGE OF 75 IS THE MINIMUM ACCEPTABLE GRADE FOR SUCCESSFUL COMPLETION OF THIS COURSE.

### **ARTIFICIAL INTELLIGENCE (AI) USAGE POLICY**

- The use of generative Artificial Intelligence Tools (AI) that emulate human capabilities (EX: ChatGPT, Dall-e, Gamma, etc.) is permitted in

this course for the following activities and must be disclosed (this includes all graded assignments and activities) in an explanatory appendix describing which tool was used and how (including illustrations and editing):

- Brainstorming and refining ideas
- Discovery of information on your topic
- Illustration of topic
- However, the use of AI tools (mentioned above) are prohibited for:
  - Discussion assignments
  - Completion of assignments
  - Making of PowerPoints
  - All written assignments

## DESIRE-TO-LEARN (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

## ATTENDANCE

Students in dental hygiene lecture and laboratory courses (not dental hygiene clinical courses) are allowed only two (2) absences in each course during a semester. All absences are counted whether they are for excused and/or unexcused reasons. Any absence over the allowed number for each course will result in a 5 point grade reduction for each absence over the number allowed. The points will be taken off the final course grade. Being tardy two (2) times will be the equivalent of one absence. You will be considered tardy if you enter class after the lecture has begun. Students must be present for the entire class period to get credit for a class session. Students leaving class early will be counted as absent.

## TECHNOLOGY SUPPORT

Students are responsible for maintaining their devices and ensuring that they are in proper working order throughout the semester. This includes maintaining access to the college wireless network, access to all accounts keeping passwords up to date. Students are expected to keep their devices up-to-date in regard to patches and OS updates. It is the student's responsibility to make sure they have access and the ability to have online assignments are turned ON TIME.

## 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 Department.

In cases of emergencies, please notify spouses, family and friends to contact you via the program secretary at 940-397-4764.

## RECORDING OF CLASS LECTURE

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

## 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

### **MSU COHSHS Student Conduct Appeals Committee**

All Midwestern State University (MSU) students may legitimately appeal a course grade if 1) the student has not be 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 impacts 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

### **SMOKING/TOBACCO POLICY**

College policy strictly prohibits the use of tobacco products in any building owned or operated by MSU TEXAS Adult students may smoke only in the outside designated-smoking areas at each location.

## SERVICES FOR STUDENTS WITH DISABILITIES

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to Disability Support Services

## CONCEALED CARRY RULES/POLICIES

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes has prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, Refer to: Campus Carry Rules and Policies

## ACTIVE SHOOTER

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit MSUReady - Active Shooter. Students are encouraged to watch the video entitled "Run. Hide. Fight." which may be electronically accessed via the University police department's webpage: "Run. Hide. Fight."

## SOCIAL MEDIA

DO NOT use any social media site related to Midwestern State University or the Dental Hygiene Dept. /Program to harass, threaten, insult, defame or bully another person or entity; to violate any College policy; or to engage in any unlawful act, including but not limited to gambling, identity theft or other types of fraud.

- Post or store content that is obscene, pornographic, defamatory, racist, excessively violent, harassing, threatening, bullying or otherwise objectionable or injurious.
- Post copyrighted content (such as text, video, graphics or sound files) without permission from the holder of the copyright. Remember, even information that is widely available to the public (such as text, photographs, or other material posted on the Internet) may be subject to copyright restrictions that prohibit unauthorized duplication or dissemination