

SPORT AND EXERCISE PHARMACOLOGY
ATRN/EXPH 3331-X10
FALL 2023

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GENERAL COURSE INFORMATION

1. Prerequisites: Junior standing in Athletic Training or Exercise Physiology
2. Credit: One semester hour
3. Intended Audience: ATRN/EXPH majors
4. Days, Times, Place: On line through D2L Learning System
5. Textbook:
 - a. Houglum, Joel and Harrelson, Gary; Principles of Pharmacology for Athletic Trainers, 3rd Ed, 2016, Slack Incorporated

COURSE PURPOSE AND GOALS

The purpose of this course is to provide the student with the knowledge's and skills necessary to better understand the pharmacology of athletic health management, and the pathology related to the injuries an athlete may receive. A survey of important pharmacological concepts and agents relevant to health, sport, and fitness professionals.

Upon completion of this course the student will be able to

1. Explain the laws, regulations, and procedures that govern storing, transporting, dispensing and recording prescription and nonprescription medications. Specifically the controlled substance act, scheduled drug classifications, and state statutes. (TI-21)
2. Identify and use terminology and abbreviations as they relate to pharmaceutical preparations. (TI-22)
3. Use an electronic drug resource and PDR to search for information on commonly prescribed medications. To include indications, contraindication, precautions, and adverse reaction of common prescription and nonprescription medications. (TI-23)
4. Explain the concepts of pharmacokinetics (absorption, distribution, metabolism, and elimination). And how exercise might affect these processes. (TI-24)

5. Explain the pharmacodynamics principles of receptor theory, dose-response relationship, placebo effect, potency, and drug interactions as they relate to the mechanism of drug action and therapeutic effectiveness. (TI-26)
6. Explain the concepts of bioavailability, half-life, and bioequivalence and their relevance to patient, medication choice, dosing schedule, and relationship between generic and brand name drugs. (TI-25)
7. Describe the common routes used to administer medications, and their advantages and disadvantages. (TI-27)
8. Explain the relationship between generic or brand name pharmaceuticals.
9. Properly assist and/or instruct the patient in the proper use, cleaning, and storage of drugs commonly delivered by metered dose inhalers, nebulizers, insulin pumps, or other parenteral routes as prescribed by the physician (TI-28)
10. Describe how common pharmacological agents influence pain and healing and their influence on various therapeutic interventions. (TI-29)
11. Explain the general therapeutic strategy, including drug categories used for treatment, desired treatment outcomes, and typical duration of treatment, for the following common diseases and conditions: asthma, diabetes, hypertension, infections, depression, GERD, allergies, pain, inflammation, and common cold. (TI-30)
12. Optimize therapeutic outcomes by communicating with patients, and/or appropriate healthcare professionals regarding compliance issues, drug interactions, adverse drug reaction, and sub-optimal therapy. (TI-31)

This is an online course using the D2L learning system

If you have questions or concerns, you NEED to e-mail me immediately at laura.poston@msutexas.edu

This class does NOT give you the time to be lost or not understand a concept. I will check my e-mail often and will be in my office daily to answer messages. Please ask questions and let me help you! As the student it is your responsibility to log on to D2L frequently (not just weekly). All important announcements, due date reminders, etc. will be posted under the course NEWS and calendar section for this course.

TENTATIVE COURSE SCHEDULE

The following is a tentative schedule of class topics, exams, and assignments. Every attempt will be made to follow the schedule. However, some alterations may be made due to circumstances beyond control. If a change is going to be

made, the students will be made aware through announcement on D2L. ***The syllabus is subject to change at instructor's discretion.***

Very important: when reviewing the ppts please do so from the home tab on power point, not the slide show. This will allow you to see the notes (additional explanatory information) that are in addition to the slide.

Week	Topic	Readings Chapters
One- 8/28	Introduction to Pharmacology, Pharmacokinetic Principles: Processes that affect drugs from Entry to Exit	1,2
Discussion	Discussion #1-- Opens 6AM 09/04 closes 11:59PM 09/10	
Two- 9/4	Pharmacodynamic Principles: Mechanism of Drug Action and Therapeutic Considerations	3
Three- 9/11	Medication Management in Athletic Training Facilities	4
Four- 9/18	Drugs for treating infections	5
Exam	Exam #1, Unit 1, Chapters 1-3 Opens 6 AM 09/18 - closes 11:59 PM 09/21	
Five- 9/25	Drugs for Treating Inflammation	6
Six- 10/02	Drugs for Treating Pain	7
Article	Article #1 Due by 11:59PM 10/04	
Seven- 10/9	Drugs for Relaxing Skeletal Muscle	8
Exam	Exam #2, Unit 2, Chapters 4-5-7 Opens 6 AM 10/09 - closes 11:59 PM 10/12	
Eight- 10/16	Drugs for Treating Asthma	9
Nine- 10/23	Drugs for treating Colds and Allergies	10
Discussion	Discussion #2--October 18 opens, closes November 1 @ 11:59pm	
Ten- 10/30	Drugs for treating Gastrointestinal Disorders	11
Exam	Exam #3, Unit 3, Chapters 8-10, Opens 6 AM 10/23- closes 11:59 PM 10/29	
Eleven- 11/06	Drugs for Treating Hypertension and Heart Disease	12
Twelve- 11/13	Drugs for Treating Psychiatric Disorders	13

Article	Article #2 Due by 11:59 PM 11/15	
Thirteen- 11/20	Drugs for Treating Diabetes Mellitus	14
Exam	Exam #4, Unit 4, Chapters 11-13, Opens 6 AM 11/20 - closes 11:59 PM 11/23	
Fourteen- 11/27	Herbal Supplements	15
Fifteen- 12/04	Performance Enhancing Drugs	16
Final 12/11	12/10 6 AM ---12/13 10:00AM	

Final Exam—Will be given **online Dec 10th 6:00 AM---Dec 13th 10:00 AM**, The exam will be **comprehensive** and cover all assigned readings and material presented during the semester.

COURSE ASSIGNMENTS

If you miss a deadline for submitting an assignment, exam or discussion, you receive a ZERO.

a. Online Discussions:

There are no scheduled “chat” sessions. There are two discussion topics/questions that will be posted. Each is worth 25 points (possible 50 points). To earn credit for participation, you must respond to the initial post from the instructor and then post an additional response to TWO other students stating your opinion or providing additional information that is constructive to the discussion. The discussions allow you to engage and interact with other students. All posting must be informative and NOT disruptive, rude or contain fowl language. It is “ok” to disagree, but keep your postings “**respectful and polite**”. Brief statements such as “I agree”, “That’s what I think” etc. will not be counted as a post. Be thoughtful and thorough on your comments.

b. Article Reviews:

As part of the course requirements you must select research articles from a “**peer reviewed journal**” that are related to health, health care, and sports medicine. The article should discuss some aspect of therapeutic medications and how they affect the athletic populations. . Please see D2L article review section for information on article selection, “what is peer reviewed” and the grading rubric.

All reviews are due on the day assigned by the deadline time. **“NO LATE PAPERS WILL BE ACCEPTED”**

All article reviews should be submitted to the appropriate course drop box on D2L by the due date and time. It is your responsibility to make sure materials are submitted at the appropriate time.

EXAMS

All exams will be given on line through the D2L learning system. **Please plan your time accordingly. MAKE SURE YOU READ ALL ASSIGNED MATERIAL ESPECIALLY TEXT CHAPTERS.** If you chose not to read the text you will have great difficulty passing the course with an acceptable grade.

LATE SUBMISSION POLICY

Discussions/Assignments/articles are DUE on the posted or announced date *by the end of the day*. For example, IF the first assignment is due on September 1, the assignments must be in the assigned drop box by the due date. Late assignments/exams will not be accepted.

Missed exams can only be made up if the absence was excused and the student has proper documentation (Dean of students or Doctor’s note). All must be completed within one week of the original due date.

COURSE EVALUATION

1. Course_Requirements:

- Completion of written examinations and quizzes covering material presented in the textbook, lectures, and references materials.
- Completion of two (2) research article reviews
- Participation in four discussions

2. Grading:

Points	
Exams (4)	200 pts (50 points each)
Discussion Participation (2)	50 (25 points each)
Article reviews (2)	50 pts (25 points each)
Final Exam	100 pts
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Total Points	400 pts

3. Grading Scale:

90-100% of total points	= A
80-89% of total points	= B

70-79% of total points	= C
60-69% of total points	= D
Below 60% of total points	= F

CAMPUS CARRY

Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at <http://mwsu.edu/campus-carry/rules-policies>.

STUDENTS WITH DISABILITIES

Midwestern State University does not discriminate on the basis of an individual's disability and complies with Section 504 of the Americans with Disabilities Act (ADA). If you have a physical, learning, sensory or psychological disability and require accommodations, please let your instructor know as soon as possible. You will need to register with, and provide documentation of your disability to the Counseling and Disability Office at 940-397-4618 or in Clark Student Center, Room 108.

ACADEMIC HONESTY/DISHONESTY

Midwestern State University is built upon a strong foundation of integrity, respect, and trust, all members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated.

Plagiarism is strictly forbidden on any course assignment. (This includes class notes and fellow students work!) All, work, besides your own, should be cited and a reference given. Do not misrepresent any of your efforts on any academic task for which you will receive a grade.

Student Honor Creed

"As an MSU Student, I pledge not to lie, cheat, steal, or help anyone else do so."
As students at MSU, we recognize that any great society must be composed of empowered, responsible citizens. We also recognize universities play an important role in helping mold these responsible citizens. We believe students themselves play an important part in developing responsible citizenship by maintaining a community where integrity and honorable character are the norm, not the exception.

Thus, we, the Students of Midwestern State University, resolve to uphold the honor of the University by affirming our commitment to complete academic honesty. We resolve not only to be honest but also to hold our peers accountable for complete honesty in all university matters.

We consider it dishonest to ask for, give, or receive help in examinations or quizzes, to use any unauthorized material in examinations, or to present, as one's own, work or ideas which are not entirely one's own. We recognize that any

instructor has the right to expect that all student work is honest, original work. We accept and acknowledge that responsibility for lying, cheating, stealing, plagiarism, and other forms of academic dishonesty fundamentally rests within each individual student.

We expect of ourselves academic integrity, personal professionalism, and ethical character. We appreciate steps taken by University officials to protect the honor of the University against any who would disgrace the MSU student body by violating the spirit of this creed.

Written and adopted by the 2002-2003 MSU Student Senate.

DEFINITIONS.

A. **ACADEMIC DISHONESTY.** An action attempted or performed that misrepresents one's involvement in an academic endeavor in any way, or assists another student in misrepresenting his or her involvement in an academic endeavor. Examples of academic dishonesty include, but are not limited

- i. Plagiarism: presenting the work (i.e., ideas, data, creations) of another, wholly or in part, as one's own work without customary and proper acknowledgement of sources and extent of use, unless authorized by the instructor
- ii. Cheating: using information, study aids, notes, materials, devices, or collaboration not explicitly approved by the instructor. For example: doing a class assignment for someone else or allowing someone to copy one's assignment; copying from, or assisting, another student during an examination; or stealing, or otherwise improperly obtaining, copies of an examination before or after its administration.
- iii. Fraud: altering or inventing data, research, or citations for an academic endeavor; fabricating, forging or otherwise misrepresenting to an instructor or an institution one's past or current academic or professional activities; impersonating someone or allowing oneself to be impersonated for an examination or other academic endeavor; using a ghost writer, commercial or otherwise, for any type of assignment.
- iv. Violation of Standards: violations against ethical and professional standards required by individual University programs, academic courses, and clinical programs that may result in qualification for entry into a profession that maintains standards of conduct.
- v. Multiple Submissions: submitting, wholly or in part, the same academic endeavor to earn credit in two or more courses without explicit approval by all concerned instructors.
- vi. Interference/Obstruction: interfering with academic efforts of other students to gain unfair advantage for personal academic advancement. Interference may include but is not limited to, sabotage, harassment, tampering, bribery, or intimidation of another student.

- vii. Complicity: assisting another person in any act of academic dishonesty as defined above.

B. ACADEMIC ENDEAVOR. Any student activity undertaken to earn University credit or meet some other University program requirement. Examples of academic endeavors include, but are not limited to:

- i. Course assignments (written/oral, projects, research, exhibitions of work)
- ii. Exams (written/oral, quizzes)
- iii. Clinical assignments (internships, rotations, practica)
- iv. Presentations (on and off campus)
- v. Publications
- vi. Independent study coursework
- vii. Plan B papers/projects, theses, dissertations
- viii. Student media associated with academic credit

Students are expected to do their own work at all times. This includes all tests, papers, quizzes, projects, reports, and notebooks. Plagiarism of any authors (even fellow classmates) work will not be tolerated.

Copying of materials using a previous student's work, notebook, etc. will not be tolerated. Students who miss class will need to get notes from other students. **HOWEVER, IT IS EXPECTED THAT THIS WORK WILL BE REDONE IN THEIR OWN WORDS.** Students using computers, word processors, etc. may not share discs or other materials between each other. To do so will be considered the same as copying of materials. In all cases students who allow for the copying of materials will be treated just like the student who does the copying.

STUDENTS WHO ARE FOUND TO BE IN VIOLATION OF THIS POLICY WILL HAVE A GRADE OF ZERO RECORDED FOR THE INVOLVED PAPER, TEST, QUIZ, PROJECT, REPORT OR NOTEBOOK. FURTHERMORE THESE STUDENTS WILL BE REFERRED TO THE APPROPRIATE DEPARTMENT, COLLEGE, OR UNIVERSITY COMMITTEE FOR THE APPROPRIATE DISCIPLINARY ACTION

MSU ALERT

MSU ALERT is an emergency notification system that gives Midwestern State University the ability to send urgent and emergency information quickly by email and / or text message. MSU ALERT subscribers will be able to receive urgent information from university officials. MSU ALERT is a free service to all MSU students, faculty and staff.

As a MSU student, faculty or staff member you are automatically enrolled in the MSU ALERT notification system. Texas law requires that the University automatically enroll all students, faculty, and staff. Once you have been enrolled and your account has been established, you have several options:

1. You may add your cell phone #, plus an additional cell phone # (this allows you to receive emergency notifications via text;
2. You may add an additional email address; or
3. You do may choose to opt-out of the notification system.

MSU ALERT is powered by e2Campus OMNILERT - a national mass notification solutions provider. Contact information you provide to the MSU ALERT service will only be used for delivering emergency information through e2Campus. E2Campus also has strict "Zero Spam" and usage policies to protect subscribers.

INSTRUCTIONS: MSU automatically sets-up your account. Once your account is established, you will need to enter into your account and add your cell phone notification information. You may also add an additional number (parent's cell #, etc.), an additional email address, or opt-out.

1. From this page, click on "User Login" under the Links Area
2. Enter your username (students - this will be your username for your MSU student preferred email address; faculty/staff - this will be the same as the campus network username for office pc access) and the password is the user's Mustang ID #(must use a capital M).
3. Click on LOGIN
4. This should open your account, then click on "Services"
5. To add your cell phone to receive emergency notifications, you must complete the required information (# and carrier), click on Add SMS. You should then receive an SMS message from Omnilert with a validation code. Enter the validation code on the computer and click "Validate." You can add multiple #s to your account.
6. You may also add additional email accounts as well.
7. Once you have completed this process, you should receive emergency notifications when they are sent out.

Opt-out Option

1. From this page, click on "User Login" under the Links Area,
2. Enter your username, it is the same as the campus network username for office pc access, your first name.last name(ex: jay.williams) and the password is the user's Mustang ID #(must use a capital M),
3. Click on LOGIN,
4. Click on "Account", top menu,
5. Check box "I agree, terminate my account,"
6. Click box "terminate account now," and
7. This will terminate your account and you will not receive emergency notifications from MSU.