



## Midwestern State University

Robert D. & Carol Gunn College of Health Sciences & Human  
Services

The Shimadzu School of Radiologic Sciences

**RADS 5552- Pharmacology & Clinical Decision  
Making**

**Course Number: RADS 5552      2 credits      Fall 2024**

**Course Title: Pharmacology & Clinical Decision Making**

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### Professor

**April Bowen, MSRS, RRA, RT(R)**

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Office: Off site

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In-office student hours:

Phone and virtual meetings via Zoom are always available by appointment.

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### Course Overview

***Prerequisites- Radiologist Assistant Majors Only***

The course includes pharmaceuticals common to radiology patients and will address indications, contraindications, complications, the intended use of these drugs, and their effect on physiology, diseases, and conditions. After learning this content and possessing the appropriate clinical skills, you will analyze the patient's current condition about medications and other therapies and determine the significance of the radiology procedure. You will suggest the appropriate action plan for the procedure for the specific patient. The student will be responsible for the delivery and documentation of procedure-related pharmaceuticals; for patient assessment and monitoring before, during, and after the procedure; and for drug administration. The student must have a clear understanding of the laws and policies related to pharmaceuticals in his or her practice setting.

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### Course Objectives

Upon completion of this course, you will be able to:

- Explain the clinical trial process, legal, regulatory, and other requirements for pharmaceuticals.

- Identify selected drug classifications, mechanisms of action, indications for use, and pertinent patient educational needs.
  - Evaluate drug effects on physiologic and psychological processes.
  - Describe processes used in medication administration.
  - Demonstrate calculations for medications.
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## Teaching Strategies

Independent reading assignments, Desire2Learn (D2L) modules, Open book module quizzes, online videos, Discussion Boards, and a Closed book proctored final exam are used in this course.

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## Course Materials

### ***Textbooks/ Subscriptions/ Licenses - Required***

ACR Committee on Drugs and Contrast Media. (2024). *ACR Manual on Contrast Media Version 2024*. American College of Radiology. Available for download in the course.- Free

Workman, M.L. & LaCharity, L.A. (2024). *Understanding Pharmacology Sherpath*. (3<sup>rd</sup> ed.). Elsevier. 978-0443124549- \$175.00 and up

### ***Microsoft Office***

Midwestern State University offers Office 365 to all students. Instructions on how to access this free software can be located at [Office 365 Education](#)

### ***Computer Requirements***

You need access to an up-to-date computer, webcam, and microphone with an internet connection for this course. Use a different browser when working in Brightspace Desire2Learn (D2L). The recommended browsers for D2L are Google Chrome, Mozilla Firefox, and Safari. Other browsers may be incompatible with D2L.

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## Course Requirements

- Complete reading assignments.
  - Participate in Discussion Boards.
  - Complete the required online examinations, including a proctored final exam.
  - Meet all submission deadlines.
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## Communication

### *Communication with the Instructor*

Communication will be through your Midwestern State University email account. An email account is created for every MSU student. If you have not accessed this account yet, please do so by logging into the Portal and clicking the student email account icon located in the Portal. You can have any messages sent here to be forwarded to the email account of your choice.

The instructor will respond to or at least acknowledge email messages from students within a maximum of five (5) business days when MSU is in session. Beyond standard university holidays and breaks, the instructor will notify you of any extended periods when email contact is not practical (professional meetings, etc.). When emailing the instructor, please include your full name, course, and section number, and a thorough explanation in your message. This will help expedite your request or needs.

You should also periodically check the 'News' section within D2L for course updates and other important information.

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## Behavioral Expectations and "Netiquette"

### *Netiquette*

When communicating through a digital environment (e.g. email, discussion boards), please use proper netiquette. The following guidelines will help you to communicate effectively.

- Don't say things that you wouldn't say in a face-to-face environment or any public place.
- Don't share confidential information.
- Use the subject line to identify the content of the message.
- Stay up to date on forum postings by reading them regularly.
- Always comply with copyright by citing your references when posting online content.
- Use individual e-mail for messages to individuals rather than tying up the group list.
- Electronic communication does not provide visual cues, such as smiles or frowns that face-to-face communication allows. Therefore, humor and/or sarcasm in a written text might be misunderstood and interpreted as rude or inflammatory in the online environment. Choose your words carefully to avoid hurting or angering anyone. Should emotions become inflamed, do not promote anger. Take a cooling down period, perhaps overnight, before you engage in the online activity again.

- Avoid using all capital letters in your text. This is considered ‘shouting’ in the online classroom.
- Aim for clarity and readability in your text.
- Use proper English and remember to spell-check.
- If you do not understand the assignment’s directions or the posts of your classmates, don’t be afraid to ask for clarification.

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## Academic Integrity

RADS 5552 adheres to the [MSU Code of Conduct](#).

Academic dishonesty, however small, creates a breach of academic integrity. Your participation in this course comes with the expectation that your work will be completed in full observance of the MSU Code of Student Conduct. You should consult the current [Student Handbook](#) for answers to any questions about the code.

All components of RADS 5552 are designed to represent the efforts of each student individually and are NOT to be shared, copied, or plagiarized from other sources. When you submit your efforts for grading, you are attesting you abided by this rule.

Online plagiarism and artificial intelligence (AI) writing generator detection services may be used in this course. Your assignments may be uploaded to the service for identification of similarities to other student papers, published works, or AI-generated text.

The term “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 carrying out other assignments.
3. the acquisition without permissions, of tests or other academic material belonging to a member of the university, faculty, or staff.

The term “plagiarism” includes, but is not limited to:

1. the use by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment.
2. the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.
3. The use of papers and assignments that the student has previously submitted for this or other courses.

The term “collusion” means collaboration with another person in preparing work offered for credit if that collaboration is not authorized by the faculty member in charge.

Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated in this class. If students are guilty of academic dishonesty on a quiz or assignment, a grade of **zero (0)** will be given for the quiz, exam, or assignment.

Based on the severity of the case, a grade of "F" may be given. Cases will be referred to the department disciplinary committee, which may result in dismissal from the program. Cases may also be referred to the Dean of Students for possible dismissal from the university.

By enrolling in this course, you expressly grant MSU a "limited right" in all intellectual property created for this course. The "limited right" shall include, but shall not be limited to, the right to reproduce your work/ project with acknowledgment, to verify originality and authenticity, and for educational purposes. Specifically, faculty may submit your papers and assignments to an external agency to verify originality and authenticity and to detect plagiarism and the use of AI writing generators.

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## **Evaluation**

### ***Grade distribution***

- 40% Module Quizzes
- 30% Final Exam
- 20% Discussion Board
- 10% Class Participation

### ***Grade Scale***

A = 90% – 100%

B = 80% - 89%

C = 70% - 79%

D = 60% - 69%

F = 59% and below

Final grades are rounded (Ex. 89.5 is rounded to 90 or an A; 89.4 is not rounded). Individual quizzes and/or assignments are not rounded,

### ***Grading Cycle***

All assignments are graded together to maintain a higher level of consistency. Grading begins on the first business day after the due date, outside of university holidays and professional meetings, and is typically completed before the next due date. You may track your progress through the Gradebook in D2L.

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## **Late Work and Extra Credit**

### ***Due Dates.***

Assignments must be submitted by 23:59 (11:59 pm) Central time, on scheduled due dates in the course schedule. If you fail to meet a deadline, you will receive **no (0) credit** for the assignment not submitted on time. Assignments are graded as **complete** after the due date.

***Emergency Extension.*** If you have a major event such as a death in the family, illness, hospitalization, or other extenuating circumstances, email the instructor as soon as possible and on or before the scheduled due date. The instructor will grant extensions on an individual basis.

### ***Extra credit:***

You have what it takes to succeed in this course by studying and communicating with your instructor; therefore, extra credit is **not** awarded in this course.

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## **Attendance**

This is an asynchronous online education course. Regular logins to D2L will benefit you in several ways, such as ensuring that messages from the professor are received promptly, you do not miss important information, and you do not miss due dates. You should expect to log in at least three (3) times per week. See the Course Schedule section for specific due dates.

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## **Course Organization**

**Module 1:** General Principles and Dose Calculation

**Module 2:** Anti-infective and Immunization and Immunosuppressant Drugs

**Module 3:** Pain Control, Migraines, Muscle Spasms, General Anti-inflammatory, Seizures, Psychiatric problems

**Module 4:** Urine Output, Hypertension, Heart failure, Dysrhythmics

**Module 5:** Lipids, Blood clotting Respiratory

**Module 6:** GI, Ulcers, Reflux, IBD, Diabetes, Thyroid

**Module 7:** Male reproductive, Female reproductive, and Contrast

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## **Assessments**

### **D2L Module Quizzes -40%**

Each module will have a 25-to 30-question quiz to assess your understanding of the information in the modules. The module quizzes are timed (50-60 minutes); therefore, you must be prepared by reading the required material before attempting the quiz. The quizzes

consist of multiple-choice, matching, fill-in-the-blank, and multiple-response questions. The time limit for the quizzes will be enforced, and the quiz will prevent any changes after the time limit is exceeded; therefore, watch your time.

Read the study guides, practice applying and using the information learned, and watch associated video presentations. Review the important key items and the objectives before attempting a quiz.

The quizzes must be completed by the due dates and times in the course schedule.

### **Final Exam -30%**

To ensure you have adequately met the course objectives, a comprehensive proctored **closed**-book final exam will be administered using Desire2Learn (D2L) by the course date listed at the end of the syllabus. You may use a calculator (no cell phone calculators) and scratch paper for the final exam. No other resources may be used. Bathroom breaks are not allowed.

### **LockDown Browser + Webcam Requirement**

This course requires the use of LockDown Browser and a webcam for online exams. The webcam can be the type that is built into your computer or one that plugs in with a USB cable.

Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.

<https://www.respondus.com/products/lockdown-browser/student-movie.shtml>

### **Download Instructions**

- Select the quiz in the course
- Under Quiz Requirements you will see "To take this quiz you must use the Respondus LockDown Browser"
- Below this will appear: "You can use the button below if you have not already downloaded LockDown Browser." Click the button to go to the download page and then follow the instructions
- Use the link to download Respondus LockDown Browser to your computer; follow the installation instructions
- Return to the Quiz page in Brightspace (it may still be open in another tab) and select the quiz
- Select "Launch LockDown Browser"
- The quiz will now start

Note: LockDown Browser must only be installed once on a computer or device. It will start automatically from that point forward when a quiz requires it.

### **Guidelines**

When taking an online quiz, follow these guidelines:

- Ensure you are in a location where you will not be interrupted
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach
- Before starting the test, know how much time is available for it, and that you have allotted sufficient time to complete it
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices
- Remain at your computer for the duration of the test
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam
- To produce a good webcam video, do the following:
  - Avoid wearing baseball caps or hats with brims
  - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) is likely to move
  - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
  - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)
- Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted

### **Getting Help**

Several resources are available if you encounter problems with LockDown Browser:

- The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area
- [As applicable, insert information about your institution's help desk, including how to contact them. Some help desks want students to run the "System & Network Check" and the "Webcam Check" before they are contacted—and even forward the results of these checks when opening a ticket.]
- Respondus has a Knowledge Base available from [support.respondus.com](https://support.respondus.com). Select the "Knowledge Base" link and "Respondus LockDown Browser" as the product. If your problem is with a webcam, select "Respondus Monitor" as your product
- If you're still unable to resolve a technical issue with LockDown Browser, go to [support.respondus.com](https://support.respondus.com) and select "Submit a Ticket." Provide detailed information about your problem and what steps you took to resolve it

### **Discussion Board -20%**

To apply your knowledge of medications, how they affect the patient, and the



consideration of how patient medication may influence radiology procedures, you will be given a patient scenario to discuss items related to the learning modules on the discussion board. The instructions are found in the modules and the discussion board area of the course. You will make an initial post and respond to another student's post by the date in the syllabus. Students cannot see other posts until they post their initial discussion. The initial post is 75%, and the response post is 25% of the discussion grade.

### **Class Participation -10%**

Students must participate in class activities and discussions. Evidence of class participation includes regularly logging into the course, participating in class discussions, and submitting assignments/quizzes on time.

## **RADS 5552-Fall 2024- Course Schedule**

<b>Date</b>	<b>Activity</b>
	*Note all quizzes and assignments are due at 11:59 p.m. CST
August 26	MSU Fall Semester Classes Start
Monday, September 16	Module 1 quiz due
September 23 (Monday)	Discussion Board Module 2- Initial post due
September 27 (Friday)	Discussion Board Module 2- Response post due
Monday, September 30	Module 2 quiz due
October 7 (Monday)	Discussion Board Module 3- Initial post due
October 11 (Friday)	Discussion Board Module 3-Response posts due
Monday, October 14	Module 3 quiz due
Monday, October 28	Module 4 quiz due
November 4 (Monday)	Discussion Board Module 5 initial post due

November 8 (Friday)	Discussion Board Module 5 response posts due
November 11 (Monday)	Module 5 quiz due
November 18 (Monday)	Discussion Board Module 6-Initial post due
November 22 (Friday)	Discussion Board Module 6-Response posts due
Monday, November 25	Module 6 quiz due
November 25 (Monday) at 4:00 p.m. C.S.T.	Last day to drop the course with a "W"
November 27-Dec 1	Thanksgiving break
Monday, December 9	Module 7 Quiz due
December 9- December 12 (Thursday) at 5:00 p.m. CST	Final Exam

## Special Needs

Following Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University makes reasonable adjustments in its policies, practices, services, and facilities to ensure equal opportunity for qualified persons with disabilities to participate in all educational programs and activities.

The Office of Disability Services (ODS) provides information and assistance, arranges accommodations, and serves as a liaison for students, instructors, and staff. A student/employee who seeks accommodations based on disability must register with the [Office of Disability Support Services](#). Documentation of disability from a competent professional is required.

Individuals with grievances related to discrimination or lack of accommodation based on a disability are encouraged to resolve the problem directly with the area involved. If the matter remains unresolved, the Office of Disability Support Services will provide advice and/or assistance for resolution. The grievance procedure may be found in the [Student Handbook](#).

The ADA Coordinator may be contacted at (940) 397-4140 or 3410 Taft Blvd., Clark Student Center Room 168.

### *The Use of Auxiliary Aids and Intermediaries*

Students with documented disabilities are provided with accommodations in the Program, which may include the involvement of an intermediary or auxiliary aid. No disability can be reasonably accommodated with aid or intermediary that provides cognitive support, substitutes for essential clinical skills, or supplements clinical and ethical judgment. Thus, accommodations **cannot** eliminate essential program elements or fundamentally alter the RA program curriculum.

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## Administrative Process

The student and the course instructor should first address unresolved issues related to this course. If there is no resolution, students must follow this sequence:

1. Interim Department Chair – Lynette Watts (940-397-4833)
2. College Dean - Dr. Jeff Killion (940-397-4594)
3. Dean of Students – Matthew Park (940-397-7500)

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## Technical Difficulties

Occasionally, you may experience problems accessing D2L, accessing class files located within D2L, connecting with your internet service, or other computer-related problems. Inform the instructor of a technical problem as soon as possible. If a problem occurs on our end, such as D2L failure, a due date extension will typically be granted.

***However, remember that it is your responsibility to have (or have access to) a working computer for this class. Assignments and quizzes are due by the due date, and personal computer technical difficulties will not be considered a reason for the instructor to allow students extra time to submit assignments, quizzes, or discussion postings.***

Dropbox assignments that can be attached in an email should be emailed to the instructor when a problem is encountered. Failure to do so may result in lost points, regardless of connection issues.

For help options:

- For D2L issues, go online go to the [Distance Education Helpdesk](#)
- By phone, call the Distance Education office at 940-397-4868 between 8:00 a.m. and 5:00 p.m. CST.
- Use the D2L help link in D2L.
- Contact the instructor.
- For other computer access issues, visit the MSU Information Technology Website online

## Campus Carry Policy

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, following state law. For more information regarding campus carry, please refer to the University's webpage at [Campus Carry](#)

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## Active Shooter

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

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***The instructor reserves the right to change the syllabus, including assignment due dates when unforeseen circumstances occur. These changes will be announced early so students can adjust their schedules.***