



**Midwestern State University**  
Robert D. & Carol Gunn College of Health Sciences & Human  
Services  
The Shimadzu School of Radiologic Sciences  
**RADS 5356- RA Clinical Preceptorship III**

**Course Number: RADS 5356 6 credits Spring 2023**  
**Course Title: RA Clinical Preceptorship III**

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**Professors**

**Vicki Dillard, MSRS, RRA, RT(R)(CV)(CT) and Richard Redd, M.D.**

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In-office student hours: Tuesday 9:00 a.m.–12:00 p.m.,  
Wednesday 9:00 a.m.–4:00 p.m.,  
Thursday 9:00 a.m.– 12:00 p.m.

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

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**Course Overview**

This clinical course will focus on imaging procedures, anatomy, physiology, and pathophysiology of the musculoskeletal system. In addition to scheduled in-class activities, the students observe and participate in radiographic procedures and imaging under the direct supervision of radiologist preceptors for at least twenty-four (24) clinical hours per week.

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**Course Objectives**

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

- Apply knowledge and skills to function at an advanced clinical level.
- Demonstrate communication skills to promote improvement of health care, develop professional practice and maintain interdependent working relationships with other health care professionals.
- Use critical thinking strategies for the resolution of concerns and issues in radiologic sciences.
- Demonstrate professional ethical behavior.
- Apply patient assessment evaluations.
- Formulate image analysis for musculoskeletal and endocrine procedures.

- Demonstrate competence on musculoskeletal and endocrine procedures, including patient preparation, fluoroscopy, and other procedures encountered during the semester.
  - Identify and describe the use of contrast materials used in musculoskeletal and endocrine imaging.
  - Identify indications and contraindications for appropriate musculoskeletal and endocrine procedures.
  - Discuss the pathophysiology of diseases common affecting the musculoskeletal and endocrine systems.
  - Identify common pathologies demonstrated on musculoskeletal and endocrine imaging.
  - Perform musculoskeletal and endocrine procedures under the supervision of a radiologist.
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## Teaching Strategies

Clinical, lecture, online videos, group discussion, written assignments, image review, and student presentations. In addition to scheduled in-class activities, the student will observe and participate in radiographic procedures and imaging under the direct supervision of his/her preceptor radiologist at least twenty-four (24) clinical hours per week.

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## Course Materials

### ***Textbooks- Required***

Herring, W. (2019). *Learning radiology: The basics* (4<sup>th</sup> ed) Elsevier Saunders. [ISBN: 978-0-323-56729-9] - \$50.33 and up

Sun, E.X., Shi, J., & Mandell J.C. (2021). *Core radiology: A visual approach to diagnostic imaging* (2<sup>nd</sup> ed.). Cambridge University Press. [ISBN 978-1-108-96591-0] – \$121.29 and up

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

- Trajecsyst student clinical recordkeeping system. <https://www.trajecsyst.com/> \$150.00
- Osmosis.org license. \$179.00-6-month subscription; \$199.00 -1-year subscription; \$279.00 for 2-year subscription

### ***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

To succeed in this course, you must:

- Complete 336 total clinical hours.
  - Perform at an acceptable level as evaluated by the radiologist preceptor.
  - Submit two case studies, according to guidelines.
  - Enter patient interactions/procedures in an online database.
  - Complete course modules, reading, quizzes, and/or assignments.
  - Meet all submission deadlines.
  - Successfully perform the In-class image review (Hot-Seat) with a score of 80 or higher
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## Attendance

This is a hybrid distance education course. Because of the unique distance learning format for this program, you must be present and on time for the on-campus seminar or required Zoom sessions to receive a passing grade. There are no exceptions to this policy. If you are tardy for class, you risk a grade reduction or dismissal from the class. The instructor will contact you in case of campus closures or other unforeseen events to arrange a virtual class session.

Regular logins to D2L will benefit you in several ways, such as it will ensure 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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## 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 have the option to have any messages sent here to be forwarded to the email account of your choice.

The instructor will respond 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”

### *Behavioral Expectations*

All students are expected to help create an environment conducive to effective teaching and learning for all participants. Behavior that disrupts teaching and learning is unacceptable; accordingly, all face-to-face or online interactions should be civilized, respectful, and relevant to the topic. Diverse opinions and engaging argumentation are critical to the higher learning endeavor, but inappropriate behavior that disrespects others or inhibits others from learning may result in sanctions, including but not limited to the removal from the classroom and/or the course. Serious or habitual offenses may result in a referral to the Radiologic Sciences Department Chair, the College Dean, or the Dean of Students.

Disruptive behaviors include:

- offensive comments
- loud and/or frequent side conversations
- dominating classroom discussions
- frequently interrupting others
- aggressively challenging others
- name-calling (attacking the person)
- appearing under the influence of drugs or alcohol

### *Netiquette*

When communicating through a digital environment (e.g., email, discussion boards), please use proper netiquette for your communication. 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 5356 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 5356 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. An online plagiarism service may be used in this course. Your assignments may be uploaded to the service for identification of similarities to other student papers and published works.

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 permission, of tests or other academic material belonging to a member of the university, faculty, or staff.
4. ***Alteration or falsification of any clinical record or evaluation.***

The term "plagiarism" includes, but is not limited to:

1. the use by paraphrasing 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. ***If a student is guilty of falsification of clinical documentation or evaluation, they will be dismissed from the RA program.***

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.

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## Evaluation

### *Grade distribution*

- 40% Professional Evaluations (2 evaluations- 20% each)
- 25% In-class Image Evaluation (Hot-seat)(2 Hot-seat sessions- 12.5% each)
- 15% Module Quizzes
- 10% Case Studies (2 case studies- 5% each)
- 10% Semester Documentation

### *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 and is a B). Individual quizzes and/or assignments are not rounded,

### *Grading Cycle*

All assignments are graded together as a group 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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## Course Organization

**Module 1:** Introduction and Arthropathies

**Module 2:** Trauma

**Module 3:** Neoplasms

**Module 4:** Metabolic, Endocrine, Infections, Miscellaneous

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## Assessments

**Professional Evaluations completed by the Radiologist Preceptor(s) - 40% (2 per semester, 20% each)**

To ensure you are demonstrating proper communication skills, professional ethical behavior, critical thinking skills, patient management skills, patient safety, and radiation safety practices, image observation skills, procedural/ technical skills, and a willingness to accept criticism, the Radiologist Preceptor(s) (and RA Clinical instructor(s), if at the site) will evaluate your performance twice a semester (**midterm and end-of-semester**).

The instructor will email the Radiologist Preceptor and the RA Clinical Instructors a link for the evaluation. Radiologist Preceptor(s) may gather information from other radiologists and staff to make their evaluations. If you have more than one Radiologist Preceptor or you have RA Clinical Instructors performing your evaluation, your grade will be averaged from all the submitted evaluations. Evaluations must be submitted directly to the instructor by the Radiologist Preceptor and/or the RA Clinical Instructor. The instructor will review the grade and the feedback with you after submission.

**In-class Image Evaluation (Hot-Seat) -25%**

To assess how you formulate initial observations on imaging, describe and identify pathology, and develop differential diagnoses, you will participate in a “hot seat” for image observation during seminar classes. Various faculty members will display randomly selected images and you will describe what they observe on those images. Radiographs will primarily focus on the musculoskeletal and endocrine systems but may include chest, gastrointestinal, and hepatobiliary images as a review. You will be assessed using a rubric found in the course.

**D2L Module Quizzes -15%**

To assess your understanding of the information in the modules, each module will have a 30-question quiz. The module quizzes are timed (60 minutes), therefore, you must be



prepared by reading the required material before attempting the quiz. The quizzes consist of multiple-choice, matching, and multiple-response questions. The Module 2 quiz will include a case study essay where you will be given a case scenario and answer 3 questions about the case. Because this is an essay question, 15 minutes will be added to the time (75 minutes). 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.

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

### **Case Study Presentations (2 case studies)-10%**

To assess your knowledge of musculoskeletal and endocrine pathology and procedures that you learned in the course, you will describe the patient presentation, characteristics of the pathology, appearance of pathology on imaging, and patient management by producing 10 to 15-minute presentations with PowerPoint.

***One presentation must be over a pathology seen on a procedure in found in the ARRT invasive non-vascular category and the other will be over any other pathology.*** You will post your selection on the discussion board for the instructor's approval. Students may not have the same topic. The selection of the topic is on a first-come-first-served basis.

You will produce two-10 to 15-minute PowerPoint presentations that cover all the items in the case study checklist found in the course. All patient information must be removed as per HIPAA policy. There should also be in-text citations and a reference list in APA format at the end of the presentation.

You will present one case studies of your choice during class. For the presentation you choose not to present in class, you will record a 10 to 15-minute PowerPoint presentation with a voice-over recording covering all the items in the case study checklist found in the course. You will be assessed using a rubric found in the course.

You will upload both PowerPoint slide decks to the appropriate dropbox in the course. The presentation must be completed by the due date and time in the course schedule.

### **Semester Documentation - 10%**

To ensure students are recording their clinical experiences, clinical time, procedures, and competencies All Semester Documentation will be submitted to the proper assignment dropbox or recorded in the [Tracejsys](#) reporting system.

### **Components**

#### ***Semester goals***

You will develop 3-5 semester goals to complete by the end of the semester. The goals should be measurable and achievable. You will upload a Word document with the goals to the correct course dropbox by the due date in the course syllabus.



### ***Daily Clinical Procedures***

You will record all patient procedures you assisted and performed in clinical in the [Tracejsys](#) system. You must document the radiologist, or other designated individual, who observed you performing the procedure. You must document only the last 5 digits of the patient's accession, exam, or medical record number for verification purposes. If you have a question on how to record the procedure, contact the instructor for guidance.

### ***Clinical Time***

This semester you are responsible for a minimum of **336 clinical hours**, which 36 are spent reviewing images with the Radiologist Preceptor. The semester is 16 weeks in length. Clinical hours for this semester are based on 15 weeks x 24 contact hours per week with a Radiologist. Of the 24 hours per week, you are expected to spend 4 hours per week of direct image review with the Radiologist Preceptor.

You will use the [Tracejsys](#) system to "clock in" and "clock out" at the clinical site to record your time. You may record your time on your portable device, but the location services must be active. If you are traveling from one clinical site to another, you must clock-out at one site and clock-in at another. Time is not counted for travel between sites. Sometimes you may forget to clock-in or out or there may be technical difficulties. You may create a time exception for these circumstances. You will be allowed only six time exceptions per semester.

The instructor will approve all time. Your time will **not** be approved if you clock-in or -out from a location not your clinical site or at a different clinical site than the one selected. If you have any questions or difficulty with the system, contact your instructor.

**The instructor reserves the right to verify all clinical documentation. Any falsification of clinical documentation will result in immediate dismissal from the RA program and a F in the course.**

### ***Mid-semester Clinical Experience Narrative***

The instructor would like to know about your experiences and feelings during your time at clinical and identify any issues that may need advice or intervention.

To communicate your experience, you will write a 1-to-2-page narrative paper and submit it to the appropriate dropbox in the course by the due date in the course schedule. You can discuss your clinical experiences and self-reflect on your time in clinical. You can discuss things you are learning, challenges, things needed to be improved on, communication/interaction with radiologists and technologists, interesting cases, complications or incidents, personal struggles, things the student would like to work on for next semester, etc. These are your thoughts and experiences, so references are **NOT** needed, but please use

proper writing mechanics (grammar, punctuation, etc.) for the narrative. You will submit the narrative to the appropriate dropbox by the due date in the syllabus.

### ***ARRT Clinical Competency Forms***

For any procedures in which you demonstrate competency, the appropriate ARRT forms (CR2A–2E) will be completed by the Radiologist Preceptor. You will scan and upload any ARRT clinical competency forms **AND** the MSU competency worksheet to the appropriate course dropbox throughout the semester as needed. ***It is your responsibility to retain all ARRT Clinical Competency forms for the ARRT.***

### ***End-of-semester Clinical Experience Narrative***

The instructor would like to know about your experiences and feelings during your time at clinical and identify any issues that may need advice or intervention.

Like the mid-semester clinical experience, you will write a 1-to-2-page narrative paper to communicate your experiences and submit it to the appropriate dropbox in the course by the due date in the course schedule. You can discuss your clinical experiences and self-reflect on your time in clinical. You can discuss things you are learning, challenges, things needed to be improved on, communication/interaction with radiologists and technologists, interesting cases, complications or incidents, personal struggles, and things that you would like to work on for next semester, among others. ***Include the goals from the first of the semester you have accomplished and/or not accomplished this semester.*** These are your thoughts and experiences, so references are ***NOT*** needed, but please use proper writing mechanics (grammar, punctuation, etc.) for the narrative. You will submit the narrative to the appropriate dropbox by the due date in the syllabus.

### ***Miscellaneous Documentation***

To meet the ARRT professional activities and accomplishments requirements, you will upload any continuing education, seminars, presentations, community service, skills check, etc. (if applicable) performed during the semester to the appropriate dropbox by the due date at the end of the course syllabus.

### ***Clinical Completion Plan***

To encourage active participation in clinical and keep students on track with the procedural requirements for graduation, the instructor will provide a suggested clinical completion plan. This semester, ***50% (250)*** of the total minimum procedure performances should be completed by this time in the program and ***50% (8-10)*** of the total competency requirements should be completed.

**All course requirements must be completed before a grade is awarded.** Students must complete the final and all course work by the dates published in the course schedule.

See the Course Schedule below.

### RADS 5356- Spring 2023- Course Schedule

RADS 5356-Spring 2023- Course Schedule	
Date	Activity * All assignments due by 11:59 p.m. CST
January 17	Classes Begin
February 2–3	RA On-campus Days
February 10	Semester Goals due to dropbox
February 10	Module 1 Quiz due
February 24	Case study topics due to Discussion Board
March 3	Module 2 Quiz due
March 10	Mid-semester Professional Evaluation due (preceptor to submit)
March 10	Mid-semester Clinical Experience Evaluation due
March 11 – 19	Spring Break
March 31	Module 3 Quiz due
April 6 – 9	Easter Break
April 26 (Wednesday)	Submit case studies to dropbox
April 27 – 28	RA On-campus Seminar Days
May 5	Module 4 Quiz Due
May 10 (Wednesday)	All Semester Documentation due ( <a href="#">End of semester Clinical Experience Evaluation</a> , <a href="#">ARRT competencies</a> , <a href="#">Misc. documents</a> ) to correct dropbox Clinical procedures and clinical time entered in <a href="#">trajecsys.com</a> )

### Special Needs

Following Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make 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, advice and/or assistance will be provided by the [Office of Disability Support Services](#) 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 involvement of an intermediary or auxiliary aid. No disability can be reasonably accommodated with an 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**

Unresolved issues related to this course should be first addressed between the student and the course instructor. If there is no resolution, students must follow this sequence:

1. Department Chair – Beth Veale' (940-397-4611)
2. College Dean - Dr. Jeff Killion (940-397-4594)
3. Dean of Students – Matthew Park (940-397-7500)

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## **Technical Difficulties**

On occasion, you may experience problems with accessing D2L, accessing class files located within D2L, connecting with your internet service, or you may encounter 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, then a due date extension will typically be granted.

***However, keep in mind 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 as soon as a problem is encountered. Failure to do so may result in points being lost, 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, go online to the [MSU Information Technology Website](#).

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