

**Midwestern State University**  
**College of Health Sciences & Human Services**  
**Master of Science in Radiologic Sciences**

**CONTEMPORARY TRENDS IN RADIOLOGIC SCIENCES**

RADS 5013 Contemporary Trends in Radiologic Sciences Section 290, Spring 2025

**COURSE DESCRIPTION**

*Prerequisite:* Admission to the MSRS Program.

Hybrid course exploring current professional issues in imaging sciences and radiation therapy.

**COURSE INSTRUCTORS**

**Lynette K Watts, Ph.D., RT(R)**  
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**Beth L. Veale, Ph.D., RT(R) (QM)**  
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**COURSE OBJECTIVES**

Upon successful completion of this course, the students will:

- Discuss current administrative, educational, and advanced clinical practice trends in imaging sciences and radiation therapy.
- Evaluate the relevancy of research data to current professional practice.
- Analyze research articles related to current trends in imaging sciences and radiation therapy.
- Synthesize peer-reviewed articles related to professional practice in a scholarly research paper.
- Demonstrate proper use of the American Psychological Association (APA) writing style.
- Create an oral and poster presentation summarizing the scholarly research paper.
- Actively participate in a hybrid classroom.

## COURSE EXPECTATIONS

- Read the syllabus in its entirety. It contains important information to succeed in this course.
- Regularly log into Desire2Learn (D2L), and check the course and email for updates and information from instructors. Often, acknowledgment of an email will be requested.
- Be punctual during the weekend class seminars. Tardiness results in a participation grade reduction.
- Be an active learner. Fully participate during the face-to-face and online components of this course.
- Contact instructors with any questions or concerns. Instructors' preferred method of contact is email (include both instructors in emails). Telephone calls must be scheduled accordingly.
- Be respectful to peers and instructors.

## TEXTBOOKS

### *Required*

1. American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7<sup>th</sup> ed.). Washington, DC: Author. [978-1433832161 (\$18.00 +)]

### *Recommended*

1. Aaron, J. E. (2014). *The little brown handbook*. Boston: Pearson. [ISBN: 978-0135571316] (Amazon \$49.99)
2. Galvan, J. L. (2014). *Writing literature reviews: A guide for students of the social and behavioral sciences* (7<sup>th</sup> ed.). Glendale, CA: Pycszak Publishing. [ISBN:978-0-415-31574-6] (Amazon from \$25.90 - \$39.74)

## GRADING/GRADING SCALE

- 75% Scholarly Research Paper (Literature review)
  - 5% Article Critiques
  - 10% Synthesis Matrix
  - 10% Title Page and Reference List
  - 15% Final Paper Draft
  - 30% Final Paper
- 20% Oral and Poster Presentation
- 10% Class Participation
  - 8% - In-class/online discussion/engagement
  - 2% - Self-assessment (APA/writing quiz)

A 90-100

B 80-89

C 70-79

D 60-69

F 59 and below

## ATTENDANCE

Without exception, students must attend and participate in both graduate weekend seminars to receive credit for this course. **Classes open August 26<sup>th</sup>.**

### COURSE SCHEDULE WITH ASSIGNMENT DUE DATES

Date	Assignment/Activity
January 21	Class opens!
January 27 - <i>Monday</i>	Self-Assessment – Discussion Board Article Critiques – Dropbox
January 31 - <i>Friday</i>	<b>First Weekend Seminar</b> <b>Students must be prepared to discuss trends (see faculty PP for ideas) and possible paper topics</b> <b>Syllabus statement must be signed and in the dropbox</b>
February 7 - <i>Friday</i>	Final Paper Topic Approval – Discussion Board ( <i>IF</i> needed)
February 24 - <i>Monday</i>	Synthesis Matrix
March 3 - <i>Monday</i>	Title Page and Reference List – Dropbox
<i>March 6 - Thursday</i>	<b>Mid-semester check-in – 12:00 – 1:00 p.m. CST</b> <b>(NOT mandatory)</b>
April 14 - <i>Monday</i>	Rough Draft – Dropbox
April 28 - <i>Monday</i>	Final Paper – Dropbox
May 1 - <i>Thursday</i>	Poster Presentation to the Dropbox Oral Presentation to the Discussion Board
May 2 - <i>Friday</i>	<b>Second Weekend Seminar</b> <b>Oral and Poster Presentation</b>

**Note:** Assignments are due by 11:59pm Central Standard Time (CST) unless indicated.

**The last opportunity to drop this course with a grade of W is 4:00 pm CST on April 30, 2025.**

## LATE SUBMISSION OF ASSIGNMENTS

All assignments have due dates indicated on the course schedule. Due dates are in place to keep students on target for the semester and allow instructors the time to provide detailed, constructive feedback. **Assignments not turned in on time will result in a 0 being recorded for that assignment.** Assignment submissions are

considered complete and graded as such. Be sure to look at all requirements including the grading rubrics before submitting course assignments within D2L.

Instructors understand students who are enrolled in the MSRS Program may be responsible for managing many employees and/or students as well as personal family matters. If students need any assistance regarding a deadline, they must contact the instructors **at least two days before the due date to discuss the issue**. “After the fact” stories are not accepted and will result in a grade of 0. Emergencies (death, severe illness, etc.) occur, so students should contact the instructors as soon as possible to resolve any due date conflicts. Assignment extensions are decided on a case-by-case basis.

## ASSIGNMENTS

- Self-assessment Discussion Board
  - Students will participate in a discussion board on D2L prior to coming to campus the first weekend of the semester. They will discuss their perceived strengths and weaknesses in the area of writing. This networking opportunity will help students find writing support for their weaknesses and use their strengths to help classmates. This discussion board will allow the instructors to determine where to focus lecture and learning activities during the first weekend of class.
  
- Journal Article Critiques
  - Students will complete critiques of two quantitative (original research studies that will indicate “original research”, “quantitative study”, etc. and that use surveys, questionnaires, pre- and post-tests, etc.) articles using the Journal Article Critique Template in D2L under “Journal Article Critique” on the home page.

Quantitative articles are peer-reviewed, but what does that mean, exactly? It means a journal’s editorial review board members have thoroughly reviewed the author’s research methods to be sure they are sound. Although not all articles in a journal are peer-reviewed, they are scholarly unless they are editorials/opinions. Here are a few examples of peer-reviewed journals: *Radiologic Technology*, *the Journal of Medical Imaging and Radiation Sciences*, and *Radiologic Science and Education*. A journal’s description should include whether or not it is a peer-reviewed publication.

Quantitative articles include some type of survey or questionnaire for participants to fill out. The items are constructed to gather numerical data that are analyzed with statistical tests (t-tests, ANOVA, pearson correlation, etc.).
  - Please answer the following questions in the template for each article – ***please note there is more detailed information on each item in the***

***template, and please download the template, keeping all instructions for easier grading:***

1. Title of article – please include a copy or a link to the article as well
1. APA citation and reference – APA 7<sup>th</sup> edition
2. Writing Style – Is the article AMA, APA, etc.? (This may mean you have to go to the journal’s author instructions for submission and find this information.)
3. Abstract OR Executive Summary – What is included? In the template, there will be minimum elements that should be included.
4. Purpose – Why did the authors conduct the study? This can be the research question, identified purpose statement, written hypothesis statement, etc.
5. Sample size – Identify sample size and sampling procedure.
6. Statistics – Statistical tests, statistical analysis, etc. These elements are found in the abstract, the methods, and/or results.
7. Results – State 2 results from the section titled “Results.”
8. Limitations – State 1 limitation identified by the researchers at the end of the study in the section labeled “Limitations”; these may also be in the conclusions. If there are none, you must state your own limitations.
9. Conclusions and future research – State 1 conclusion and 1 area for future research. If no area for future research is identified, please recommend one that you identify.

*If you are unsure if your article is appropriate for this assignment, please email the article or a working link to the article to instructors listed at the beginning of the syllabus.*

- Trends Discussion – First Seminar
  - Students must research and be ready to discuss a trend in their department or profession. Think about something that has recently emerged, maybe even because of COVID-19 or changes in professional policies. You will upload your outline. There is no specified length; rather, you will be responsible for encouraging and fostering discussion.
- Topic Approval
  - Students will investigate and report on an emerging trend in imaging sciences and radiation therapy using graduate-level (scholarly) writing skills. The topics may be related to a new trend, procedure, equipment, or teaching strategy the student is familiar with or to something which the student wants to learn more about. Students must get their topics approved by the date indicated on the course schedule. A discussion board is available for students to submit their topics. Topics will be approved or additional information will be requested within the discussion board. Two students cannot write about the same topic. If duplicate topics exist, the instructors will approve the topic to the student who posted first

and will require a different topic from the student with the latter post. A list of students and their respective topics will be available within D2L.

- Synthesis Matrix

- After a comprehensive review of the resources, students will create a synthesis matrix and submit it to the appropriate drop box within D2L by the due date indicated on the course schedule. The matrix should include in-text style citations of the sources in each article block of the matrix. Although the final paper may deviate from the matrix somewhat, it should reflect the organization of this matrix content. Therefore, students must be very familiar with their resources to create an accurate and realistic matrix. A sample synthesis matrix is located in this syllabus. Be certain to review the grading rubric for this assignment within D2L.

- Title Page and Reference List

- Students should review the course resources and *APA Manual* (7<sup>th</sup> ed.) for proper formatting of the title and reference pages. Reference lists must include at least eight sources from reliable, scholarly sources such as peer-reviewed journals and government reports. Sources should be current and published within the past five years. Submit the title page and reference list as a single document to the appropriate drop box within D2L by the due date indicated on the course schedule. **Do not use any pre-formatted template or citation editor to create your reference list.**
- Other format/requirements include **Microsoft Word file, Times New Roman, 12-point font, 1" margins on all sides, and double-spaced**. Be certain to review the grading rubric for this assignment within D2L.

- First Submission of Complete Paper (Body of the Paper with Abstract)

- Students should review the course resources and *APA Manual* (7<sup>th</sup> ed.) for pointers about the structure of a literature review in APA format. Students should follow the guidelines for writing a literature review provided during the first weekend seminar to be sure all sections are included (Abstract, Introduction, Methods, Discussion, and Conclusion).
- This paper should reflect graduate-level effort. It should demonstrate the student's ability to gather and discriminate pertinent resources, the ability to SYNTHESIZE information from a variety of sources, the ability to apply new information to a topic, and the ability to correctly use the APA writing style.
- Other format/requirements include Microsoft Word file, Times New Roman, 12-point font, 1" margins on all sides, and double-spaced. The body of the paper should be five to seven pages in length, excluding the title page, abstract, and reference list.

- Students should review the course resources and *APA Manual* (7<sup>th</sup> ed.) for proper formatting and writing of an abstract. The abstract should be between 150-250 words. Additional requirements (including keywords) can be found in the *APA Manual* (7<sup>th</sup> ed.) on page 38.
- This assignment should include the revised title page and reference list in the correct APA format. Submit as one document to the appropriate drop box within D2L by the due date indicated on the course schedule. Although this assignment is not graded, students are encouraged to submit a rough draft to receive feedback for the final paper. **PLEASE NOTE: The first draft is to be submitted as a COMPLETE PAPER (title page, abstract, body, and reference list) to ensure maximum feedback from the instructors.**
- Final Paper
  - After making all the necessary revisions or providing justification for omitting changes, submit the final paper (title page, abstract, body, and reference list) to the appropriate drop box within D2L by the due date indicated on the course schedule. Be certain to review the grading rubric for this assignment within D2L.
- Poster Presentation
  - Many local, state, national, and international conferences include poster presentations as a convenient method to document scholarly productivity and attract participants. Using the PowerPoint poster template provided within D2L, students will turn their research paper into a poster presentation. The poster presentation is a condensed summary of the literature review manuscript. Sample poster presentations will be shared during the first weekend class seminar. It is important for students not to change the default settings in the PowerPoint poster presentation template. These settings are necessary in order to print a full-size poster. Exemplary poster presentations may be displayed during MSU's various research endeavors. Students should upload their presentations to the appropriate drop box within D2L before the second weekend seminar. The poster presentation is part of the grading rubric for the oral presentation.
  - Be certain to review the grading rubric for this assignment within D2L. The poster presentation is also assessed on the oral presentation grading rubric.
- Oral Presentation
  - Students will formally present their paper topics in either PowerPoint, Prezi, or other presentation platform during the second weekend seminar. Each presentation will be limited to 10-15 minutes in length. Students are encouraged to interact with their classmates and use the Power Point presentation as background information on the screen. Include an

interactive piece in your presentation. Examples are quick quizzes/questions and answers, thought-provoking exercises, or games (Jeopardy, Wheel of Fortune, BINGO, Kahoot, etc.) reinforcing the main points of the presentation content.

- In-text citations **are required** on the poster slide; however, a reference list is **not** required. Citations are written in research manuscripts as: (Author, Year).
  - Students should upload their poster presentations to the **Dropbox** no later than the due date listed on the syllabus.
  - The Power Point/Prezi Presentations should be uploaded to the **Discussion Board** for easy download to the classroom PC. Students will be graded on speaking ability, class engagement, Power Point design/readability, and professionalism. We will discuss the presentation requirements in the course; the rubric will be available in the course for review.
- Class Participation
    - Being prompt for the weekend seminars, submitting the course assignments on time, paying attention during presentations, and completing classroom activities all affect the class participation grade. Each student should be prepared to fully participate in class discussions and activities, including during the presentations. The instructors will evaluate the quality, relevancy, and consistency of each student's class participation based on the following criteria:
      - Quality and quantity of both verbal and nonverbal participation (online and in class)
      - Cognizance of group process and supportive behavior toward others
      - Demonstration of familiarity with the reading assignments
      - Timeliness in attending class and submitting assignments
      - Completion of the APA/writing self-assessment

## **INCOMPLETE GRADES**

Incomplete grades are given only at the instructors' discretion and must be requested by the student. If the instructors grant the incomplete, the student has until 90 days after the beginning of the next regular semester (fall or spring) to complete the course requirements. If the student does not complete the course requirements within this deadline, the grade of incomplete will automatically convert into a grade of F. Please note incomplete grades are given only in an emergency or when there are extenuating circumstances. Refer to the Graduate Catalog for additional details about receiving a grade of incomplete in a course.

## **GRADUATE COMPETENCIES**

Graduates of the MSRS Program should be able to:



- Use knowledge of current and future trends and well-developed skills to lead a medical imaging department, teach in a radiologic sciences program, or perform advanced clinical procedures.
- Use critical-thinking strategies and communication skills to develop an ethical and legal framework for the resolution of concerns and issues in radiologic administration, education, or advanced clinical practice.
- Demonstrate leadership skills and knowledge of the political process to effect change within the administration, education, or advanced clinical practice settings.
- Evaluate, design, and conduct research studies for the improvement of radiologic science administration, education, or advanced clinical practice.
- Demonstrate a sound academic foundation to support lifelong learning and to prepare for future matriculation in post-master or doctoral programs.

## **PLAGIARISM**

Plagiarism is not tolerated in this course whether intentional or not. 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* includes but is not limited to the right to reproduce the student's work product to verify originality and authenticity and for educational purposes.

## **ACADEMIC DISHONESTY**

This course adheres to the MSU Code of Student Conduct. In particular, however small, academic dishonesty creates a breach of 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. Students should consult the MSU Student Handbook for answers to any questions about the code of conduct.

Some components of this course are designed to be highly interactive with students helping each other learn; however, all assignments are designed to represent the efforts of each student individually and not to be shared. When students submit their efforts for grading, they are attesting they have abided by this rule.

Academic dishonesty (cheating, plagiarism, artificial writing generators, etc.) will not be tolerated in this class. Whenever a student is unsure of whether a particular situation will be interpreted as academic dishonesty, the student should ask the professor for clarification. If students are guilty of academic dishonesty, a grade of zero (0) will be given for the quiz, assignment, etc., and the student will not be given an opportunity to resubmit the assignment. Based on the severity of the cheating, plagiarism, or use of artificial writing generators, the professor reserves the right to fail the student in the course and refer the student to the department chair for further disciplinary action, which could include permanent dismissal from the program. Cases may also be referred to the Dean of Students for possible dismissal from the university and the ARRT as a possible ethics violation.

RADS 5013 adheres to the [MSU Code of Conduct](#).

In particular, however small, academic dishonesty breaches 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 4743 are designed to represent the efforts of each student individually and are NOT to be shared, copied, or plagiarized from other sources. Therefore, when you submit your efforts for grading, you are attesting you have abided by this rule.

An online plagiarism and artificial intelligence screening service may be used in this course. Student assignments may be uploaded to the service to identify similarities to other student papers and published works and to detect AI-generated work.

**Cheating** includes but is not limited to

- Use of any unauthorized assistance in taking quizzes, tests, or examinations
- Dependence upon the aid of sources beyond those authorized by the professor in writing papers, preparing reports, solving problems, or completing other assignments
- 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 paraphrasing or direct quotation without correct citation in the text and the reference list
- The published or unpublished works of another person
- You may NOT submit papers and assignments you have previously submitted for this or any other course.
- Using materials generated by agencies engaged in "selling" term papers is also plagiarism.

**Artificial Intelligence (AI)-Declaration of Generative AI in Academic Writing**

For all writing assignments, the student will not use generative artificial intelligence (AI) to construct the content of the assignment. Doing so is similar to plagiarism, and the assignment may be subject to a grade of zero or failure of the course, depending on the severity of the incident. AI-assisted technologies should only be used to improve readability and language. If used, it is the responsibility of the student to carefully review and edit this content, as AI can generate incorrect, incomplete, or biased information. Using these technologies requires human oversight and control. Additionally, AI and AI-assisted technologies should not be listed as an author or co-author or cited as an author. If the student uses AI-assisted technologies, a disclosure must appear at the

end of the document in a separate section before the references, using the following format.

### **Declaration of Generative AI and AI-Assisted Technologies in the Writing Process**

*Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.*

Academic dishonesty will not be tolerated in this class. When unsure whether a situation will be interpreted as academic dishonesty, you should ask your professor for clarification. If you 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.

You are encouraged to review the tutorials and suggested websites for more information about plagiarism. If you have any questions about what constitutes plagiarism, please consult:

- The [University Academic Dishonesty Policy](#)
- The website [Plagiarism.Org](#), or
- The professor

### **SPECIAL NEEDS**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please contact the Disability Support Services in Room 168 of the Clark Student Center, (940) 397.4140. Documentation of disability from a competent professional is required.

### **PROGRESSION POLICY**

Graduate students are expected to do uniformly high quality work on all MSRS coursework pursued (final course grades of A or B). Only grades of A or B are acceptable for graduate courses transferred from another university.

Graduate students may earn a grade of C in one or two graduate courses and be allowed to continue in the MSRS Program as long as their cumulative GPA is 3.0 or higher. If a graduate student earns a grade of C in three or more graduate courses, the student will be dismissed from the MSRS Program. Any grade below a C will also result in dismissal from the MSRS Program.

**ADMINISTRATIVE PROCESS**

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

Interim Department Chair – Dr. Lynette Watts (940) 397.4833

College Dean – Dr. Jeff Killion (940) 397.4594

Dean of Students – Mr. Matthew Park (940) 397.7500

**CAMPUS CARRY**

Senate Bill 11 passed by the 84<sup>th</sup> 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 [MSU Texas Campus Carry](#).