

Section 190



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RESEARCH METHODS I: RADS 5003

Research Methods I – Fall 2025

COURSE DESCRIPTION

Prerequisite: RADS 5013 – Contemporary Trends in Radiologic Sciences
Hybrid course exploring quantitative, qualitative, and mixed methods research designs and statistical analyses appropriate in radiologic sciences and medical imaging.

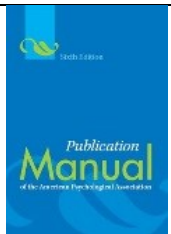
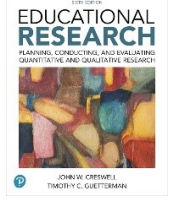
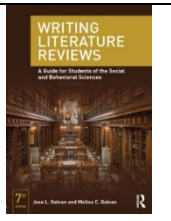
COURSE OBJECTIVES

Upon successful completion of this course, the students will:

- Critique selected research studies in radiologic sciences pertaining to completeness, clarity, and appropriateness of the components of research.
- Evaluate the relationship between research questions, research designs, levels of measurement, and data analysis techniques.
- Demonstrate understanding of the legal and ethical issues surrounding research.
- Interpret findings in radiologic science research studies in relation to clinical applications and the need for further research.
- Demonstrate proper use of the American Psychological Association (APA) writing style.
- Synthesize peer-reviewed articles related to professional practice in a scholarly research paper.

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 important information from instructors.
- 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. Telephone calls must be scheduled accordingly.

TEXTBOOKS	
<p><i>Required</i> American Psychological Association. (2010). <i>Publication manual of the American Psychological Association</i> (6th ed.). Washington, DC: Author. [ISBN: 9781433805615 (\$18.00)]</p>	
<p><i>Required</i> Creswell, J. W., & Guetterman, T. C. (2019). <i>Educational research: Planning, conducting, and evaluating quantitative and qualitative research</i>. Pearson (6th ed.) NY, NY. {ISBN 13: 978-0-13-451936-4 (\$40.50+)} </p>	
<p><i>Recommended</i> Galvan, J. L. (2017). <i>Writing literature reviews: A guide for students of the social and behavioral sciences</i> (6th ed.). Glendale, CA: Pyrczak Publishing. [9780415315746, 0415315743] (\$37.20 +)</p>	

ATTENDANCE

Without exception, students must attend and participate in both graduate weekend seminars to receive credit for this course.

GRADING

50% Scholarly Research Paper
(Literature review)
20% Topic and two references
20% Synthesis Matrix
10% Class Participation

GRADING SCALE

A - 90-100
B - 80-89
C - 70-79
D - 60-69
F - 59 and below

COURSE SCHEDULE WITH ASSIGNMENT DUE DATES

Date	Assignment/Activity
August 26	Class Starts
September 13-14 <i>Saturday and Sunday</i>	First Weekend Seminar – On-campus – Be prepared to discuss your topics Research Projects and Presentations
September 28 – <i>Monday</i>	Final Topic & Two References in APA format
October 13 – <i>Monday</i>	Synthesis Matrix
December 1 – <i>Monday</i>	Scholarly Research Paper (Literature Review)
December 12-13 <i>Friday and Saturday</i>	Second Weekend Seminar – In-Person Meeting

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

The last opportunity to drop this course with a grade of W is 4:00 pm CST on November 24, 2025.

ASSIGNMENTS

Topic Approval

Students must submit their topics, along with two references in APA format, by the due date indicated on the course schedule. When selecting topics, students should consider that they will continue to develop the paper during RADS 6773, Research Methods II (for non-thesis majors). Appropriate topics include those directly related to radiologic science issues and must be relevant to the students' major. Specific questions about potential topics should be addressed to the section instructor.

Scholarly Research Paper (Literature Review)

Synthesis Matrix

After a comprehensive review of the resources, students will create a synthesis matrix by the due date indicated on the course schedule. The matrix should include in-text style citations of the sources next to each block. 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.

This literature review is to be a substantial manuscript that reflects graduate-level effort. The body of the paper (excluding components such as the title page, abstract, reference list, appendices, etc.) should be 10 – 12 pages – NO MORE THAN 12 PAGES. Only PEER-REVIEWED resources published within the past five (5) years can be cited. 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 reference style. Complete literature reviews (title page, abstract, introduction, methods, discussion, conclusion, and reference list) are due by the date indicated on the course schedule.

Other format/requirements

- Microsoft Word format, Times New Roman, 12-point font, 1" margins on all sides, and double-spaced.
- Students should bring a copy of their paper to the second weekend seminar.

Group Presentation:

Part of the class participation grade includes a group presentation during the second weekend seminar. Specific instructions regarding this activity will be provided during the second weekend seminar.

Deadlines for submission of assignments are provided in this syllabus. Failure to comply with established deadlines may result in a reduction of your grade. Assignment submissions are considered complete and will be graded accordingly. Be sure to look at all requirements, including the grading rubrics, before submitting course assignments within D2L.

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 submitted on time will result in a score of 0 being recorded for that assignment.

With that being said, the instructors understand that students enrolled in the MSRS Program may be responsible for managing multiple employees and/or students, as well as personal and family matters. If students require assistance with a deadline, they should contact the instructors at least two days prior to the due date to discuss the issue. "After the fact" stories are not accepted and will result in a grade of 0. In the event of emergencies (such as death or severe illness), students should contact their instructors as soon as possible to resolve any conflicts with due dates. Assignment extensions are decided on a case-by-case basis.

Class Participation

Being punctual for the weekend seminars, submitting course assignments on time, and completing classroom activities all contribute to the class participation grade. Each student should be prepared to fully participate in class discussions and activities. 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
- Cognizance of group process and supportive behavior toward others
- Demonstration of familiarity with the reading assignments
- Timeliness in attending class and submitting assignments

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, as well as for educational purposes.

ACADEMIC DISHONESTY

This course is governed by the MSU Code of Student Conduct. In particular, academic dishonesty, however small, creates a breach in academic integrity. A student's participation in this course comes with the expectation that his or her work will be completed in full observance of the MSU Code of Student Conduct. 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 individual efforts of each student and should not be shared. When students submit their work for grading, they attest that they have adhered to this rule.

Academic dishonesty (cheating, plagiarism, artificial writing generators, etc.) will not be tolerated in this class. Whenever a student is unsure whether a particular situation will be interpreted as academic dishonesty, they should ask the professor for clarification. If students are found guilty of academic dishonesty, a grade of zero (0) will be assigned for the quiz, assignment, etc., and the student will not be given the opportunity to resubmit the assignment. Based on the severity of cheating, plagiarism, or the 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 may include permanent dismissal from the program. Cases may also be referred to the

Dean of Students for possible dismissal from the university and to the ARRT for possible ethics violation.

RADS 5003 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 5003 are designed to represent the individual efforts of each student and should not 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 can be uploaded to the service to identify similarities with other student papers and published works, as well as 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 a 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, students must not use generative artificial intelligence (AI) to construct the content of the assignment. Doing so is similar to plagiarism, and the assignment may result in a grade of zero or course failure, depending on the severity of

the incident. AI-assisted technologies should be used only to enhance readability and language. If used, it is the student's responsibility 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 authors, co-authors, or cited as authors. If the student uses AI-assisted technologies, a disclosure must be included at the end of the document in a separate section, preceding the references, in 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.

INCOMPLETE GRADES

Incomplete grades are given only at the instructor's 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 by this deadline, the grade of incomplete will automatically be converted to a grade of F. Please note that 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.

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 continue in the MSRS Program, provided 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.

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 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's or doctoral programs.

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 an 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.

Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) permits licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations designated by the University as prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit [the Campus Carry website](#).

Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [Safety / Emergency Procedures](#). Students are encouraged to watch the video entitled “Run.

Hide. Fight." which may be electronically accessed via the University police department's webpage: *"Run. Hide. Fight."*

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:

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