

RESEARCH METHODS I

RADS 5003 RESEARCH METHODS I – FALL 2023

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.

Section 190



Beth L. Vealé RT(R)(QM)
beth.veale@msutexas.edu
(940) 397.4611



Lynette Watts, PhD, RT(R)
Lynette.watts@msutexas.edu
(940) 397.4833

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.

*GUNN COLLEGE OF HEALTH SCIENCES AND HUMAN SERVICES
MIDWESTERN STATE UNIVERSITY*

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: Pycszak 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 28	Class Starts
September 16-17	First Weekend Seminar – On-campus – Be prepared to discuss your topics
<i>October 2 - Monday</i>	<i>Mid-semester check-in – 12-1 p.m. CST (NOT mandatory)</i>
October 2 – Monday	Final Topic & Two References in APA format
October 16 – Monday	Synthesis Matrix
November 20 – Monday	Scholarly Research Paper (Literature Review)
December 9-10	Second Weekend Seminar – In-Person Meeting Group Presentation

Note: Assignments are due by 11:59pm 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 October 30, 2023.

ASSIGNMENTS

Topic Approval

Students must submit their topics plus two references in APA format by the due date indicated on the course schedule. When selecting topics, students should consider that after this course, they will continue to develop the paper during RADS 6773, Research Methods II (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 in 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.

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 the established deadlines may result in a grade reduction.

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.

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.

With that being said, the 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.

Class Participation

Being prompt for the weekend seminars, submitting the course assignments on time, and completing classroom activities all affect 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 not limited to the right to reproduce the students 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, 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 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.

Using Artificial Writing Generators includes but is not limited to

- Using any artificial intelligent agent (e.g., Chat GPT) to generate written work that the student uses within their course paper, poster, presentation, or any other project, with or without proper citation, or;
- Using any artificial writing generator as a primary source, or;
- Using any artificial writing generators in place of traditional methods of research to obtain sources and any interpretations about the content of those sources.

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.

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.

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 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) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes has 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 [Campus Carry](#).

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. Beth Vealé (940) 397.4611
College Dean – Dr. Jeff Killion (940) 397.4594
Dean of Students – Mr. Matthew Park (940) 397.7500