

# Midwestern State University

Robert D. & Carol Gunn College of Health Sciences & Human Services  
The Shimadzu School of Radiologic Sciences

*Revised July 2020*

## Course Syllabus: Applied Research

### Course Information

**Name:** RADS 4913 X20

**Credit:** 3 hours

**Term:** Spring 2025

**Prerequisite:** RADS 3503

### Professor

**Robert Comello, MS, RT(R)**

**Email:** [robert.comello@msutexas.edu](mailto:robert.comello@msutexas.edu)

Use this information in the subject line: 4913\_your last name\_topic of the message.

Email is the best way to reach me. If I have not responded within 72 hours, please email me again.

**Phone:** (940) 397-4801

**Office Location:** Midwestern State University  
3410 Taft Blvd.

Centennial Hall 430E

Wichita Falls, TX 76308

**Office Hours:** Please make an appointment.

### Course Communication

Contact information for the instructor is listed at the beginning of this syllabus. Email is the preferred mode of communication. Students must use their standardized MSU Student email for correspondence about this course. When emailing the instructor, you must use the following subject header:

4913\_your last name\_topic of message  
Example: 4913\_Smith\_Quiz 4

When there is a need to contact students, the instructor will use the student's MWSU email account, students.mwsu.edu. The instructor is not responsible for sending emails to any other email account. Faculty members will not be responsible for keeping up with other email addresses for students. If you have not established this account, do so as soon as possible by going to: <http://infosys.mwsu.edu/email.asp>

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 students of any extended periods when email contact is not practical (professional meetings, etc.). I will meet face-to-face with any interested students by appointment only. This meeting is optional and must be confirmed by email ahead of time with me.

## **Course Description**

This is the capstone course involving directed research which will be completed by reviewing previously published articles, culminating in a substantive paper related to the field of radiologic sciences. The student's topic/research question must be approved by the course instructor.

## **Course Objectives**

Upon completion of this course, the student will be able to:

- Apply appropriate research methods.
- Formulate an appropriate research question.
- Compose a publication-quality substantive research paper reviewing previously published articles.
- Format this research paper, which is a literature review, in the appropriate APA style (no original research is allowed).

## **Teaching Methodology**

Strategies include an independent research project with a directed student paper.

## Course Materials

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7<sup>th</sup> ed.). Washington, DC: American Psychological Association. [ISBN 978-1-4338-3216-1] Paperback costs range from \$23.00 - \$31.50

## Attendance

Since this is an online course, there are no mandatory class sessions. However, you must keep track of your progress, due dates, etc. Students should communicate with the instructor regularly.

## Requesting a Withdrawal

**The last day to drop this course with a grade of "W" is 4:00 pm on Wednesday, April 24, 2024.** Refer to the Undergraduate Bulletin for details about receiving a grade of "Incomplete" in a course. In an emergency or extenuating circumstance, a student may request a grade of "Incomplete" in a course before grades are submitted. If the instructor grants the "Incomplete," the student has until thirty (30) days after the beginning of the next long semester to complete the course requirements. If the student does not complete the course requirements within the deadline, the grade of "Incomplete" will automatically convert into a grade of "F."

## Grading/Evaluation

Students are required to submit all assignments in the appropriate assignment dropbox within D2L. Do not email or fax assignments unless told specifically to do so by your instructor. All assignments must be done as a word document. I will not accept any other file (pdf, Google docs, or any other type of word processing program). Do not wait until the last minute to submit in case you have technical difficulties. If you have difficulties submitting any assignments, contact your instructor immediately so that problems can be resolved by the deadline. Technical difficulties need to be addressed through the D2L help link. Assignments must be submitted on time; **each assignment that fails to meet the deadline or incorrect file submission will result in a grade of 0. Note: All assignments are considered complete upon submission and will be graded as such. Please review your work before sending it in.**

## Grade Distribution

- 3%      Research Question & Outline

- 2% Title Page
- 10% Reference List
- 45% Body of Paper
- 10% Abstract
- 30% Final Paper

## Grade Scale

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

**Note:** This instructor **does not** give extra credit. The final course grade does not get rounded up. Final grades are determined by the first number of your final course average. Example: 90 is an A, and 89.5 or above is a B.

## Technical Difficulties

On occasion, you may experience problems with accessing D2L, accessing class files located within D2L, connecting with your internet service, or may encounter other computer-related problems. Make the professor aware of a technical problem as soon as possible (**preferably when it is happening via an e-mail message so there is a time stamp to verify**).

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 in this class. *Assignments and tests 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, tests, or discussion postings.***

Dropbox assignments that can be attached in an email should be emailed to the professor 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 am and 5 pm.
- Use the D2L help link in D2L.

- Contact your professor.
- For other computer access issues, go online to the MSU Information Technology Website.

## **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 Support Services (DSS) provides information and assistance, arranges accommodations, and serves as a liaison for students, instructors, and staff. The DSS has assistance devices such as books on tape, recorders, and adaptive software which can be loaned to qualified individuals. A student/employee who seeks accommodations based on disability must register with the Office of Disability Support Services in the Clark Student Center Room 168 or call (940) 397.4140 for further information. 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 Services for resolution. The grievance procedure may be found in the Student Handbook and Activities Calendar.

The Director of the Counseling Center serves as the ADA Coordinator and may be contacted at (940) 397.4618, TDD (940) 397.4515, or 3410 Taft Blvd., Clark Student Center Room 108.

## **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:

- Department Chair: Dr. Beth Veale (940) 397.4664)

- College Dean: Dr. Jeff Killion (940) 397.4594
- Dean of Students: Matthew Parks (940) 397.6273

## **Academic Conduct**

RADS 4643 adheres to the MSU Code of Conduct. In particular, academic dishonesty, however small, 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. A student should consult the current Student Handbook for answers to any questions about the code.

All components of RADS 3773 are designed to represent the efforts of each student individually and are NOT to be shared, copied, or plagiarized from other sources. When students submit their efforts for grading, they are attesting they abide by this rule. An online plagiarism service may be used in this course. Student assignments may be uploaded to the service for identification of similarities to other student papers and published works.

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, by paraphrase or direct quotation without correct citation in the text and the reference list
- The published or unpublished works of another person.
- Students may NOT submit papers and assignments that they have previously submitted for this or other courses.
- The use of materials generated by agencies engaged in "selling" term papers is also plagiarism.

Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated in this class. Whenever a student is unsure of whether a particular situation will be interpreted as academic dishonesty, he/she 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. Cases may also be referred to the Dean of Students for possible dismissal from the university.

Students 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: [http://mwsu.edu/Assets/documents/student>life/2013>14%20Student%20Handbook.pdf](http://mwsu.edu/Assets/documents/student%20life/2013%20Student%20Handbook.pdf)
- The website [Plagiarism.Org](http://Plagiarism.Org)
- The professor

### **Please Note**

By enrolling in this course, the student expressly grants MSU a "limited right" in all intellectual property created by the student for this course. The "limited right" shall include, but shall not be limited to the right to reproduce the student's work/ project to verify originality and authenticity, and for educational purposes. Specifically, faculty may submit student papers and assignments to an external agency to verify originality and authenticity and to detect plagiarism.

All assignments will be submitted to TurnItIn.com, a computerized service that checks for plagiarism. Any suspicious results will be investigated. Instances of plagiarism will result in a lower grade on the assignment; a grade of "F" on the assignment, and/or a grade of "F" on the course. Repeated or severe instances may result in academic probation or dismissal from the program. Instances can also be referred to the Dean of Students for further action.

Read the "use of artificial writing generators" statement below.

### **Senate Bill 11**

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, by state law. For more information regarding campus carry, please refer to the University's campus carry webpage. If you have questions or concerns, please contact MSU Chief of Police Patrick Coggins by email at [steven.callarman@mwsu.edu](mailto:steven.callarman@mwsu.edu).

# Applied Research Assignment Details

## **Student Responsibilities:**

As a student enrolled in this course, you will be responsible for adhering to and meeting posted deadlines and due dates. Posted closing dates along with assignment due dates and deadlines found in the Course Calendar within D2L will be **strictly** enforced. If an assignment does not meet the posted deadline, a grade of zero (0) will be recorded for that assignment. Extenuating circumstances do occur and will be addressed on an individual basis. **NOTE:** waiting until the last minute to submit an assignment does not constitute an extenuating circumstance.

## **Assignment Format:**

This course is divided into six (6) assignments and all assignments *must* adhere to the following requirements:

- IBM compatible format (not MAC)
- Word 97 or newer version (not Microsoft Works, WordPerfect, Pages, Google Docs, PDF files, etc.)
- Times New Roman, 12 point font ONLY
- 1" margins on all sides
- Double-spaced
- APA 7th edition formatted Title page (Only applies to assignments 2 through 6).
- Any files submitted other than a Word file as listed above, will not be graded or comments made. There will be no exceptions.

The assignments should be written using standard technical writing skills. This includes appropriate spelling, grammar, sentence structure, transitions, text flow, the currency of knowledge, and scope of research. Additionally, all submitted work must conform to APA format.

## **Grading/Evaluation:**

Students are required to submit all assignments in the appropriate assignment area, (quizzes and discussion boards) within D2L. Do not email or fax assignments unless told specifically to do so by your instructor. Do



not wait until the last minute to submit in case you have technical difficulties. If you have difficulties submitting any assignments, contact your instructor immediately so that problems can be resolved by the deadline. Technical difficulties need to be addressed through the D2L help link.

### **Use of Artificial Writing Generators**

The use of any artificial writing generator (ex: Chat GPT) is strictly prohibited. The use of artificial writing generators can and will be deemed a violation of the university's honor system. Any or all parts of a written assignment identified as having elements of writing attributed to an artificial writing source will automatically receive a zero (0) for a grade. **Students will not be allowed to make up those assignments.** This program uses software that detects AI generators. For more policy information regarding cheating and plagiarism, see the Honor System section in this syllabus.

### **Assignment 1: Request for Research Question & Outline Approval Form (3%)**

Students must complete the Request for Research Question and Outline (major sections of the paper) Approval Form. Include an APA formatted reference list. There should be at least 2 references per major section of the body of the paper. The assignment must be submitted to the Assignment 1 Dropbox within D2L by the due date. **References older than 5 years will generally not be accepted, but depending on the topic, source, etc., this will be at the discretion of the instructor.**

All parts of this assignment must be submitted as one single document via the assignment dropbox.

This course only allows topics related to Radiologic Sciences (which emphasizes the role of technologists), not topics related to clinical radiology (which emphasizes the role of radiologists). For example, "Factors Contributing to Job Satisfaction for MRI Technologists" is acceptable, but "Treatment of Obstructive Bowel Syndrome" is not acceptable. Also, for example, "Position for Radiographic Demonstration of the Trauma Knee" is acceptable, but "Diagnosis of Cerebral Hemorrhage" is not acceptable. **Topics cannot deal with subjects that are outside the scope of practice of the radiographer.**

The outline should be based on published literature. Students will **not** develop their surveys or conduct experiments to write this paper.

**Please note:** Those students pursuing a BSRS degree MUST change their topic for this course.

### **Assignment 2: Title Page (2%)**

Review pages 30-31, & 50 within the *APA Manual*. There is no need to have an author's note with the course assignments. Use the sample title page as a guide because it includes additional information not included on the APA version to help distinguish assignments submitted in different classes. The assignment must be submitted to the Assignment 2 Dropbox within D2L by the due date.

### **Assignment 3: Reference List (10%)**

This will evaluate your ability to create a reference page in the correct APA format.

Refer to Chapters 9 and pages 39,40 and 58 in the *APA Manual* for an explanation on how to construct a reference list. Also, refer back to RADS 3503; you should have your graded reference list from that class. **A minimum of eight (8) scholarly references is required.** The assignment must be submitted to the Assignment 3 Dropbox within D2L by the due date.

NOTE ON REFERENCES: References should be from a variety of sources with the majority being from peer-reviewed journals or other scholarly works. Peer-reviewed journals use an editorial board that evaluates the article for accuracy. **Publications or magazines like *RT Image, Advance, Decisions in Imaging Economics, and Applied Radiology* are not peer-reviewed. Journals such as *Radiologic Technology, Radiologic Science & Education, and Radiology Management* are peer-reviewed.** You should be able to look at the inside cover of a journal or on a website to see if the journal has a review board. Most likely if you cannot find anything about a review board, then the journal is not peer-reviewed. The journal homepage should also indicate if the journal is peer-reviewed. **Include a title page with this assignment.**

### **Assignment 4: Body of Paper (45%)**

The body of this paper will include the following sections: Introduction, Methods, Discussion, Suggestions for Future Research, and Conclusion (see format beginning on page 43). All sections except the Introduction should have a heading (see *APA Manual*, p. 47, Section 2.27). This is an evaluation of your ability to synthesize a literature review. **Be sure to include a corrected Title Page and**

**Reference List with this assignment (they are not to be counted as part of the body of the paper). The body of the paper only must be no less than 5 pages and no more than 7 full-length pages (Times New Roman, 12-point font).** An expanded explanation of each component follows:

**Introduction:** Includes background, purpose, research question, and hypothesis (*APA Manual*, p. 27-28). This is where you develop the reason for the problem. Note: The word *Introduction* is not used as a header. The first section of the paper is assumed to be the Introduction section.

**Methods:** Include how references were found and what resources were used. The *APA Manual* describes a methodology for original research. Since no original research is allowed in this course, use the methods section to describe how information was obtained. Example: Searches were conducted using the following keywords: knee injuries, radiology, radiography, infection control, (etc. to include all the appropriate search terms). Academic First Search, ERIC, EbscoHost were the primary databases used and were accessed through Midwestern State University's Moffett Library.

**Discussion:** (*APA Manual*, p. 35-36). Compare the literature with the approved research question. This is where all the literature is pulled together so the reader does not have to read each separate source. The writer's job for this section is to enlighten the reader by synthesizing the literature and reporting on it. Synthesis of material means that information gathered from more than one author is compared and contrasted. For example, one can formulate thoughts based on the literature, but a personal opinion is not appropriate in a research literature review. The writer is reporting on what was found; therefore, it must be supported with reference citations. Do not use personal pronouns such as "I found this..." or "we discovered this..."

#### Poor Discussion

Firms must take the initiative in retaining gifted and competent employees to effectively deal with this expected predicament. Proactive exploring is the catalyst for discovering various methods that could improve the retention rate of radiologic technologists and provide direction for organizations looking to implement and maintain a successful employee retention program.

#### Better Discussion

During this literature review, a common theme was evident among many of the authors (Ackerman, 2000; Bated, 2003; Devlin, 2000; Myers, 2006; & Zuckerman, 2007) how organizations must take the initiative in retaining gifted and competent employees. It appears proactive exploring is the catalyst for discovering various methods that could improve the retention rate of radiologic technologists and provide direction for organizations looking to implement and maintain a successful employee retention program. For example, Veale' (2008) said, "Passive attitudes towards employee retention are no longer effective. Health care organizations are bleeding to death by

ignoring the loss of talent" (p. 45).

It seems then the answer to the question of how to keep talent is to contemplate, renovate, innovate, and create new best practices to achieve institutional goals and thereby add to the existing body of knowledge on radiographer retention. Watts (2005) and Johnston (2007) support these notions by strongly encouraging health care organizations to work with employees instead of against them and to actively engage employees in the development of best practices for retention.

Suggestions for Future Research: Explain where the literature was lacking and possible future research studies.

Conclusion: This is where you remind readers of the purpose, what was discovered, and if the findings were in line with the research question. Remember, this section should be no longer than 1 page.

References: Include the reference list you corrected after receiving your instructor's comments.

Appendices: (if needed, not encouraged). Place any graphics, tables, etc. after the references.

**You must include your title page and complete revised reference list with this assignment as part of the document, not separately.** The assignment must be submitted as a single document to the Assignment 4 Dropbox within D2L by the due date.

### **Assignment 5: Abstract (10%)**

This is an evaluation of your ability, to sum up, your paper in one paragraph. Refer to pages 38, 39, and 73-75 in the *APA Manual*. The abstract should be between 150 and 250 words. Explain what the focus of the paper is and a little about the literature. Sell your paper here. Write something that is going to make people want to read it. The abstract is essentially a snapshot of the entire paper; it is what hooks people and convinces them to continue reading. **Write the abstract after you complete the paper. Include a title page with this assignment.** The assignment must be submitted to the Assignment 5 Dropbox within D2L by the due date.

### **Assignment 6: Final Paper (30%)**

This research paper is to be a substantial manuscript (5-7 full-length pages for the body). **Be sure to include a corrected Title Page, Abstract, Appendices (if required), and Reference List with this assignment (they are not to be counted as part of the body of the paper).** The paper's body must only be no less than 5 pages and no more than 7 full-length pages (Times New Roman, 12-point font).

The paper must reflect baccalaureate level effort and must incorporate the suggestions for revision provided by the instructor for Assignments 1-5. It should demonstrate the student's ability to gather and discriminate pertinent resources, synthesize information from a variety of sources, applies new information to a topic, and correctly use the APA reference style.

**All parts of this assignment must be submitted as one single document through the Assignment 6 Dropbox within D2L by the due date.**

## Important Dates

### Course Schedule

Date	Activity/Assignment
Tuesday, January 21	Class opens  Review course syllabus and sign and submit syllabus agreement form
Monday, January 27	Assignment 1 Dropbox due <b>by 8:00 am</b>  Request for Research Question and Outline Form. <b>Assignments that fail to meet the deadline or incorrect file submission will result in a grade of 0.</b>
Monday, February 3	Assignment 2 Dropbox due <b>by 8:00 am</b> Title Page. <b>Assignments that fail to meet the deadline or incorrect file submission will result in a grade of 0.</b>
Monday, February 10	Assignment 3 Dropbox due <b>by 8:00 am</b>  Reference List. <b>Assignments that fail to meet the deadline or incorrect file submission will result in a grade of 0.</b>
Monday, March 17	Assignment 4 Dropbox due <b>by 8:00 am</b>  Body of Paper. <b>Assignments that fail to meet the deadline or incorrect file submission will result in a grade of 0.</b>
Monday, March 31	Assignment 5 Dropbox due <b>by 8:00 am</b>  Abstract. <b>Assignments that fail to meet the deadline or incorrect file submission will result in a grade of 0.</b>
Monday, April 28	Assignment 6 Dropbox due <b>by 8:00 am</b>  Final Paper. <b>Assignments that fail to meet the deadline or incorrect file submission will result in a grade of 0.</b>

**Wednesday, April 30**

The last day to drop with a "W" by 4 pm

\*\*All times are CST (Central Standard Time) on the date indicated.