



**Course Syllabus: Applied Research**  
**College of Health Sciences & Human Services**  
**RADS 4913**  
**Summer 2024**  
Revised May 2024

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**Prerequisite:**

RADS 3523

**Course Overview:**

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 appropriate APA style (no original research is allowed).

**Textbook:**

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7<sup>th</sup> ed.). Washington, DC: American Psychological Association. [ISBN: 9781433832161]

### **Communication with the Instructor:**

Communication will be through the student's 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 students of any extended periods of time 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.**

### **Class Meeting Date and Time:**

Since this is a hybrid course, meetings will be on Tuesdays at 1:00 – 1:50 pm. This course also uses a D2L shell. All course documents are housed in this shell. This course is on a schedule that will be strictly adhered to. See the Course Schedule at the end of this syllabus for specific information about activities and due dates. The instructor will be available to meet face-to-face with any interested students. This meeting is optional and must be confirmed by email ahead of time with the instructor.

Students should check for class announcements on the course website in D2L.

We all experience stressful and difficult events as a normal part of life. As your instructor, I believe your mental health is an important part of your academic success. Success in this course depends heavily on your personal health and wellbeing. Recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. I strongly encourage you to reframe challenges as unavoidable pathways to success. Reflect on your role in taking care of yourself throughout the term, before the demands of exams and projects reach their peak. Please feel free to reach out to me about any difficulty you may be having that may affect your performance in this course as soon as it occurs and before it becomes unmanageable. In addition to your academic advisor and me, I strongly encourage you to contact the many other support services on campus that stand ready to assist you:

- Counseling Center – call 940-397-4618 to schedule an appointment
- [TAO](#) – a multilevel online therapy tool
- [Self-help apps](#) – MSU has a list available

- Mental Health [Resources](#)
- More [online resources](#)

**Methodology/Teaching Strategies:**

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

**Evaluation Method:**

- 3% Research Question & Outline
- 2% Title Page
- 10% Reference List
- 45% Body of Paper
- 10% Abstract
- 30% Final Paper

Students are required to submit all assignments in the appropriate assignment area 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.

**Grading Scale:**

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

**\*The last opportunity to drop this course with a “W” is 4:00pm July 31, 2024.**

Please 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.”

Please note, late submissions may not be accepted for this course without approval from the instructor. It is the student's responsibility to keep up with the course work and adhere to posted due dates and deadlines. All submissions are considered final and will be graded as such.

### **Activities and Assignments:**

#### **Assignment Format:**

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

- PC compatible format (not MAC)
- Word documents (not .pages or .pdf)
- Times New Roman, 12 point font **ONLY**
- 1" margins on all sides
- Double-spaced

The assignments should be written using standard technical writing skills. This includes appropriate spelling, grammar, sentence structure, transitions, text flow, currency of knowledge, and scope of research. Additionally, all submitted work must conform to APA format. **All assignments must be submitted on time; late work may not be accepted unless approval has been granted from the instructor. All assignments submitted are considered complete and will be graded as such.** Extenuating circumstances do occur and will be addressed on an individual basis. **NOTE:** Waiting until the last minute to submit an assignment and being unable to do so does not constitute an extenuating circumstance.

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

Students must complete the Request for Research Question and Outline Approval Form, including a detailed outline of the paper, (please look at the sample outline for the amount of detail required) and include an APA formatted reference list. There should be at least 2 references per major section of the body of the paper. **\*Students will not develop their own surveys or conduct experiments to write this 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.**

Students may **NOT** use their topic from Research 3523 because a mini literature review has already been written. **\*Please avoid the following topics: burnout, radiation safety, radiation dose, pediatric dose, or anything that has a TON of research.** Try to think outside the box and explore something that interests you. If students need help finding a topic, websites like [Aunt Minnie](#), [Radiology Today](#), and [Imaging Technology News Online](#) have a news section and a blog section; these can be used to come up

with current topic ideas. Once a topic is selected, student should perform a literature search in the databases to see if there is enough material for the paper requirements for this course. This course only allows topic 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 outside the scope of practice of the radiographer.**

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

Review pages 30-31, & 50 within the *APA Manual*. There is no need to have 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%)**

Refer to Chapters 9 and pages 39, 40, & 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 are 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.

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

The body of this paper will include the following sections: Introduction, Methods, Discussion, Suggestions for Future Research, and Conclusion. All sections except the Introduction should have a header (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 Reference List with this assignment. The body of the paper 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, 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 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 key words: 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. 39). 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 are compared and contrasted. I love all things miniature: mini furniture, mini appliances, mini food items, etc. Find examples of spectacular miniatures and email me a photo for 1 bonus point on the final semester grade. Use the subject line "extra credit" and email prior to June 17. No other extra credit opportunities will be offered. 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 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.** 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). The length of the body of the paper **does not** include the title page, abstract, appendices, and reference list. 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, apply 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.**

**See next page for course schedule.**



**Tentative Course Schedule**

<b>Date</b>	<b>Activity/Assignment</b>
<b>Monday, June 3</b>	Class opens Review course syllabus
<b>Monday, June 10</b>	Assignment 1 Dropbox due by 11:59pm Request for Research Question and Outline Form
<b>Monday, June 17</b>	Assignment 2 Dropbox due by 11:59pm Title Page
<b>Wednesday, June 26</b>	Assignment 3 Dropbox due by 11:59pm Reference List
<b>Thursday, July 11</b>	Last day to drop this course with a 'W' by 4:00pm
<b>Wednesday, July 17</b>	Assignment 4 Dropbox due by 11:59pm Body of Paper
<b>Monday, July 22</b>	Assignment 5 Dropbox due by 11:59pm Abstract
<b>Monday, August 5</b>	Assignment 6 Dropbox due by 11:59pm Final Paper

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

**Disability Support Services:**

In accordance with 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 on the basis of disability must register with the Office of Disability Support Services in the Clark Student Center Room 168 or call 940-397-4140 for more information. Documentation of disability from a competent professional is required.

Individuals with grievances related to discrimination or lack of accommodation on the basis of 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 ADA Coordinator may be contacted at (940) 397.4140, or 3410 Taft Blvd., Clark Student Center Room 168.

### **Conduct/Honesty/Honor System:**

This course adheres to the MSU Code of 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/her work will be completed in full observance of the MSU Code of Student Conduct. A student should consult the Student Handbook for answers to any questions about the code.

Students are encouraged to take full advantage of many resources available including Internet sites, handouts, other textbooks & journals, faculty, and peers. This interactive collegial learning environment is conducive to life-long learning.

Specific components of this course are designed to represent the efforts of each student individually and are NOT to be shared. These components include the written assignment submitted for a grade. Submitting someone else's work as your own or improperly cited work constitutes plagiarism. Please see the Midwestern State University Catalog for further discussion of plagiarism. Plagiarism will constitute in an F for the course and the student will be referred to administration for further action. When students submit their efforts for grading, they are attesting they abided by this rule.

***\*Quizzes and exams are not to be copied in any form or shared in any form. Students caught engaging in such activity will receive an F for the course and be referred to University administration for dismissal.***

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 completing other assignments; or (3) 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 on 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. Students are encouraged to review the tutorials and suggested websites for more information about plagiarism.

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

*Since writing, analytical, and critical thinking skills are part of the learning outcomes of this course, all writing assignments should be prepared by the student. Developing strong competencies in this area will prepare you for a competitive workplace. Therefore, AI-generated submissions are not permitted and will be treated as plagiarism.*

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 shall include but shall not be limited to the right to reproduce the students work product in order to verify originality and authenticity, and for educational purposes.

### **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 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 [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.”](#)

### **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. Interim Department Chair – Dr. Lynette Watts (940-397-4833)
2. College Dean – Dr. Jeff Killion (940-397-4594)
3. Dean of Students – Matthew Park (940-397-7500)