



RADS 6443 - Survey Design in Radiologic Sciences – Summer 2026

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

Faculty:

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Course Overview:

This course covers the design and administration of questionnaires/surveys. Additional topics will include types of questionnaires, presenting and describing survey data, and sampling procedures. The course will focus on special issues related to mail surveys.

Course Objectives:

1. Identify the steps involved in conducting a survey
2. Describe the advantages and disadvantages of using surveys
3. Evaluate good questionnaire design
4. Write survey questions to get the right answers
5. Design an effective survey instrument
6. Discuss issues related to the administration of a questionnaire
7. Describe the simple random sampling technique
8. Discuss alternative sampling techniques
9. Relate levels of measurements to measures of central tendency
10. Given a set of data, calculate the mode, median, and mean
11. Given a set of data, calculate the standard deviation.

Textbook:

Rea, L.M. & Parker, R.A. (2014). Designing and conducting survey research (4th ed.). San Francisco: Jossey-Bass Publishers. (ISBN 978-1-118-76703-0) \$47.00+

Scope of the Course

Unit I General Planning Issues

- Chapter 1:
 - Types of Data Collecting Methods
 - Advantages of Using Surveys
 - Types of Sample Survey Research
 - Stages of Survey Research Process
- Chapter 4:
 - Utilizing Focus Groups

Unit II Designing Questionnaires/Surveys

- Chapter 2 :
 - Introducing the Study
 - Question Format
 - Sequence of Questions
 - Questions Length
 - Editing the Completed Questionnaire
- Chapter 3:
 - Principles of Good Design
- **From unit notes:** Writing Survey Questions
 - To Collect Factual Information
 - To Collect Demographic Information
 - To Measure Attitudes
 - To Evaluate Products/Services/Programs

Unit III Describing Survey Data

- Chapter 5:
 - Descriptive Statistics
 - Measures of Central Tendency
 - Measures of Dispersion
- Chapter 6:
 - Theoretical Basis of Sampling
 - Properties of Normal Distribution

Unit IV Ensuring Scientific Accuracy

- Chapters 7, 8, & 9:
 - Sampling Techniques

- Sample Size
- Sample Selection
- Describing Survey Data
- Descriptive Statistics

Evaluation:

Grade Scale

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

Grade Weights

Assignments	Weight
Units I, II, & III Assignments	40%
Unit IV Survey Project-Part A	30%
Unit IV Survey Project-Part B	30%

Assignments

Unit I

Discussion board assignment –

For this assignment, discuss two advantages and two disadvantages for one of the five major types of surveys (your choice). Respond to one of your classmates by clarifying a point or adding information you found in the text (see due date in the schedule below and on the discussion board).

Unit II

Assignment 1:

Find a survey to critique (it can be one at your place of employment or one you find on the internet). Please include a link to the survey or an electronic copy. Using what you have learned so far about designing surveys, write an evaluation to include the following:

1. What is the survey’s purpose? (One to two sentences.)
2. What were the survey’s strength(s)? (No more than one paragraph.)
3. How would you improve the survey? (No more than one paragraph.)

Assignment 2 –

- This is to be submitted as a rough draft in the appropriate dropbox:

- Using the guidelines in the textbook, design an effective original questionnaire (10-20 questions) to accomplish one of the following:
 - To collect factual information,
 - To measure attitudes, or
 - To evaluate services/programs.
- Submit your research question and survey questionnaire to be evaluated in the rough draft dropbox. The purpose of submitting this assignment early is to get approval or revise as needed, since many students choose to use the topic/survey as their final data analysis project.
- Please note: You must submit your research question and preliminary survey by the due date listed in the course schedule below for approval/revisions as needed.
- See due dates for these assignments in the course schedule.

Unit III

- Answer the questions using the statistical analysis graphic in the unit notes.
- See the due date in the course schedule.

Unit IV – Part A

- Answer the questions in Part A (see supplemental documentation), including your approved research question and revised survey (if revision was needed).
- See due date in the course schedule.

Unit IV – Part B

- In a 3-5 page narrative, typed & double-spaced, describe in detail each of the following aspects related to the questionnaire/survey administered in Part A of this project.
- Please refer to the supplemental document in the unit notes for specifics for the assignment.
- Deadlines for submission of assignments are provided in this syllabus. Failure to comply with the established deadlines may result in a grade reduction.

Summer Assignment Schedule – All due dates are Tuesdays

Subject to change if needed: Classes begin 6/1

Assignment	Due Date
Unit I assignment	June 9
Unit II assignment	June 16
Draft of research question/survey	June 23
Unit III assignment	June 30
Unit IV assignment – Parts A & B	July 21
Last Day to Withdraw with a “W” – 4:00 p.m. CST	July 21

Attendance:

This course is an online course and has no mandatory meeting sessions; however, students should check the announcements feature at least weekly for any updates to content, due dates, etc.

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. Lynette Watts (940-397-4833)

College Dean – Dr. Jeff Killion (940-397-4594)

Dean of Students – Matthew Park (940-397-7500)

Honor System:

RADS 6443 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. A student should consult the MSU Student Handbook for answers to any questions about the code.

Some components of RADS 6443 are designed to be highly interactive with students helping each other learn, however, all written 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 that they have abided by this rule.

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 student's work product in order to verify originality and authenticity, and for educational purposes.

Use of Artificial Writing Generators

The use of any artificial writing generator (e.g., 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.

Special Needs:

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 Services (ODS) provides information and assistance, arranges accommodations, and serves as a liaison for students, instructors, and staff. The ODS has assistive 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 Services in the Student Wellness Center. 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, the Office of Disability Services will provide advice and/or assistance. 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., Student Wellness Center.